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

(11) **EP 3 858 753 A1**

(12) **EUROPEAN PATENT APPLICATION**

(43) Date of publication:
04.08.2021 Bulletin 2021/31

(51) Int Cl.:
B65D 5/50 *(2006.01)* ***B65D 71/72*** *(2006.01)*

(21) Application number: **21152793.2**

(22) Date of filing: **21.01.2021**

(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

(30) Priority: **28.01.2020 IT 202000001573**

(71) Applicant: **ISEM S.r.l.**
20121 Milano (IT)

(72) Inventors:
- **PINTUCCI, Francesco**
  27029 Vigevano (PV) (IT)
- **STANGALINO, Aldo**
  27029 Vigevano (PV) (IT)

(74) Representative: **Zambardino, Umberto**
Botti & Ferrari S.p.A.
Via Cappellini, 11
20124 Milano (IT)

(54) DISPLAY SUPPORT FOR PACKAGED PRODUCTS, PARTICULARLY PERFUMERY ARTICLES AND/OR COSMETIC PRODUCTS IN BOX OR CASE

(57) A display support made of paper material for packaged products is described, the display support comprising a rear portion (200, 500) provided a back wall, side walls and a top panel (220, 520, 820, 920), the top panel (220, 520, 820, 920) having at least one opening which together with the back and side walls of the rear portion (200;500) defines at least one recess (221, 521, 821, 921) for housing a packaged product, a front panel (300, 600, 820, 920) having an opening (321, 621, 821, 921) at the at least one recess (221, 521, 821, 921), and at least one flap (381, 681, 882, 981) extended from said opening on the front panel inwards of said at least one recess, characterized in that the rear portion (200, 500) has a plurality of recesses (221, 222; 521, 522) having respective base panels (240, 261; 530, 561) at different distances from the front panel (300, 600).

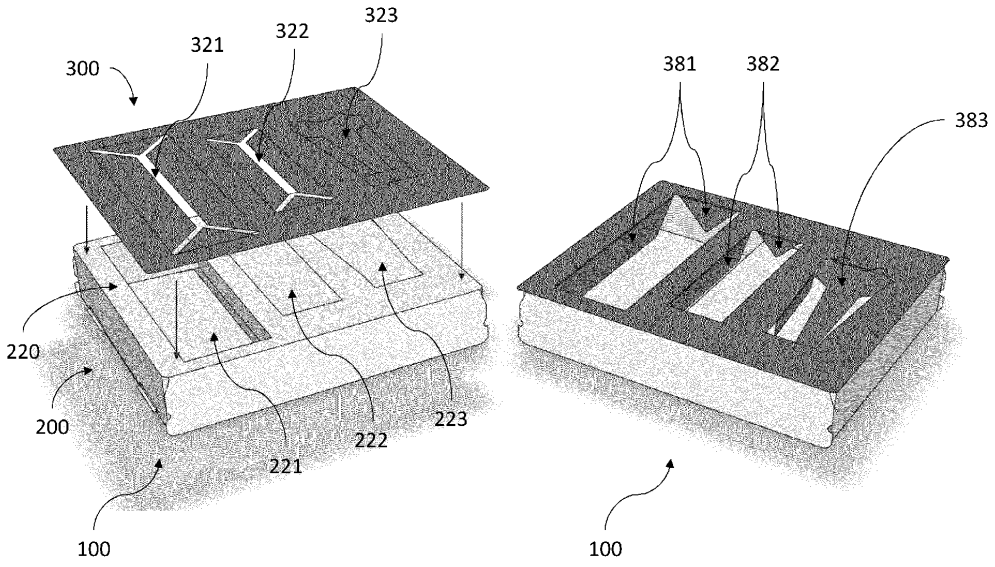

FIG. 1

EP 3 858 753 A1

Description

Field of application

[0001] The present invention relates to a display support for packaged products of various shapes, such as preferably perfumery articles and/or cosmetic products. The display support is configured to be inserted in a box or case.

Prior art

[0002] As it is known, for packaging perfumery articles or similar articles the use of box-like packages comprising a box-like container (or bottom), a closing cover and a display support for the articles to be packaged inserted into the container is currently widespread.

[0003] In general, the box-like container is made of cardboard, paperboard or similar paper materials and it has a base from which a plurality of side walls branch off on the upper part forming, together with the base, a housing compartment for the articles to be packaged.

[0004] The closing cover is also made of cardboard, paperboard or similar materials and it has a top wall from which a plurality of flanges branch off on the lower part defining, together with the top wall, a closing compartment in which an upper portion of the box-like container is received.

[0005] The display support for the packaged products is normally inserted into the box and attached to the box-like container.

[0006] In some cases, the box-like container can be a case made of cardboard, paperboard, or other material, into which the support for the packaged products is inserted - for example slidingly; the container can be possibly equipped with a transparent window which allows the packaged products housed on the display support therein to be viewed.

[0007] The display support is usually made of plastic material, for example by thermoforming, and normally it has a one-piece structure having one or more housing recesses possibly engaging the articles to be packaged and it can be also provided with means for engaging the container body when the support is inserted into the box-like container.

[0008] Although plastic materials have optimum elastic features and are economical, the disposal thereof is not simple. The increasing attention to the environmental issues drives therefore to seek alternative solutions for manufacturing display supports for packaged products which ensure anyhow satisfactory performances, in particular with regard to the holding in position (stability) of the packaged products, so as to reduce the chance to damage goods, for example during transport.

[0009] Likewise, it is important that these alternative solutions do not adversely affect the overall appearance of the final package so as to meet the expectations and/or requirements of the consumers addressed by the products, bearing in mind that, in particular in the field of perfumery articles and cosmetic products packaging, the package appearance is particularly important.

[0010] US 2012006698 discloses a paper cushioning structure comprising an elongated, hollow support member of U cross-section having two open ends and an elongated brace member of inverted U cross-section having two open ends, the brace member comprising a packing space defined by a first slope at one end, two sides extending from both ends of the first slope respectively, and two first wing slopes each extending transversely from an end of the side distal the first slope; a second slope at the other end, two sides extending from both ends of the second slope respectively, and two second wing slopes each extending transversely from an end of the side distal the second slope; spaced flat first and second bottoms; and two sides, wherein the brace member is shaped to securely dispose in the support member.

[0011] US 3489269 discloses a display carton formed by folding and glueing a one piece blank and being of a generally rectangular parallelepiped configuration and with a double-ply front wall, opposite end portions of the plies of the front wall remaining in contact, when the carton is erected, to provide flat areas as for receiving printed matter. A depression for receiving an article is provided in the front wall area by sloping inwardly-converging oppositely disposed panels hinged in pairs to the respective layers of the front wall. One pair of panels is provided with openings to receive portions of the enclosed article, the end portions of the several walls of the carton forming hollow box-like end portions for the carton, one of these portions being braced by a fixed angular partition which underlies one of said sloping panels and serves to brace that panel to aid in supporting the article.

[0012] DE202012100582 discloses a holding device for fixing tubes pointing downwards with the closure, with two vertically spaced guide plates with through openings which are attached to the cross section of the tubes (20).

[0013] US 3189247 discloses a serving tray made of cardboard or paperboard.

[0014] WO 2018/002795 discloses a package comprising: a box-shaped body having a bottom and at least one lateral wall extending perpendicularly from the bottom delimiting a housing compartment open on the side opposite the bottom; a support structure made of a paper material, preferably cardboard, which can be inserted into the housing compartment of the box-shaped body; one or more housing seats, made of a paper material, preferably pressed cardboard pulp, engaged with the support structure for housing and/or supporting a corresponding product or item to be contained and/or displayed according to a predetermined position.

[0015] The main aim of the present invention is to provide a display support for packaged products in a box-like container, such as in particular perfumery articles and cosmetic products, which has such structural and functional features as to ensure satisfactory performances while having a lower environmental impact so as to

overcome the above-described problems of the prior art.

[0016] Another aim is to provide a display support as above which can be produced in a simple manner and at a low cost.

Summary of the invention

[0017] These aims are achieved by a display support made of a paper material for packaged products comprising:

- a rear portion provided a back wall, side walls and a top panel, the top panel having at least one opening which together with the back and side walls of the rear portion defines at least one recess having at least one recess for housing a packaged product,
- a front panel having an opening at the at least one recess,
- at least one flap extended from said opening on the front panel inwards of said at least one recess.

characterized in that the rear portion has a plurality of recesses having respective base panels at different distances from the front panel.

[0018] In the present invention, the term "paper material" or "cellulose material" means any material based on paper such as a paperboard, cardboard and similar materials.

