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(54) **Shelf ready packaging having improved shelf presentation**

(57) The present relates to a shelf ready package having improved shelf presentation, even when some or all of the products have been removed.

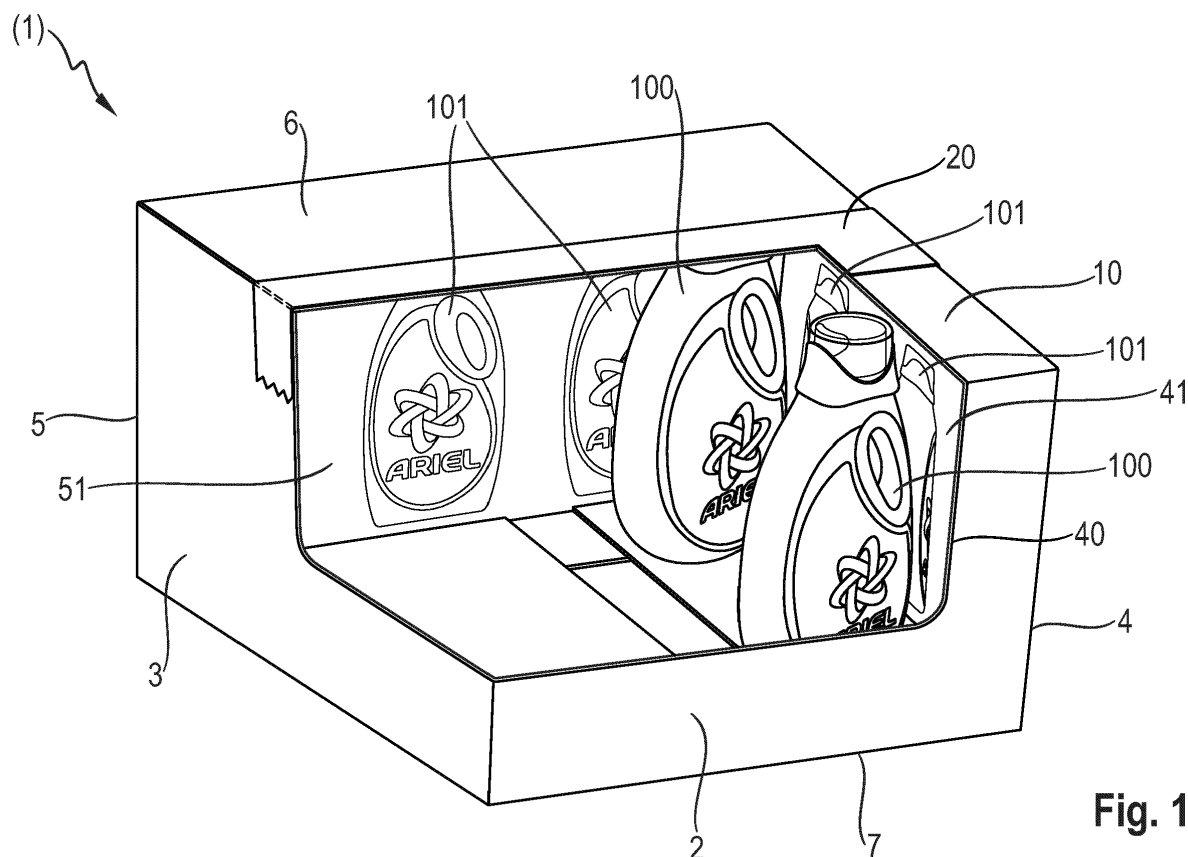


Fig. 1

Description

FIELD OF THE INVENTION

[0001] Stackable outer case packaging for transporting and displaying articles contained therein.

BACKGROUND OF THE INVENTION

[0002] Outer cases, such as cartons, made from cardboard, paperboard, or similar materials are well known and used for transporting and storing various types of articles, including retail articles and the like. Shelf ready packaging are a means for packaging a plurality of articles in outer cases in a manner that they can be displayed, for instance on a supermarket shelf or aisle, directly from the outer case without first having to remove the articles from the outer case. The individual articles, contained within the shelf ready packaging, can be individual packets, cans, bottles, bags, boxes, and the like. Typically, the shelf ready packaging has a removable element, formed by a line of weakness in the outer-case, which can be easily removed. Once the removable element has been removed, the articles contained within are displayed to the customer, and the customer is able to remove the displayed article.