[0019] In some embodiments, the rear portion is formed of a first paper material such as a cardboard, for example a die-cut one, having a first thickness and the front panel is formed of a second paper material such as cardboard, for example a die-cut one, having a second thickness which can be smaller than the first thickness and the front panel of the front portion is coupled to an upper panel of the rear portion in which the at least one recess is formed.

[0020] In other embodiments, the rear portion and the front panel are formed of a single material, for example a die-cut cardboard so that the front panel coincides with the top panel of the rear portion.

[0021] The paper material used such as cardboard or cardboards can be derived from recycled materials. Moreover, in some cases, the rear portion is equipped with a plurality of panels configured to be folded at different distances from an upper panel and thus to allow a substantially aligned display even of packaged products of different dimensions (thickness and/or diameter, for example) when the latter are inserted and/or housed in the respective recesses of the container support.

[0022] Further features and advantages of the present invention will be more apparent from the following detailed description of a preferred but not exclusive embodiment thereof, given with reference to the attached figures given by way of non-limiting example.

Brief description of the drawings

[0023] In the drawings:

- Figure 1 shows, in a full and exploded perspective view, a display support according to an embodiment of the present invention;
- Figure 2 shows a die-cutting profile of a rear portion of the display support of Figure 1;
- Figure 3 shows an example of die-cutting profile of a front panel of the display support of Figure 1;
- Figure 4 shows, in a full and exploded perspective view, a display support according to another embodiment of the present invention;
- Figure 5 shows a die-cutting profile of a rear portion of the display support of Figure 4;
- Figure 6 shows a die-cutting profile of a front panel of the display support of Figure 4;
- Figure 7 shows, in a perspective view, two display supports according to further embodiments of the present invention;
- Figures 8 and 9 show the die-cutting profiles of the respective display supports of Figure 7.

Detailed description

[0024] With reference to the above figures, and particularly to figures 2, 3, 5, 6, 8 and 9, the cut lines of the die-cut are indicated with a black solid line, while the half-cut or crease lines are indicated with a coloured line. As it is known, the cut lines define the shape and size of the die-cut as a whole (including the recesses inside the perimeter thereof, be they intended to form housings or to form anchoring slots), while the half-cut lines define the lines along which the die-cut will be bent (for example to obtain panels, flaps, or anyhow suitably oriented surfaces.

[0025] With reference to Figures 1-3, a display support according to a first embodiment of the invention is indicated as a whole with the reference number 100.

[0026] The display support 100 comprises a rear portion 200 provided a back wall, side walls and a top panel 220. The top panel 220 has three openings which together with the back and side walls of the rear portion 200 define three recesses 221, 222, 223 each constituting a housing for a respective packaged product. The display support 100 further includes a front panel 300 having three openings 321, 322, 323 each at a respective recess. Moreover, the display support 100 comprises at each recess 221, 222, 223 at least one flap 381, 382, 383 extended from a corresponding opening 321, 322,

323 on the front panel 300 inwards of the recess 221, 222, 223.

[0027] The front panel 300 is coupled to the upper panel 220 of the rear portion 200 by gluing to form the display support 100.

[0028] The flap or flaps of a respective recess is/are configured to facilitate the insertion of the packaged products into the display support and to ensure the correct positioning and the holding in position thereof. Conveniently, but without limitation, the flaps are in pairs symmetrically arranged with respect to the recess in which they extend, as illustrated in figure 1 and 3.

[0029] The rear portion 200 provides the overall structural support and it is also configured so that the packaged products can rest on respective bottom panels (230, 261 in Figure 2) of the recesses located at different distances from the upper panel 220, and thus also from the front panel 300 of the display support 100, so as to allow the insertion of packaged products of different dimensions (thickness, diameter, etc.) keeping the front alignment thereof.

[0030] Advantageously, the rear portion 200 of the display support can be made of a die-cut solid or corrugated cardboard, having a first thickness or a first basis weight, for example a thickness comprised between 1 mm and 3.5 mm or a basis weight comprised between 250 and 800 g/m^2, preferably a thickness comprised between 1.8 mm and 2.5 mm or a basis weight comprised between 1,150 and 1,230 g/m^2. The front panel 300 can be formed of a second die-cut cardboard or a sheet, possibly a moulded one, having a second thickness or a second basis weight, for example a thickness comprised between 0.1 and 2 mm or a basis weight comprised between 30 and 350 g/m^2, preferably a thickness comprised between 0.4 and 0.5 mm or a basis weight comprised between 300 and 350 g/m^2. Preferably, the thickness or the basis weight of the cardboard forming the rear portion 200 is greater than the thickness or the basis weight of the cardboard or sheet forming the front panel 300. Both cardboards can derive from recycled materials.

[0031] The shape of one and/or each of the recesses 221, 222, 223 and of the corresponding openings 321, 322, 323 is substantially complementary to that of the packaged product to be inserted therein, with a suitable size tolerance to conveniently accommodate them, the position being kept by the flap or flaps 381, 382 and 383.

[0032] Figure 2 shows an example of die-cutting profile of a rear portion 200 of a display support 100 as described above.

[0033] The profile comprises a cut line 205 of an external perimeter and three cut lines 211, 212 and 213 which define, in an upper panel 220, corresponding openings for recesses 221, 222 and 223 constituting housings for three packaged products. The cut lines 207 define hooking slots for the teeth 208 (the dashed lines indicate where each tooth must insert after bending the die-cut).

[0034] On the left side of the die-cutting profile in figure 2, the half-cut lines 230, 231 and 232 define respective panels 240, 241 and 242 which, as described below, will serve as a structural support for the rear portion 200 of the display support and in particular they will provide the bearing base for a packaged product to be inserted or housed in the recess 221.

[0035] The panel 240 is configured to be completely folded until it couples to the panel 241 (by the rotation of 180°, around the crease 230, represented with A at the top of figure 2). In this operation, the hooking teeth 208 make ready to engage the corresponding slots 207. The panel 241 is configured to be folded (rotation B of 90° around the crease 231) until it is substantially perpendicular to the panel 242, which is in turn configured to be folded (by the rotation C of 90° around the crease 232) until it is substantially perpendicular to the upper panel 220.

[0036] Therefore, following the rotations A + B + C, assuming that the upper panel 220 is horizontal, the panel 242 will be vertical (thus configured as a side panel of the rear portion 200 of the display support 100) and the facing panels 240 and 241 will be horizontally arranged under the recess 221 of the upper panel 220 being therefore configured as a bearing base for a packaged product to be inserted or housed in this recess (panel 240) and as a base of the rear portion 200 (panel 241), respectively.

[0037] On the right side of the die-cutting profile in figure 2, the half-cut lines 250, 251, 252, 253 and 254 define respective panels 260, 261, 262, 263 and 264 which, as described below, will serve as a structural support for the rear portion 200 of the display support and in particular they will provide the bearing base for the packaged products to be inserted or housed in the recesses 222 and 223 respectively.

[0038] The panel 260 is configured to be folded (by a rotation of 90°, around the crease 250, indicated with D at the top of figure 2) until it is substantially perpendicular to the panel 261. The panel 261 is configured to be folded (by the rotation E of 90° around the crease 251) until it is substantially perpendicular to the panel 262. The panel 262 is configured to be folded (by the rotation F of 90° around the crease 252) until it is substantially perpendicular to the panel 263. In this operation, the hooking teeth 208 make ready to engage the corresponding slots 207, as depicted in figure 2 by the dashed lines. The panel 263 is configured to be folded (by the rotation G of 90° around the crease 253) until it is substantially perpendicular to the panel 264 and the panel 264 is configured to be folded (by the rotation H of 90° around the crease 254) until it is substantially perpendicular to the upper panel 220 (and thus it serves as a side panel of the rear portion 200 of the display support 100).

[0039] Therefore, following the rotations D + E + F + G + H, the upper panel 220 being horizontal, the panels 264, 262 and 260 will be vertical and the panels 261 and 263 will be horizontally arranged under the recesses 222 and 223 of the upper panel 220. In particular, the panel 261, after folding, is in a proximal position to the upper

panel 220 being therefore configured as a bearing base for a packaged product to be inserted into these housings, while the panel 263 is in a distal position with respect to the upper panel 220 being therefore configured as a base of the rear portion 200.

[0040] It should be noted that, in the configuration shown in figure 2, the panels 231 and 263 configured as a base of the rear portion 200 of the display support are aligned (i.e. they are at the same distance from the upper panel 220 since the vertical dimensions of the panels 242 and 264 are equivalent) and adjacent to each other so that, once the display support 100 is inserted into a box-like body (box or case) there is no clearance and the structure of the rear portion and of the display support as a whole is adequately supported and/or restrained.