[0003] Shelf ready packaging avoids the time consuming effort associated with removing articles from the outer case and placing on shelves. Store owners are constantly looking for additional ways in which to reduce costs for stacking articles, while ensuring that the article remains presentable to the customer. Such shelf ready packaging is typically placed adjacent to other shelf ready packaging, on a shelf or even on a pallet, and the removable element removed in order to display the articles contained therein. The shelf ready packages can even be stacked on top of each other, on the pallet or directly on the floor.

[0004] Since the articles will be displayed in the shelf ready package, the outer surfaces of the shelf ready packages are typically decorated with images and wording which is relevant for the articles contained therein. The outer surfaces of the shelf ready package are often decorated such that the overall impression from a stack or row of the shelf ready packages is improved.

[0005] However, once articles are removed, the continuity of the remaining articles within the shelf ready package is disturbed by the missing articles, resulting in a less appealing display arrangement. This is particularly noticeable for a series of shelf ready packages which are arranged adjacent to each other, and particularly when one or more of the shelf ready packages are empty of articles.

[0006] Hence, a need remains for a shelf ready package with improved aesthetics, particularly when the shelf ready package is partially or fully empty.

SUMMARY OF THE INVENTION

[0007] The present invention relates to a shelf ready package (1) and at least one article (100) contained therein, wherein the shelf ready package (1) has an image (101) of the article (100) printed on a surface selected from the group consisting of: side wall inner surface (31) or (41), back wall inner surface (51), and combinations thereof, wherein the image (101) on the surface is substantially aligned to the article (100), when viewed perpendicular to the surface which comprises the image (101).

BRIEF DESCRIPTION OF THE DRAWINGS

[0008]

FIG. 1 is a perspective view of a shelf ready package (1) with the top wall (6) held together with tape (20). The at least partially removable element (30), formed by a line of weakness (40) in the outer case, has been removed to expose the articles (100) contained within, and the images (101) printed on the side wall inner surface (41) and back wall inner surface (51).

FIG. 2 is a view of a carton blank (60), which can be used to make a shelf ready package of Figure 1. The carton blank (60) has images (101), of the article to be contained therein, printed on the side wall inner surface (41) and back wall inner surface (51).

FIG. 3 is a perspective view of a plurality of shelf ready packages (1) arranged adjacent to each other, on two pallets (200). The at least partially removable elements (30) of the front layer of shelf ready packages (1) have been removed, as have some of the articles that were contained within.

FIG. 4 is a front view of the plurality of shelf ready packages (1) of Figure 3.

DETAILED DESCRIPTION OF THE INVENTION

[0009] The shelf ready package (1) of the present invention comprises at least one article (100) contained within. The shelf ready package (1) has an image (101) of the article (100) printed on a surface selected from the group consisting of: side wall inner surface (31) or (41), back wall inner surface (51), and combinations thereof, wherein the image (101) on the surface is substantially aligned to the article (100), when viewed perpendicular to the surface which comprises the image (101). Thus, when the image (101) is on the back wall inner surface (51), the article (100) and image (101) are substantially aligned when viewed from the front. When the image (101) is on the left side wall inner surface (31), the article (100) and image (101) are substantially aligned when viewed from the right side. When the image (101) is on

the right side wall inner surface (41), the article (100) and image (101) are substantially aligned when viewed from the left side. The article (100) and image (101) are substantially aligned when the article (100) and image (101) substantially overlap (see figure 1). By substantially overlap, the article (100) covers at least 60%, preferably at least 70%, more preferably at least 80% of the image (101) by area, when viewed perpendicularly to the surface which comprises the image (101).

[0010] For articles (100) which have an elongated horizontal cross-section, such that the front face of the article (100) has a different width from the side face of the article (100), it is preferable that the article (100) and image (101) also have substantially the same orientation (see figure 1).

[0011] Shelf ready packages (1) are typically made from at least one carton blank (60). Lines of weakness are typically added via perforations or mechanical scoring. The carton blank is shaped and typically glued to form the four walls. The bottom flaps are then folded together and either taped or glued to form the bottom of the shelf ready package, before the articles are placed inside the shelf ready package. The top flaps are then folded together and either glued or taped together. When glued, the lower flaps have to be supported, for instance by the articles contained within the shelf ready package, or by flaps which fit into slots on the top edge of the outer case side walls, in order for there to be sufficient contact between the flaps which form the top of the outer case, to result in a strong glued bond.