[0041] Moreover, the panels 240 and 261, which are configured to serve as a base for the packaged products to be inserted and housed in the recesses 221 and 222/223 respectively, can be at a different distance from the upper panel 120 (depending on the vertical dimensions of the panels 242 and 264/262), thus allowing a possible dimensional difference (thickness or diameter) of the packaged products to be inserted and displayed in the support to be compensated. That is, by suitably adjusting in the designing step of the die-cutting profile 200 the dimensions of the panels (242, on the one side, and difference between 264 and 262 or 260, on the other side) it is possible to obtain a display support in which packaged products of different dimensions are substantially frontally aligned.

[0042] The panels 270, joined to the upper panel 220 at the corresponding half-cut lines as illustrated in Figure 2, are configured to be folded by a rotation (not shown in the figure) of 90° around the respective half-cut lines and thus to give further structural support and solidity to the rear portion 200, in view of the insertion thereof into a box-like body.

[0043] Advantageously, the rear portion 200 of the display support 100 being described is devoid of glued parts. Moreover, after the assembly, there are no visible structural supports, even in the absence of the packaged products.

[0044] Figure 3 shows an example of die-cutting profile of a front panel 300 corresponding to the rear portion of the display support of Figure 2, that is which can be coupled thereto, for example by gluing to the upper panel 220, as explained above, with reference to Figure 1.

[0045] The profile shown comprises a cut line 305 of an external perimeter, and three cut lines 308, 309 and 310 and a plurality of half-cut or crease lines 311, 312 and 313 which define, in an upper panel 320, corresponding openings 321, 322 and 323 for three packaged products.

[0046] The three openings 321, 322 and 323 are configured to match the three recesses 221, 222 and 223 in the upper panel 220 of the rear portion 200 described with reference to Figure 2; obviously a different number of recesses and openings (greater or smaller) can be formed according to need.

[0047] The outlines of each cut line 308, 309 and 310 and of the corresponding half-cut lines are designed so that, by bending along a half-cut line, at least one flap 381, 382 and 383 is formed, extended from the respective opening 321, 322 and 323 on the front panel 300 inwards of the opening itself, that is inwards of the corresponding recess or housing 221, 222 and 223 once the front panel 300 is coupled to the rear portion 200.

[0048] Each flap 381, 382 and 383 is joined to the front panel 320 at at least one half-cut line (311, 312 and 313, respectively); the flaps are further defined by the cut lines 308, 309 and 310 corresponding to the respective openings 321, 322, and 323 in which they are formed, as shown in figure 3.

[0049] The flaps are configured to facilitate the insertion of the packaged products into the display support and to ensure the correct positioning and the holding in position thereof.

[0050] The flaps can have a substantially trapezoidal (381a, 382a) or triangular (381b, 382b) shape, or a different form, being for example substantially rectangular (383c) or even shaped (383d, 383e). The flap 383e is joined to the front panel in two segments defined by two aligned half-cut lines 313e, between which a curved cut line defines a lunette which is not present in the corresponding recess 223 of the rear portion 200. This lunette, which is configured not to be bent, provides a hooking and further holding point for the packaged product to be inserted or housed in this recess.

[0051] The front panel 300 can be made of a cellulose material, for example recycled paperboard. The panel 300 can be moulded according to said known techniques to customize the display support of which it will be the most visible part. Advantageously, after assembling the display support 100, there are no visible structural supports, even in the absence of the packaged products.

[0052] Figures 4, 5 and 6 refer to a second non-limiting example of a display support. In particular, Figure 4 shows, in a full and exploded perspective view, a display support according to another embodiment of the present invention; Figure 5 shows a die-cutting profile of a rear portion of the display support of Figure 4 and Figure 6 shows a die-cutting profile of a front panel of the display support of Figure 4.

[0053] With reference to Figures 4-6, a display support according to this further embodiment of the invention is indicated as a whole with the reference number 400.

[0054] The display support 400 comprises a rear portion 500 provided a back wall, side walls and a top panel 520. The top panel 520 has two openings which together with the back and side walls of the rear portion 500 define two recesses 521, 522 each constituting a housing for a respective packaged product. The display support 400 also includes a front panel 600 having two openings 621, 622 each at a respective recess. Moreover the display support 400 comprises at each recess 521, 522 at least one flap 681, 682, 683, 684 extended from a correspond-

ing opening 621, 622, 623 on the front panel 600 inwards of the recess 521, 522, 523.

[0055] The front panel 600 is coupled to the upper panel 520 of the rear portion 500 by gluing to form the display support 400.

[0056] The flap or flaps of a respective recess is/are configured to facilitate the insertion of the packaged products into the display support and to ensure the correct positioning and the holding in position thereof. Conveniently, some flaps (681, 684) are in pairs symmetrically arranged with respect to the recess in which they extend, while others (682 and 683) are configured to hold the packaged product in position without the help of opposed flaps, as illustrated in figure 4 and 6.

[0057] The rear portion 500 provides the overall structural support and it is also configured so that the packaged products can rest on respective base panels (530, 561 - see Figure 5) located at different distances from the upper panel 520, and thus also from the front panel 600 of the display support 400, so as to allow the insertion of packaged products of different dimensions (thickness, diameter, etc.) keeping the front alignment thereof, as described hereafter in greater detail with reference to Figure 5.

[0058] The display support 400 is also equipped with spacing flaps 693 and 694 which are configured to hold the display support 400 in position once it is inserted in a box-like element (not shown) such as a case or box, possibly equipped with a transparent window to allow the packaged products to be viewed. The spacing flaps 693, 694 are configured to rest on the side walls of the box or case and so sized as to substantially engage without clearance the residual gap between the front panel 600 of the display support 400 and the box cover or anyhow the case wall facing it.

[0059] Conveniently the display support 400 is devoid of glued elements, at least with regard to the structure of the rear portion 500 (the front panel 600 can be glued to the upper panel 520 of the rear portion 500, in some cases). Moreover, there are no visible structural supports, even in the absence of the packaged products.

[0060] Figure 5 shows an example of die-cutting profile of a rear portion 500 of a display support of packaged products according to the present invention.

[0061] The profile comprises a cut line of an external perimeter 505 and two cut lines 511 and 512 which define, in an upper panel 520, corresponding recesses 521 and 522 each configured to form a housing for a packaged product. The cut lines 507 define hooking slots for tabs 508 (only one of which is highlighted in Figure 5 for clarity).

[0062] Without repeating in full the description already made with reference to Figure 2, the half-cut lines (not highlighted in Figure 5, but always represented with coloured lines) define die-cut panels which are configured to create, suitably folded (in this case by rotations typically of 90°), a rear portion 500 of the display support 400.

[0063] For example, it will be evident that, in this example too, the panels 530 and 561 are configured to form, after the assembly, respective bearing bases for the packaged products to be inserted into the recesses 521 and 522, the bearing bases having a different distance from the upper panel 520 and consequently allowing products of different dimensions (thickness, diameter, etc.) to be packaged. The shape and size of the recesses 521 and 522 is substantially complementary to that of the packaged products they must receive - for example a bottle and a glass - even taking into account a suitable size tolerance.

[0064] The rear portion 500 can be obtained from a die-cut cardboard, for example a solid or corrugated cardboard, having an appropriate thickness and/or basis weight (for example, a thickness comprised between 1 mm and 3.5 mm or a basis weight comprised between 250 and 800 g/m^2, preferably a thickness comprised between 1.8 mm and 2.5 mm or a basis weight comprised between 1.150 and 1.230 g/m^2), or other cellulose-based material. The cardboard can be derived from completely recycled material.

[0065] Figure 6 shows an example of die-cutting profile of a front panel 600 corresponding to the rear portion 500 of Figure 5 of the display support 400, that is which can be coupled thereto, for example by gluing to the upper panel 520, as explained above, with reference to Figure 4.

[0066] The profile shown comprises a cut line 605 of an external perimeter, and two cut lines 608 and 609 and a plurality of half-cut or crease lines 612 which define, in an upper panel 620, corresponding openings 621 and 622 for two packaged products. Similarly to what was discussed in relation to Figure 3, the shapes of each cut line 608 and 609 and of the corresponding half-cut lines 612 are designed so that, by bending along a half-cut line, at least one flap 681, 682, 683 and 684 is formed extended from the respective opening 621 and 622 on the front panel 600 inwards of the opening itself, that is inwards of the corresponding recess 621 or 622, once the front panel 600 is coupled to the rear portion 500.

[0067] Each flap 681, 682, 683 and 684 is joined to the front panel 620 at at least one half-cut line 612; the flaps are further defined by the cut lines 608 and/or 609 and they can have a substantially trapezoidal, triangular, rectangular shape, in some cases.

[0068] The flaps are configured to facilitate the insertion of the packaged products in the display support and to ensure the correct positioning and the holding in position thereof.

[0069] In the example represented in Figure 6, the cut line 609 defines, in the opening 622 corresponding to the recess 522 in Figure 5, a hooking element 690 with which no half-cut line is associated; this hooking element, or other similar ones, is configured to promote the insertion and give a greater holding in position of the packaged product inserted into the recess.

[0070] In the example represented in Figure 6, there are also further half-cut or crease lines 613 and 614 which

define (on the sides of the die-cut in Figure 5) further spacing flaps 693 and 694. These spacing flaps are configured to be folded in an opposite direction to the folding direction of the positioning flaps 681, 682, 683 and 684. In particular, while the positioning flaps extend, once they are folded in the resulting display support (see Figure 4), inwards of the respective recesses or housings for the packaged products, the spacing flaps 693 and 694 extend orthogonally to the front panel 620 from a front side, that is opposite the side in which the rear portion 500 lies, in order to keep a distance from an internal surface of a box-like body, such as for example the facing wall of a case or the cover of a box (not shown).

[0071] The front panel 600 can be made of a cellulose material, for example recycled paperboard. The panel 600 can be moulded according to one of the known techniques to customize the display support of which it will be the most visible part. The front panel 600 can be obtained from a die-cut sheet or paperboard having an appropriate thickness, for example comprised between 0.1 and 2 mm, preferably between 0.4 and 0.5mm, and basis weight, for example comprised between 30 and 350 g/m^2, preferably between 300 and 350 g/m^2.

[0072] The shape and size of the openings 621 and 622 substantially matches that of the corresponding recesses 521 and 522 (i.e. it is complementary to that of the packaged products, without a suitable size tolerance and possible hooking elements as discussed - for example 690). The positioning flaps 681, 682 and 683 facilitate the insertion of the products and ensure the holding in position thereof.

[0073] Further embodiments of the present invention are shown in Figures 7-9 where, in particular, Figure 7 shows, in a perspective view, two display supports obtained from the die-cutting profiles shown in Figures 8 and 9 respectively.

[0074] Figure 7 shows, in a perspective view, the display supports 800 and 900 respectively obtained by the die-cutting profiles of Figure 8 and 9 after the assembly. In particular, the positioning flap 882 in the container support 800 is highlighted, which, in this case is the single flap made in the opening corresponding to the recess 821. The support elements formed in the panels 961 and 962 for the packaged products to be inserted into the recesses 921 and 922 are also highlighted. As explained below with reference to Figure 9, the support elements are formed by suitable shaping of the recesses 971 and 972 extending partially in the panels 961 and partially in the panels 962. The display supports 800 and 900 of figure 7 can be box-packed separately or jointly.

[0075] Figures 8 and 9 show two examples of die-cutting profiles of display supports in which the rear portion and the front portion, that is the front panel, are formed of a single cardboard. In these display supports 800 and 900, the top panel of the rear portion provided with at least one opening which together with the back and side walls of the rear portion define at least one recess constituting a housing for a respective packaged product coincides with the front panel of the display support.

[0076] In particular, Figure 8 shows a die-cutting profile 800 comprising a cut line 805 of an external perimeter and a single internal cut line 811 which define, in a front panel 820, a recess 821 for a packaged product.

[0077] Without repeating in full the description already made with reference to the previous figures, the crease or half-cut lines (not identified by labels in Figure 8, but anyhow represented with coloured solid lines) define, complementarily to the front panel 820, die-cut panels and tabs which are configured to create, suitably folded (in this case by rotations typically of 90°), a rear portion of the display support.

[0078] For example, it will be evident that, in this example too, the panel 861 is configured to form, after the assembly, a bearing and/or support base for the packaged product to be housed in the recess 821, the bearing base having a suitable distance from the upper or front panel 820, which is proportionate to the product dimensions. The shape and size of the recess 821 is substantially complementary to that of the packaged product it must house, taking into account a suitable size tolerance. It should be noted that in this embodiment, there is a single flap 882, configured to facilitate the insertion of the packaged product into the recess 821 and to hold it in position.

[0079] The display support 800 can be obtained from a die-cut sheet of a cellulose material, for example paperboard, possibly customized by moulding according to one of the known techniques, having an appropriate thickness, for example comprised between 0.1 and 2mm, preferably between 0.4 and 0.5 mm, and having an appropriate basis weight, for example comprised between 30 and 350 g/m^2, preferably between 300 and 350 g/m^2. The paperboard can be derived from materials recycled.

[0080] Conveniently the display support 800 is devoid of glued elements, and it is suitable for the insertion in a case, possibly a windowed one. Moreover, there are no visible structural supports, even in the absence of the packaged products.

[0081] Figure 9 shows a die-cutting profile 900 which is similar to that described with reference to Figure 8; hence what seems to be evidently equivalent will not be repeated (for example the formation of recesses 921 and 922, with respective positioning flaps 981, for the packaged products, of the front panel 920 and of side and rear panels and associated flaps constituting a rear portion), highlighting instead some differences.

[0082] The panels 961 are configured to form, in the assembled display support, support elements for the packaged products inserted and housed in the recesses 921 and 922. As it can be appreciated, the panels 961 are, after the assembly, vertically arranged in a perpendicular position to the front panel 920 (envisaged as horizontal); the panels 962 are configured to keep the panels 961 in a vertical position and at the proper distance from the display edges. The openings 971 and 972 are suitably outlined to house and allow the insertion of the packaged

products into the recesses 921 and 922 respectively (for example, the semi-circular part in the openings 972 is complementary to a substantially cylindrical product to be inserted and housed in the recess 922). The part of the recess 971 and/or 972 which extends in the panel 961 also determines the distance of the product bearing base from the front panel 920, thus allowing packaged products of different dimensions (thickness, diameter, etc.) to be inserted and housed while keeping a substantial front alignment of the products. The part of the recess 971 and 972 extending in the panels 962 avoids the insertion of the packaged products to be prevented. In some cases, the flap 995 can be glued.

[0083] Except for what is described in detail, the display support 900 can be made by the same above-described techniques and by using the same materials.

[0084] In view of the above, the display support according to the invention solves the problems of the prior art to which respect it has several advantages.

[0085] In fact, due to the adoption of one or more flaps which extend from an opening in a front panel inwards of the recess of the rear portion, the insertion of the product in the display support is facilitated and the product is steadily kept in position (thus avoiding a possible damage thereof for example during transport). This is allowed by using fully recycled materials, such as die-cut cardboard and/or paperboard, and thus actually eco-friendly. Moreover, the manufacturing of the display support is simple and economical.

[0086] A person skilled in the art will be allowed to bring several modifications and alternatives to the above-described solution, for example in order to meet specific and contingent requirements, all however falling within the scope of protection of the invention, as defined by the following claims.

Claims

1. Display support made of a paper material for packaged products comprising:

   a rear portion (200, 500) provided a back wall, side walls and a top panel (220, 520, 820, 920), the top panel (220, 520, 820, 920) having at least one opening which together with the back and side walls of the rear portion (200;500) defines at least one recess (221, 521, 821, 921) for housing a packaged product,
   a front panel (300, 600, 820, 920) having an opening (321, 621, 821, 921) at the respective recess (221, 521, 821, 921),
   at least one flap (381, 681, 882, 981) extended from said opening on the front panel inwards of said respective recess,
   characterized in that the rear portion (200, 500) has a plurality of recesses (221, 222; 521, 522) having respective base panels (240, 261; 530, 561) at different distances from the front panel (300, 600).

2. Display support according to the claim 1, wherein the rear portion (200, 500) is formed by a first die-cut paper material having a first thickness or a first basis weight and the front panel (300, 600) is formed by a second die-cut paper material having a second thickness or a second basis weight, the first thickness or the first basis weight being greater than the second thickness or the second basis weight.

3. Display support according to claim 1 or 2, wherein the front panel (300, 600) is coupled to the upper panel (220, 520) of the rear portion, preferably by gluing.

4. Display support according to claim 1, wherein the rear portion and the front panel (821, 921) are formed by a single die-cut so that the front panel (821, 921) coincides with the top panel of the rear portion.

5. Display support according to any of the previous claims, wherein the front panel (600) has a spacing flap (693, 694) on at least one side thereof.

6. Display support according to any of the previous claims, further comprising at least one support panel (961) arranged in said at least one recess (221, 521, 821, 921) perpendicular to the front panel (300, 600, 820, 920).

7. Display support according to any of the previous claims, wherein the paper material is selected from solid cardboard, corrugated cardboard, paperboard and combinations thereof.