[0012] Shelf ready packages (1) can be used both to transport articles (100) to the retail outlet, and also display the articles (100) in the retail outlet. As such, they are typically designed to form an aesthetically pleasing display when the shelf ready packages (1) are arranged adjacent to each other. The plurality of shelf ready packages (1) can comprise at least 2 layers, preferably from 2 to 8 layers, more preferably from 4 to 6 layers of the shelf ready packages (1), preferably placed on a pallet (200). The shelf ready packages (1) can be arranged next to each other, such as on a shelf. They can also be stacked on top of each other, as a floor display, or even displayed directly from the pallet (200). After filling, the shelf ready package (1) comprises at least one, preferably from 2 to 16, more preferably from 4 to 16 articles (100), contained within the shelf ready package (1).

[0013] As such, the shelf ready packages are preferably constructed with sufficient structural integrity that they can be stacked on top of each other, even when the at least partially removable element has been removed.

[0014] A shelf ready package (1) of the present invention is shown in figure 1, having a front wall (2), side walls (3) and (4), a back wall (5), and a top wall (6). An image (101) of the article is printed on the inner surface of side wall (3), the inner surface of the second side wall (4), the inner surface of the back wall (5), and combinations thereof. A bottom wall (7) completes the container, for totally enclosing and protecting articles contained there-

in.

[0015] The image (101) typically has all of the principle visual elements of the article (100), preferably including the overall shape, the brand name, and the like. The image (101) typically has a height of from 50% to 150% of the height of the article (100) to be contained within the shelf ready package (1). Preferably, the image (101) has a height of from 75% to 125%, more preferably from 90% to 110% of the height of the article (100) to be contained within the shelf ready package (1). While the image (101) can be in black and white or grey scale, the image (101) is preferably in color. More preferably, the article (100) and image (101) have at least one common element, preferably greater than one common element of the same color. The image (101) is preferably positioned, such that when articles have been removed, the "empty" impression of the at least partially empty shelf ready package is substantially diminished, and visual continuity is maintained across the adjacent shelf ready packages (1).

[0016] Any suitable article can be contained within the shelf ready package, including: fabric care products such as liquid laundry bottles, powdered laundry bags, fabric softeners, and the like; household cleaners, including dish washing agents, floor cleaners, and the like; personal care products such as moisturisers, cosmetics, shampoos, shaving products, and the like; diaper bags; perfumes; pet food; and combinations thereof.

[0017] Such shelf ready packages can be delivered to retail outlets, and the like, on a pallet (200) comprising at least two layers of the shelf ready package (1). More preferably, such pallets (200) comprise at least 3, more preferably at least 4 layers of shelf ready packages (1). The maximum number of layers of shelf ready packages (1) is typically 8, more typically 6, for instance, due to the size of delivery trucks.

[0018] The shelf ready package (1) is formed from at least one carton blank (60). The carton blank (60) can be made from any suitable material, such as paperboard, plastic, and combinations thereof. The carton blank (60) can be corrugated or non-corrugated. Each of the front wall (2), two side walls (3) and (4), and back wall (5) contain upper portions (61), (62), (63) and (64) respectively (see figure 2). The upper portions (61), (62), (63) and (64) collectively form the top wall (6). The carton blank (60) can also include an attachment seam (81), in order to connect together the leftmost part and rightmost part of the carton blank (60), for instance, by glueing.

[0019] The shelf ready package (1) can comprise an outer-case having a bottom wall (7), typically made from one carton blank (60) (see figure 2). Such carton blanks typically comprise lower portions (71), (72), (73) and (74) respectively, which form the bottom wall (7). The lower portions (71), (72), (73) and (74) are preferably formed into the bottom wall (7) using adhesive tape, glueing, and combinations thereof, though glueing is preferred.

[0020] Alternatively, the shelf ready package (1) can be a tray (2) and hood (3) combination, made from at least 2 carton blanks. For shelf ready packages (1) which

comprise a tray (2) and hood (3), the carton blank (60) is formed into the hood (3), which fits into the tray (2). Such hoods (3) do not comprise a bottom wall (7). In order to improve structural rigidity, particularly during transport and handling, the overlapping parts of the tray (2) and hood (3) can be glued together.