8. Display support according to any of the previous claims, wherein the paper material is a recycled paper material.

9. Display support according to claim 7 or 8 wherein the paper material is cardboard.

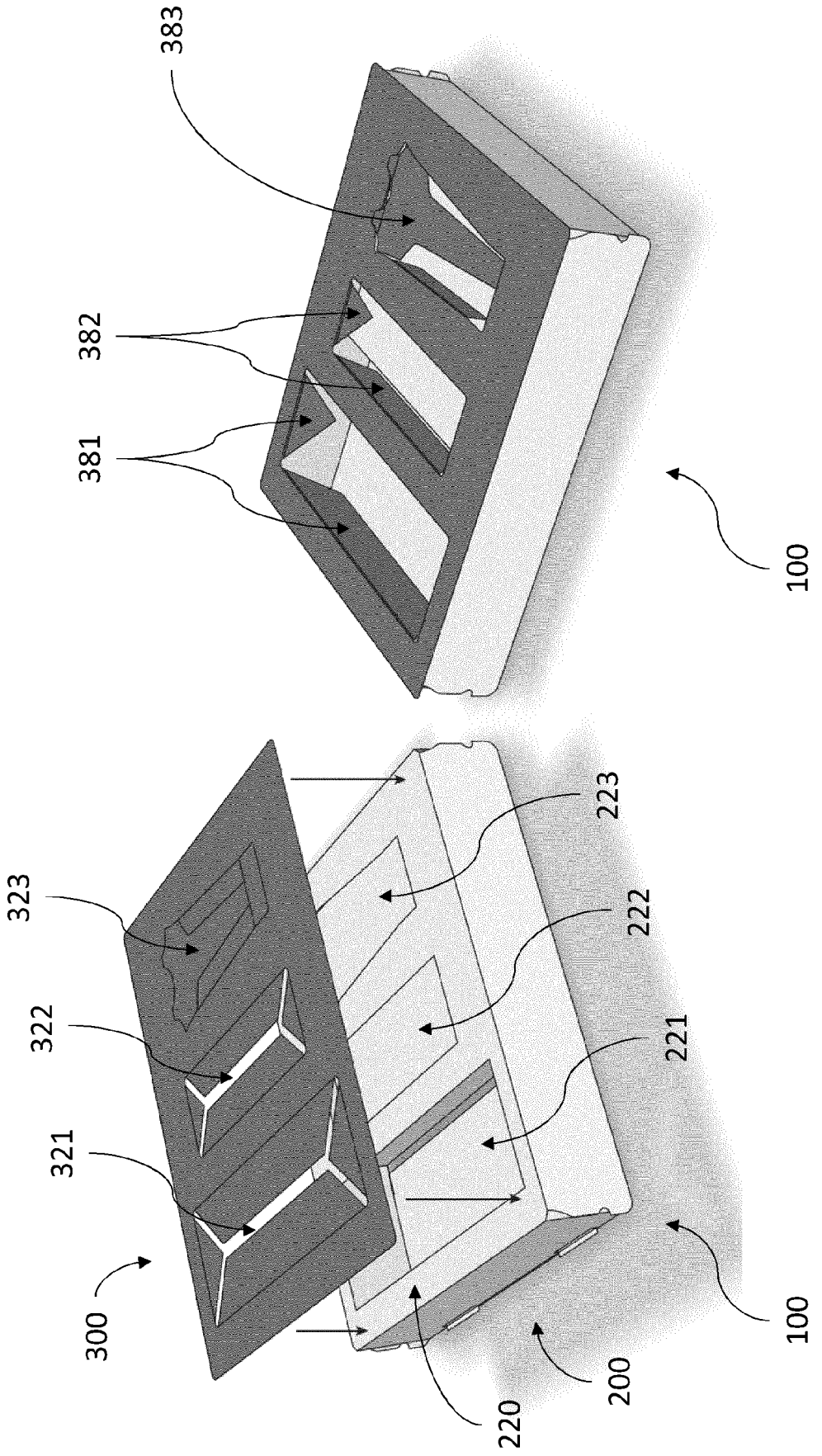

FIG. 1

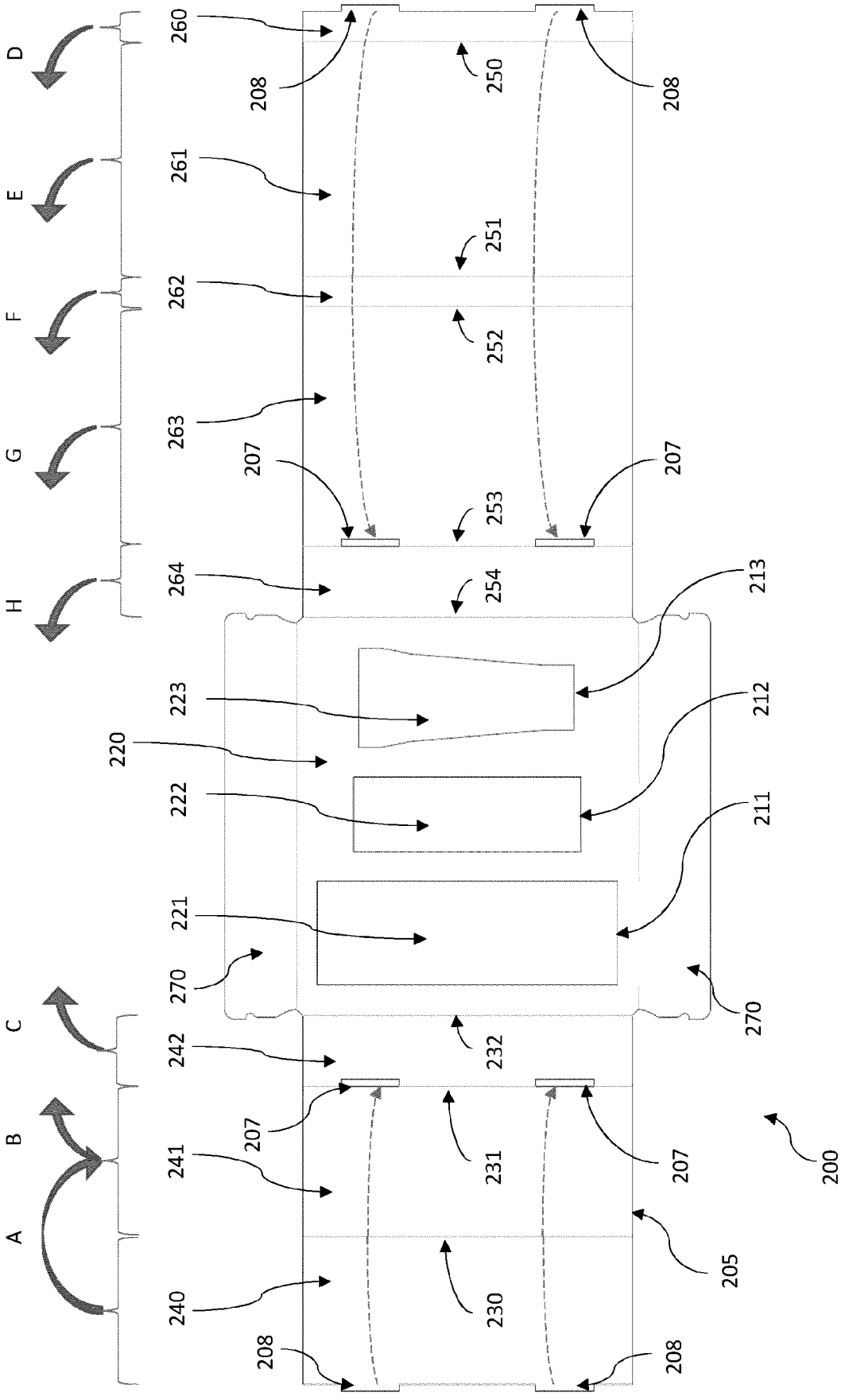
A
B
C
D
E
F
G
H
200
205
207
208
211
212
213
220
221
222
223
230
231
232
240
241
242
250
251
252
253
254
260
261
262
263
264
270