[0021] The shelf ready package (1) comprises a line of weakness (40), and an at least partially removable element (30). The at least partially removable element is at least partially removed by separating the at least partially removable element (30) from the outer case, along the line of weakness (40).

[0022] The line of weakness (40) is preferably continuous, such as forming a loop, so that the at least partially removable element (30) can be fully removed (see figure 1 and 3), preferably by hand, more preferably without the use of a tool. However, the line of weakness can also be discontinuous, such that the at least partially removable element (30) remains partly attached. For instance, when the interior surface of the removable element comprises graphics, advertising, usage instructions, and combinations thereof. When it is desirable that the at least partially removable element (30) remains partially attached to the shelf ready package, the shelf ready package (1) typically comprises a fold line (43). Such fold lines can be added to the carton blank (60), or can be added after the carton has been assembled into an outer case. In the latter case, the fold line (43) can be formed by any suitable means, such as scoring, perforating, and combinations thereof.

[0023] Scoring can be achieved by applying suitable pressure onto a knife or sharp element which is placed on the carton blank (60), before or after forming the carton blank into an outer case. A perforated fold line (43) can be formed using any suitable means, such as punch pins (typically in the form of dots or slits), a cutting disc, or a laser. For carton blanks which comprise paperboard, lasers are not preferred. The fold line (43) preferably has a resistance to separation which is higher than that of the line of weakness (40).

[0024] The continuous line of weakness (40) typically comprises perforation components (41) and land components (42). The dimensions of the perforation components (41) and land components (42) are defined to ensure protection of the articles prior to removing the at least partially removable element (30), while allowing easy and clean opening of the shelf ready packaging (1). The perforation components (41) of the continuous line of weakness (40) are preferably 1.5 to 25 millimeters in length, more preferably 10 to 15 millimeters in length. The perforation component (41) preferably is comprised of a hole or slit which penetrates the full thickness of the material forming the carton blank (60). The perforation components (41) and land components (42) can be oriented along the line of weakness (40). Alternatively, and in order to increase the force required to remove part or all of the removable element (30), part or all of the perforation components (41) can be oriented at an angle from the direction of the line of weakness (40). Alterna-

tively, or in addition, if a stronger line of weakness (40) is desired, the perforation can penetrate part way through the thickness of the material forming the carton blank. Alternatively, a stronger line of weakness (40) can be provided by reducing the length of the perforation components (41), and correspondingly increasing the length of the land components (42). The land components (42) of the continuous line of weakness (40) are preferably from 1.5 to 4 millimeters in length, more preferably from 2.5 millimeters to 3.5 millimeters in length.

[0025] In addition, the continuous line of weakness (40) preferably has a minimum radius at points of directional change of at least 10 millimeters. Points of directional change, as used herein, do not include the corners of the container. The minimum radius aids in the ease and clean removal of the at least partially removable element (30) from the shelf ready packaging (1). The radius at points of directional change is preferably 20 to 50 millimeters.

[0026] The vertical position of the continuous line of weakness (40) on the front wall (2), back wall (5), and side walls (3) and (4), is set to provide proper retention of contained articles and an unobstructed view of, and access to, articles housed by the shelf ready package (1).

[0027] The at least partially removable element (30) can be present on the front wall (2), side walls (3) and (4), top wall (6), and combinations thereof. The at least partially removable element (30) preferably comprises a front face (32), more preferably the at least partially removable element (30) comprises a front face (32) and top face (36). Even more preferably, the at least partially removable element (30) comprises a front face (32), top face (36), and at least one side face (33) or (34). In the most preferred embodiment, the at least partially removable element (30) consists of a front face (32), top face (36), and one side face (33) or (34). Such embodiments provide a large opening to view and remove articles contained within the shelf ready packaging (1), once the at least partially removable element (30) has been removed, while also providing a corner, side wall (3) or (4), and back wall (5) to support other shelf ready packages that may have been placed on top of the shelf ready package.

[0028] If present, the front face (32) of the at least partially removable element (30) preferably comprises from 25 to 95 percent of the front wall (2) area, more preferably from 50 to about 90 percent of the front wall (2) area. If present, the top face (36) of the at least partially removable element (30) preferably comprises from 25 to 85 percent of the top wall (6) area, more preferably from 40 to about 70 percent of the top wall (6) area. Where the at least partially removable element (30) is not fully removable, the wall area of the shelf ready package (1) which forms the at least partially removable element (30) is calculated based on the shortest straight line between the start of the line of weakness (40) and end of the line of weakness (40).

[0029] The line of weakness (40) can be made using any known means, such as scoring; perforating; and

combinations thereof. The line of weakness (40) can be a single line, or a series of lines, such as those that make up a tear strip configuration. Preferably, the line of weakness (40), is a perforated line as illustrated in the Figures. The line of weakness can be formed either on the carton blank (60), before assembly of the outer case, or on the assembled outer case, after it has been filled with the desired articles. Scoring can be achieved by applying suitable pressure onto a knife or sharp element which is placed on the carton blank or formed carton. A perforated line of weakness can be formed using any suitable means, such as punch pins (typically in the form of dots or slits), a cutting disc, or a laser.

[0030] The line of weakness (40) has a substantially constant resistance to separation along its length. For example, if the line of weakness (40) is a scored line, then it is of constant depth and density. Alternatively, if the line of weakness (40) is a perforated line, the dimensions of the perforation and the un-perforated portion in-between the perforations is constant. The properties of the line of weakness (40) may vary in the corners of the outer case to impart strength properties as described more fully below.

[0031] The shelf ready package can be at least partially sealed using tape (20) which overlaps at least part of the line of weakness (40). The tape can be perforated, such that the tape perforations (50) coincide with at least part of the line of weakness (40). Any suitable means can be used to perforate the tape, the outer-case, and combinations thereof. Suitable means include using a laser, a knife, such as a rotary knife, punch-pins, and combinations thereof.

[0032] Grasping members (38) can be optionally employed to aid in the removal of the at least partially removable element (30). Preferably, the present invention employs at least one grasping member (38) on at least two faces of the at least partially removable element (30). More preferably, the removable element comprises a front face (32) and a top face (36), with both the front face (32) and the top face (36) comprising at least one grasping member (38), allowing separation of the removable element to start either from the front face (32) or the top face (36). Such grasping members are preferably positioned adjacent to the line of weakness (40). Thus, a person can engage the grasping members (38) and begin separation of the top face (36) of the at least partially removable element (30) from the shelf ready package (1). Preferably, the grasping member (38) remains attached to the at least partially removable element (30), when the at least partially removable element (30) is separated from the shelf ready package (1).

[0033] The grasping member (38) can be defined by secondary lines of weakness (39). Each secondary line of weakness (39) may exhibit a uniform resistance to separation along its entire length, or alternatively vary in resistance to separation along its length. Preferably, each secondary line of weakness (39) varies in resistance to separation along its length, allowing each grasp-

ing member (38) to be only partially disassociated from the walls (that is, separated along a first region and rotatably displaced along one or more remaining regions of secondary line of weakness (39). This avoids separate disposal issues. The secondary lines of weakness (39) can be perforated lines, with optionally each line having a varying resistance to separation along its length by virtue of having land components and perforation components of varying dimensions.

[0034] The grasping member (38) should be of sufficient size and geometry to readily receive at least one human finger, and preferably two fingers. Alternatively, various tools, such as a hook, could be inserted into the grasping member (38) for removing the at least partially removable element (30) from the shelf ready packaging (1).

[0035] The shelf ready packaging (1) preferably has a maximum box compression strength of at least 1500 N, preferably greater than 2500 N, more preferably greater than 3500 N, according to ISO 12048. The box compression strength of an outer-case, including shelf ready packages (1), is a direct measure of the stacking strength of outer-case. However, since the load-bearing properties of a box are often of decisive importance under modern transport conditions, it can also be said that the compression strength constitutes a general measure of the performance potential of an outer-case.

[0036] When the shelf ready package (1) comprises a line of weakness (30) which passes through at least one vertical corner, the shelf ready package (1) can further comprise a panel (80), such as a display panel, which covers the line of weakness (30) on the vertical corner. The compression strength of a shelf ready package (1), which comprises a line of weakness (30) which passes through a vertical corner between a side wall (3) or (4) and the front wall (2), can also be improved by adding a panel (80) which is attached to the side wall (3) or (4) and the front wall (2). The panel can be attached to the side wall (3) or (4) and the front wall (2) by any suitable means, including gluing, taping, and combinations thereof, though gluing is preferred. Such panels (80) can also be attached to the front wall (2) and both side walls (3) and (4). Where the panel (80) is continuous sleeve, having a front part, a back part, and two side parts, the panel (80) need not be attached to the shelf ready package (1), but can be slipped over the shelf ready package (1).