FIG. 2

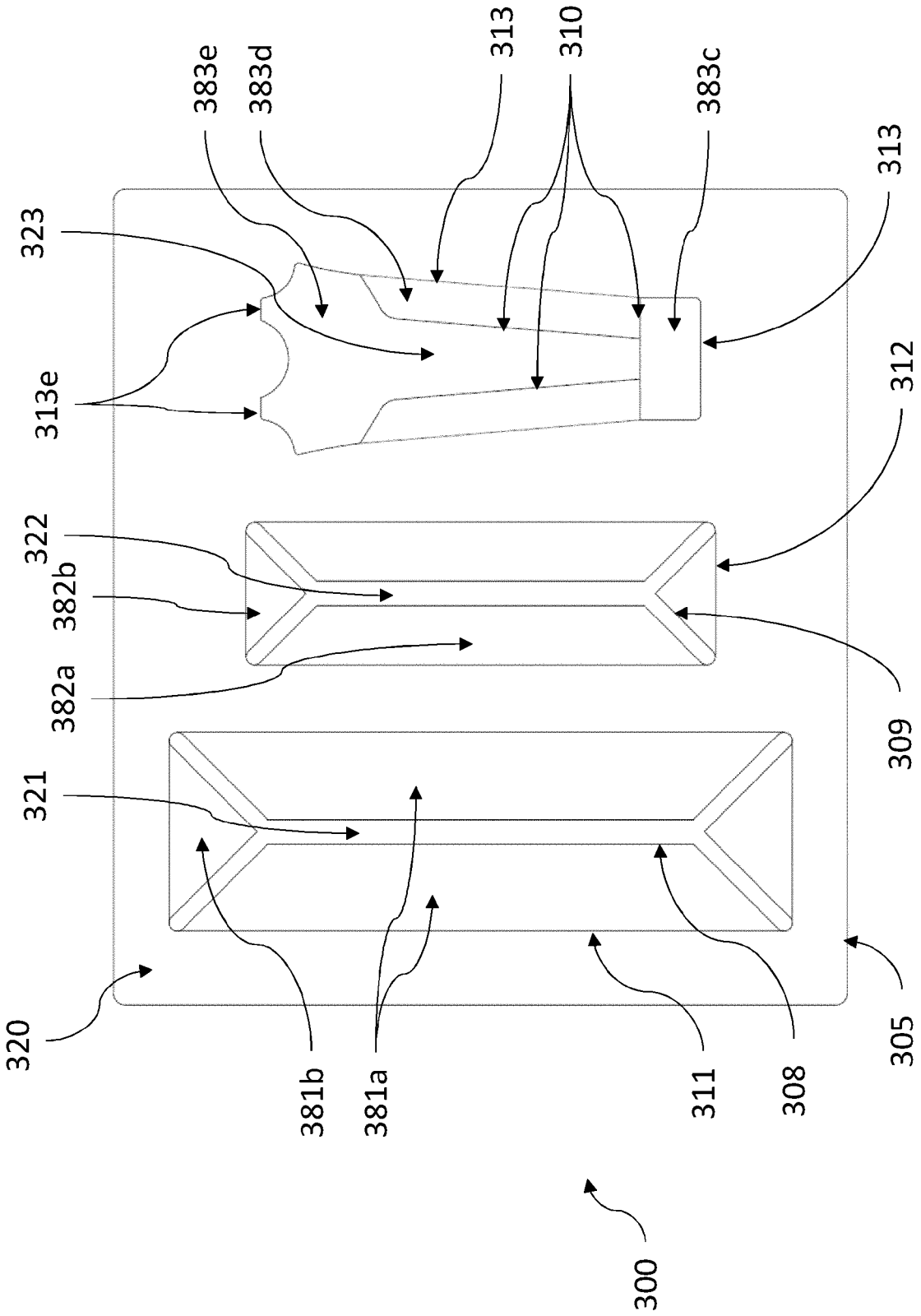
383e
383d
313
310
383c
313
323
313e
312
322
382b
382a
309
321
320
381b
381a
311
308
305
300