[0037] Such panels can also be used to advertise the product inside, or even to customise a generic shelf ready package (1) into one which displays information related to the articles contained therein.

[0038] The shelf ready package (1) can be formed using any suitable means. Such processes can include the steps of:

- (a) folding a carton blank (60) to form an outer case having an at least partially removable element (30), formed by a line of weakness (40), such that the at least partially removable element (30) can be at least

partially removed along the line of weakness (40);
 (b) bonding the front lower portion (72) and back lower portion (75) together, preferably using glue, tape, and combinations thereof, to form a bottom wall (7);
 (c) placing articles inside the outer case;
 (d) bonding the first upper portion (62) and second upper portion (65) together using tape (20);

[0039] The carton blank (60) is typically made from paperboard, usually in roll-form. The paperboard is typically unwound for printing and the printed paperboard rerolled for later use, or immediately corrugated. Alternatively, printing can take place after corrugation. The image (101) of the article is printed on the part of the paperboard which will form the side wall inner surface (31) or (41), back wall inner surface (51), and combinations thereof. Generally, at least part, and sometimes all, of the surface of the paperboard which will form the outer surface of the shelf ready package is also printed.

[0040] Corrugation is typically achieved by running paperboard through corrugation wheels, to form a corrugated layer (often referred to as medium or fluting). A further two roll of paperboard is fed into the corrugators, either sequentially or simultaneously, and glued onto the corrugated layer to form the inner and outer layers of the single wall corrugated board. One or both of the inner and outer layers can be printed.

[0041] Alternatively, the corrugated board can have other structures, such as single face (one layer of liner and one layer of medium), double wall (3 layers of liners having 2 layers of mediums in between).

[0042] The corrugated board is typically cut into rectangular sheets (also called blanks), or can be directly cut into the required shape to form the carton blank (60). At the same time, or afterwards, the line of weakness (30) can be formed into the carton blank (60). The carton blank (60) is folded and glued to form the shelf ready package (1).

[0043] The dimensions and values disclosed herein are not to be understood as being strictly limited to the exact numerical values recited. Instead, unless otherwise specified, each such dimension is intended to mean both the recited value and a functionally equivalent range surrounding that value. For example, a dimension disclosed as "40 mm" is intended to mean "about 40 mm".

Claims

1. A shelf ready package (1) and at least one article (100) contained therein, wherein the shelf ready package (1) has an image (101) of the article (100) printed on a surface selected from the group consisting of: side wall inner surface (31) or (41), back wall inner surface (51), and combinations thereof, wherein the image (101) on the surface is substantially aligned to the article (100), when viewed perpendicular to the surface which comprises the image

(101).

2. The shelf ready package (1) and at least one article (100) contained therein according to claim 1, wherein the shelf ready package (1) comprises at least one carton blank (60), formed into an outer case having:

(a) a top wall (6),
 (b) two side walls (3) and (4), each comprising an inner surface (31) and (41) and an outer surface (32) and (42),
 (c) a front wall (2),
 (d) a back wall (5), comprising an inner surface (51) and an outer surface (52),
 the shelf ready package (1) further comprises an at least partially removable element (30), formed by a line of weakness (40), such that the at least partially removable element (30) can be at least partially or fully removed along the line of weakness (40).

3. The shelf ready package (1) and at least one article (100) contained therein according to any preceding claim, wherein the image (101) has a height of from 50% to 150% of the height of the article (100).

4. The shelf ready package (1) and at least one article (100) contained therein according to any preceding claims, wherein the article (100) covers at least 60%, preferably at least 70%, more preferably at least 80% of the image (101) by area, when viewed perpendicularly to the surface which comprises the image (101).

5. The shelf ready package (1) and at least one article (100) contained therein according to any preceding claims, wherein the image (101) is in colour.

6. The shelf ready package (1) and at least one article (100) contained therein according to any of claims 2 to 5, wherein the at least partially removable element (30) comprises from 25 to 95 percent of the front wall (2) area.

7. The shelf ready package (1) and at least one article (100) contained therein according to any of claims 2 to 6, wherein the top face (36) of the at least partially removable element (30) preferably comprises from 25 to 85 percent of the top wall (6) area.

8. The shelf ready package (1) and at least one article (100) contained therein according to any preceding claim, wherein the shelf ready package (1) comprises from 2 to 16 articles (100), contained within the shelf ready package (1).