FIG. 3

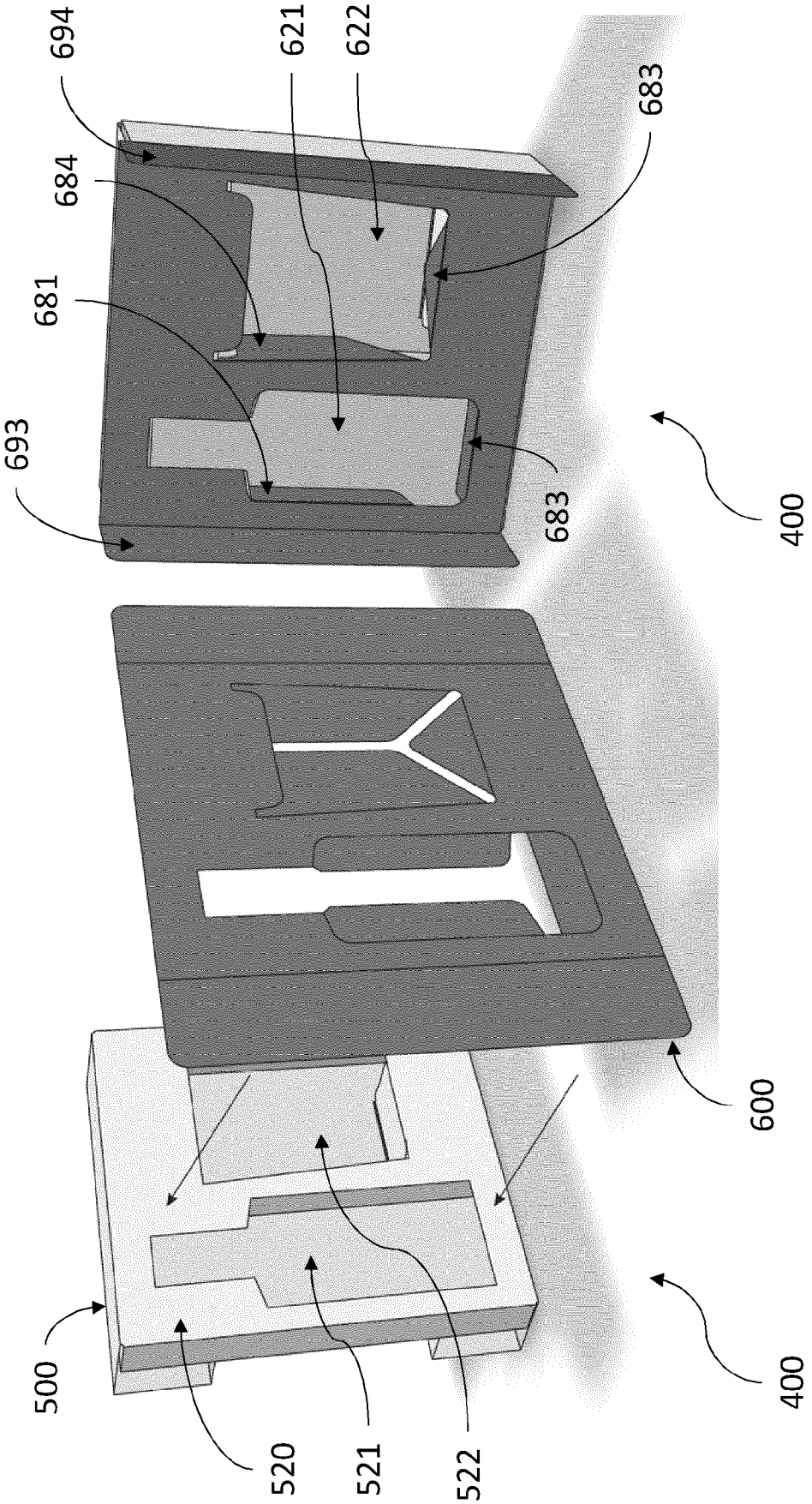

FIG. 4

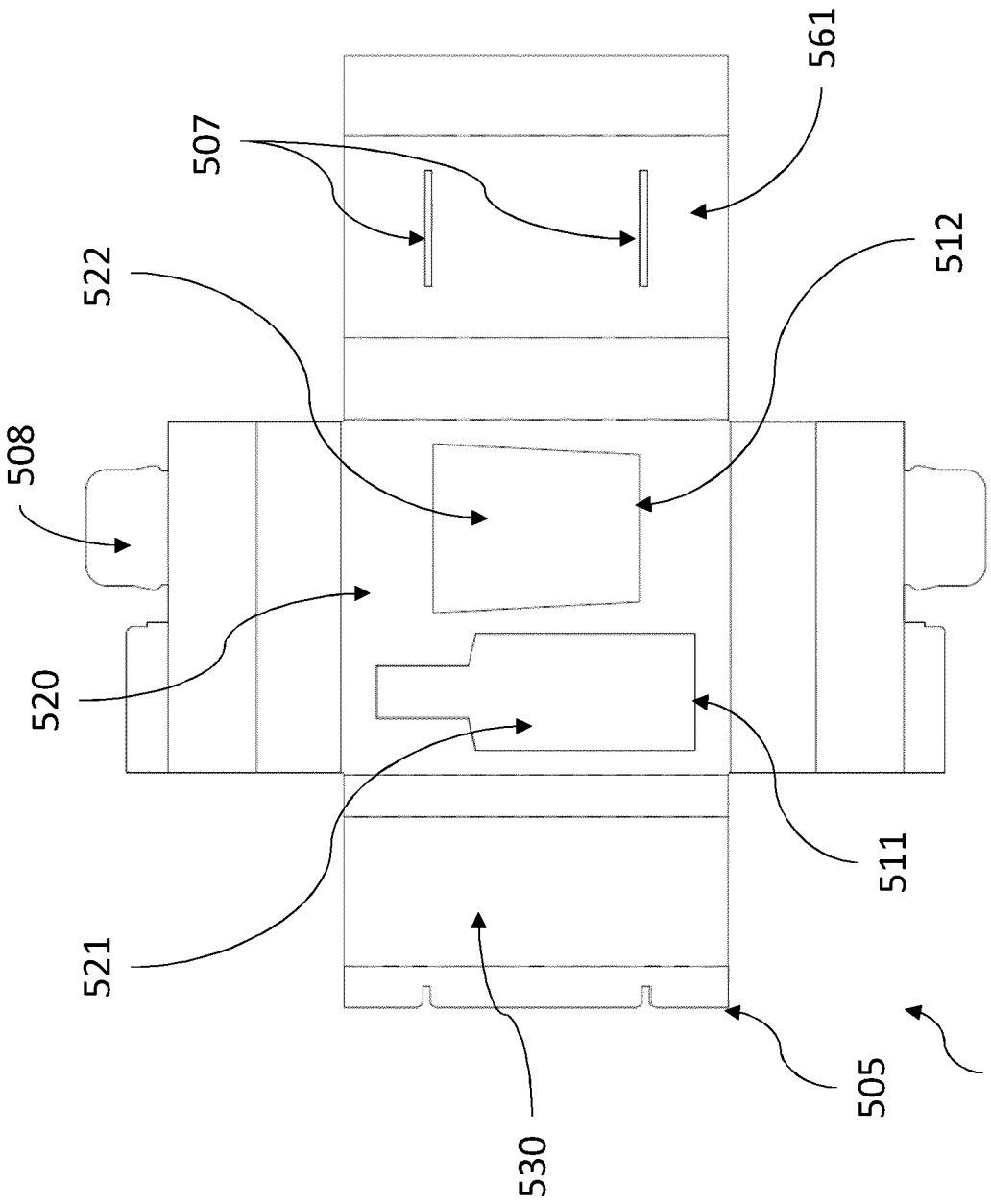

FIG. 5

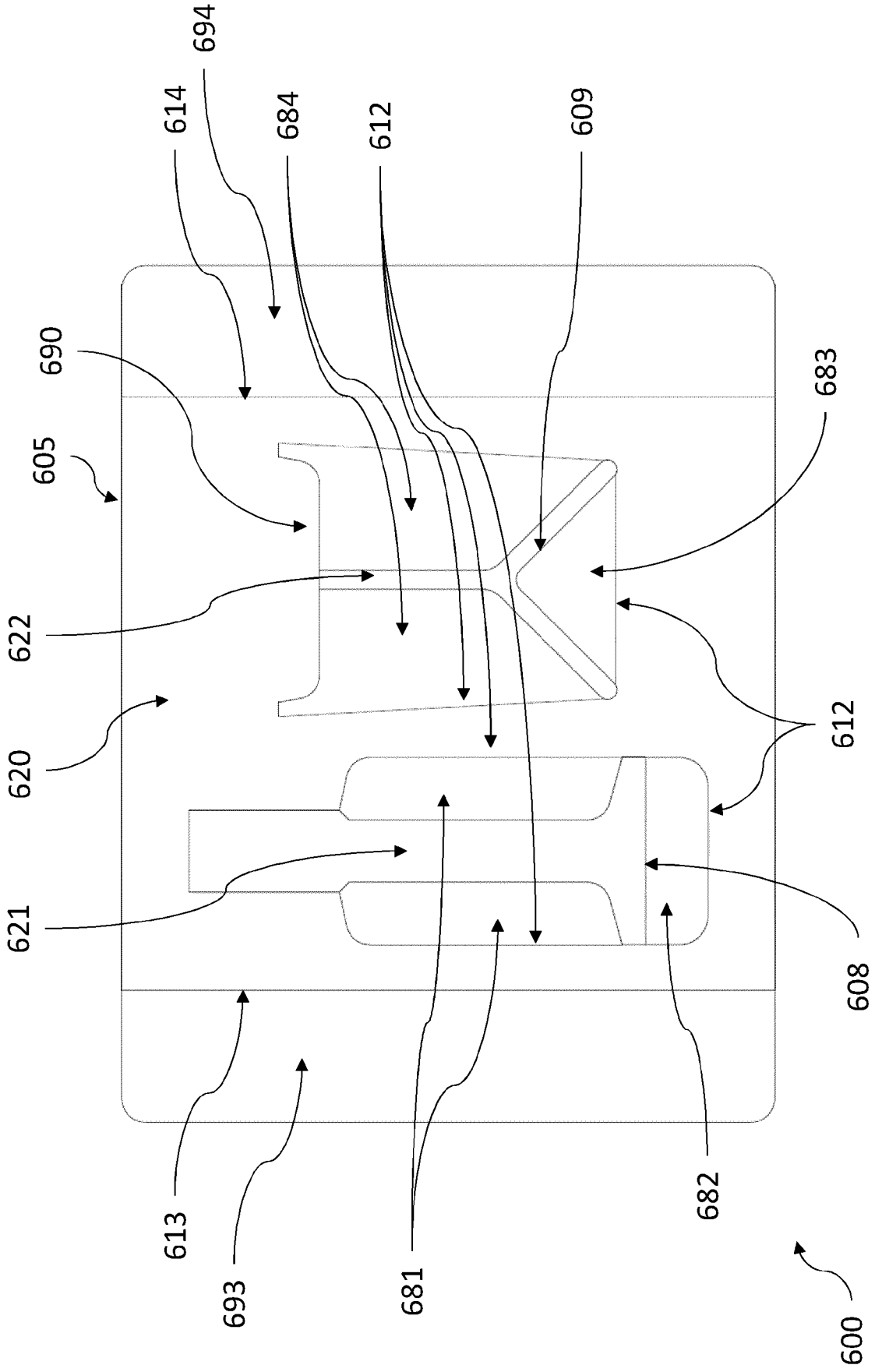
694
614
684
612
609
690
683
605
622
620
612
621
608
613
693
681
682
600

FIG. 6

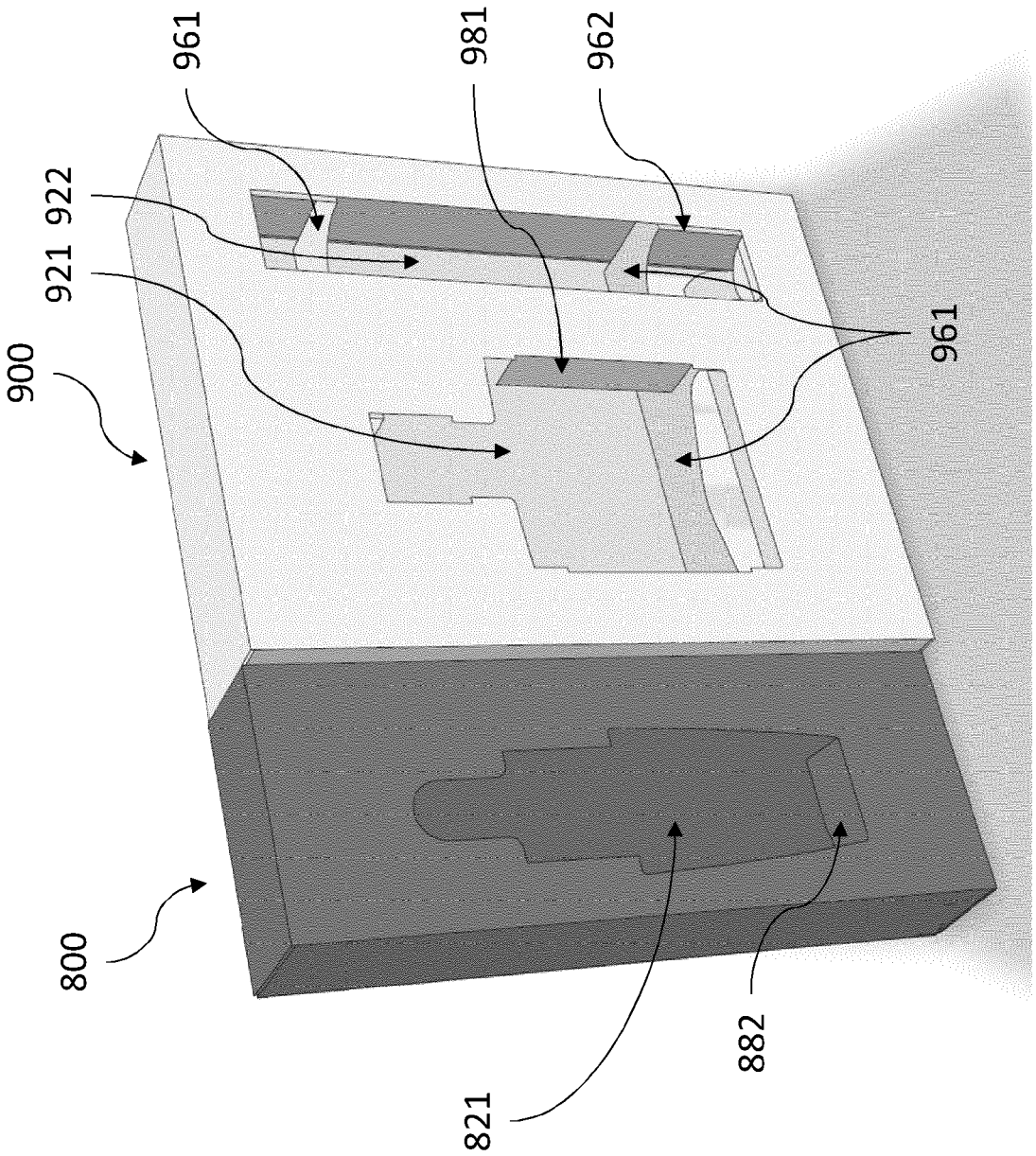

FIG. 7

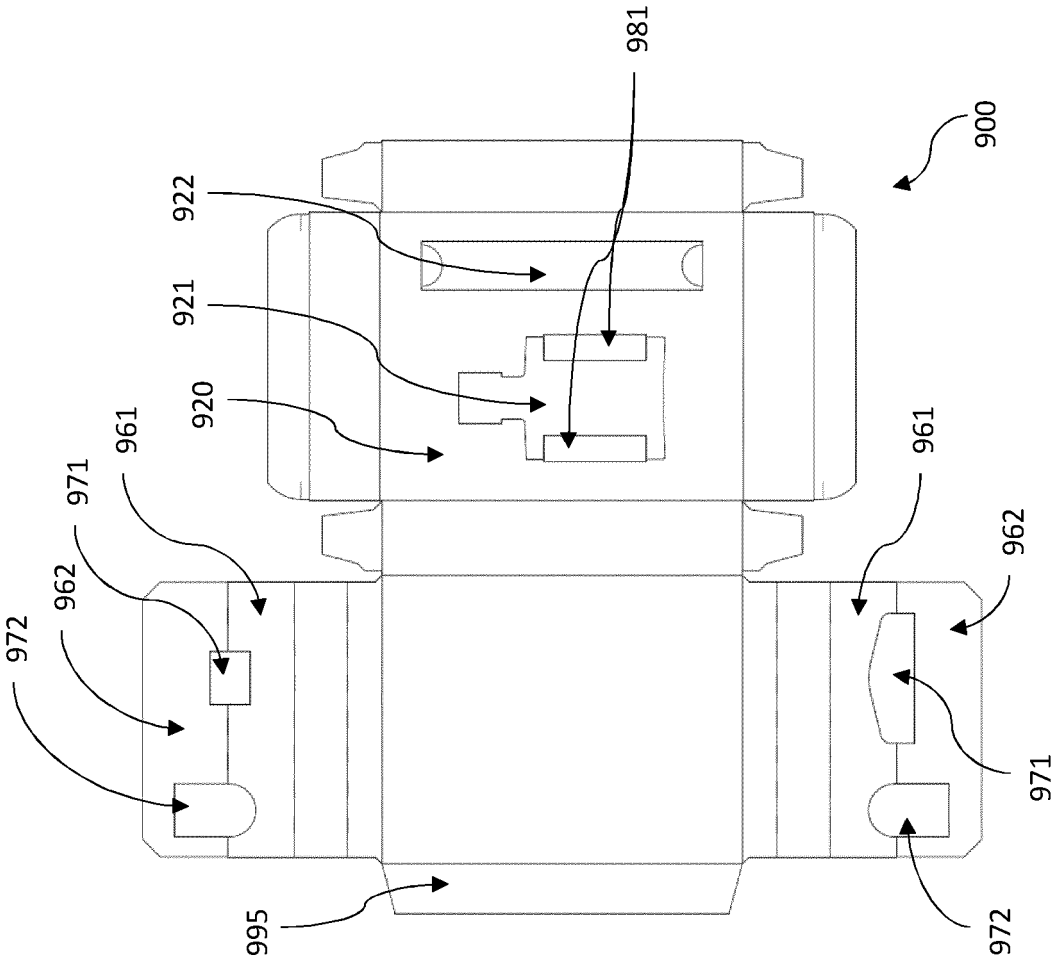
981
900
922
921
920
961
971
962
972
995
961
962
971
972

FIG. 9

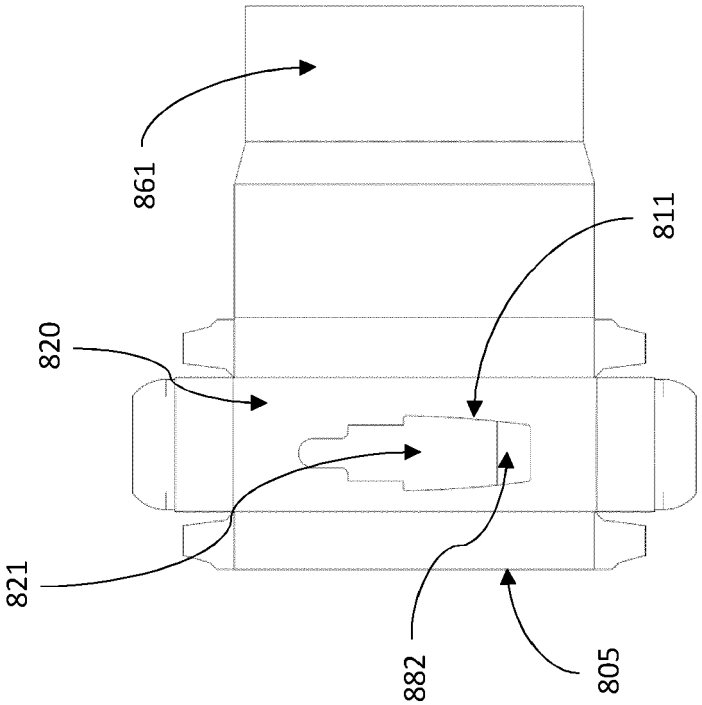
861
811
820
821
882
805
800

FIG. 8

Europäisches Patentamt
European Patent Office
Office européen des brevets

EUROPEAN SEARCH REPORT

Application Number
EP 21 15 2793

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
A,D	US 2012/006698 A1 (KUO SHENG-HSI [TW]) 12 January 2012 (2012-01-12) * paragraphs [0005], [0048] - [0050]; figures 1-4 *	1-9	INV. B65D5/50 B65D71/72
A,D	US 3 489 269 A (ROSENBERG CHARLES W JR) 13 January 1970 (1970-01-13) * column 1, lines 12-27 * * column 2, line 10 - column 4, line 30 * * figures 1-7 *	1-9	
A,D	DE 20 2012 100582 U1 (SCHUBERT GERHARD GMBH [DE]) 11 April 2012 (2012-04-11) * paragraphs [0007], [0010], [0023], [0035] - [0053]; figures 1a-4b *	1-9	
A,D	WO 2018/002795 A1 (PUSTERLA 1880 S P A [IT]) 4 January 2018 (2018-01-04) * abstract; figures 1-7 *	1-9	
A,D	US 3 189 247 A (WISCHUSEN HENRY F) 15 June 1965 (1965-06-15) * column 1, lines 9-14 * * column 1, line 51 - column 2, line 54 * * figures 1-5 *	1	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	22 February 2021	Leijten, René

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 21 15 2793

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.

22-02-2021

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2012006698 A1	12-01-2012	NONE	
US 3489269 A	13-01-1970	NONE	
DE 202012100582 U1	11-04-2012	NONE	
WO 2018002795 A1	04-01-2018	CH 712675 A2	15-01-2018
		FR 3053317 A1	05-01-2018
		GB 2554125 A	28-03-2018
		HK 1252912 A1	06-06-2019
		WO 2018002795 A1	04-01-2018
US 3189247 A	15-06-1965	NONE	

EPO FORM P0459

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

REFERENCES CITED IN THE DESCRIPTION

This list of references cited by the applicant is for the reader's convenience only. It does not form part of the European patent document. Even though great care has been taken in compiling the references, errors or omissions cannot be excluded and the EPO disclaims all liability in this regard.

Patent documents cited in the description

- US 2012006698 A **[0010]**
- US 3489269 A **[0011]**
- DE 202012100582 **[0012]**
- US 3189247 A **[0013]**
- WO 2018002795 A **[0014]**