9. A plurality of shelf ready packages (1) according to any preceding claims, wherein the shelf ready pack-

ages (1) are arranged adjacent to each other.

10. The plurality of shelf ready packages (1) according to claim 9, wherein the plurality of shelf ready packages (1) comprises at least 2 layers of the shelf ready packages (1), preferably placed on a pallet (200).

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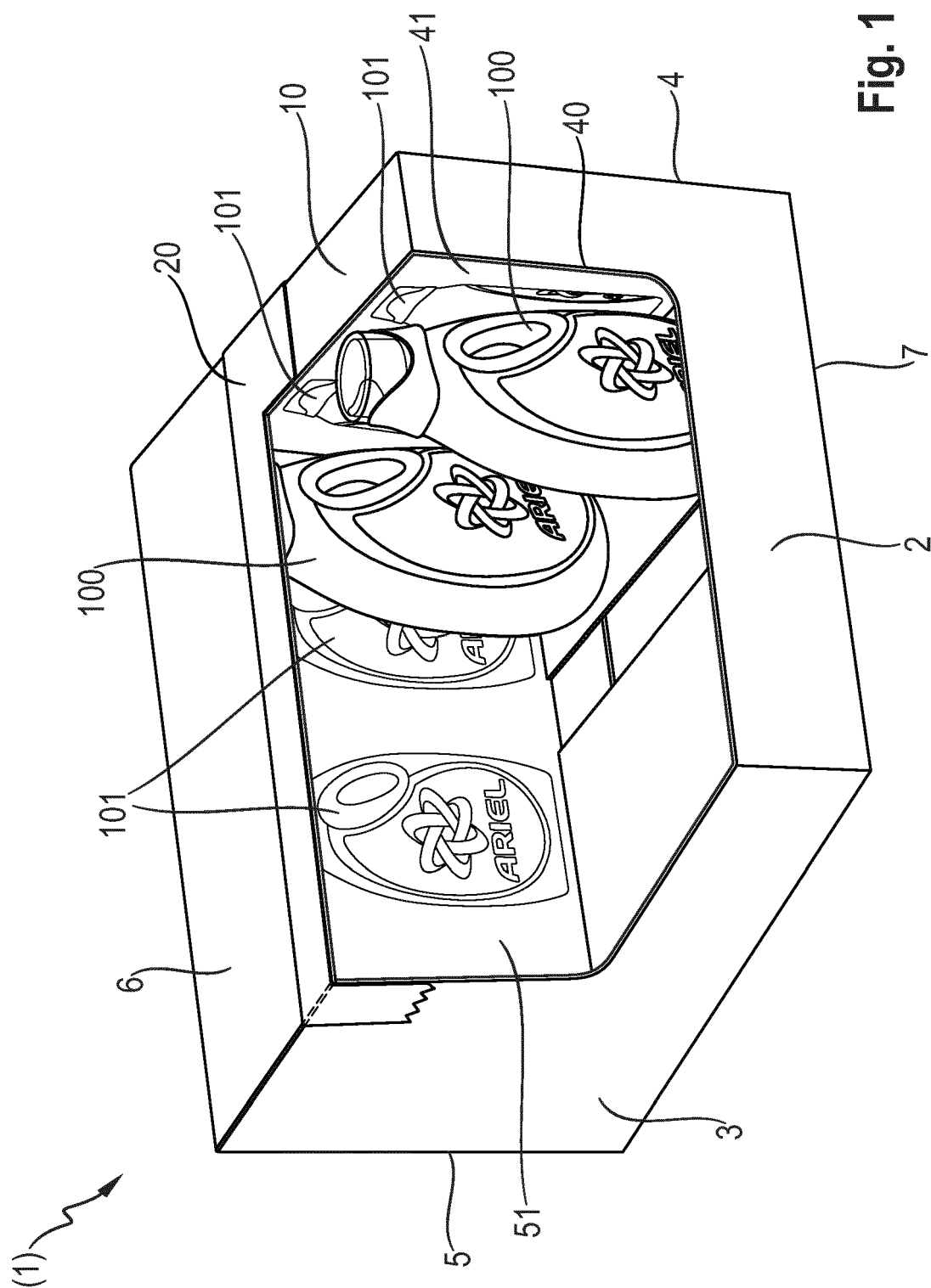


Fig. 1

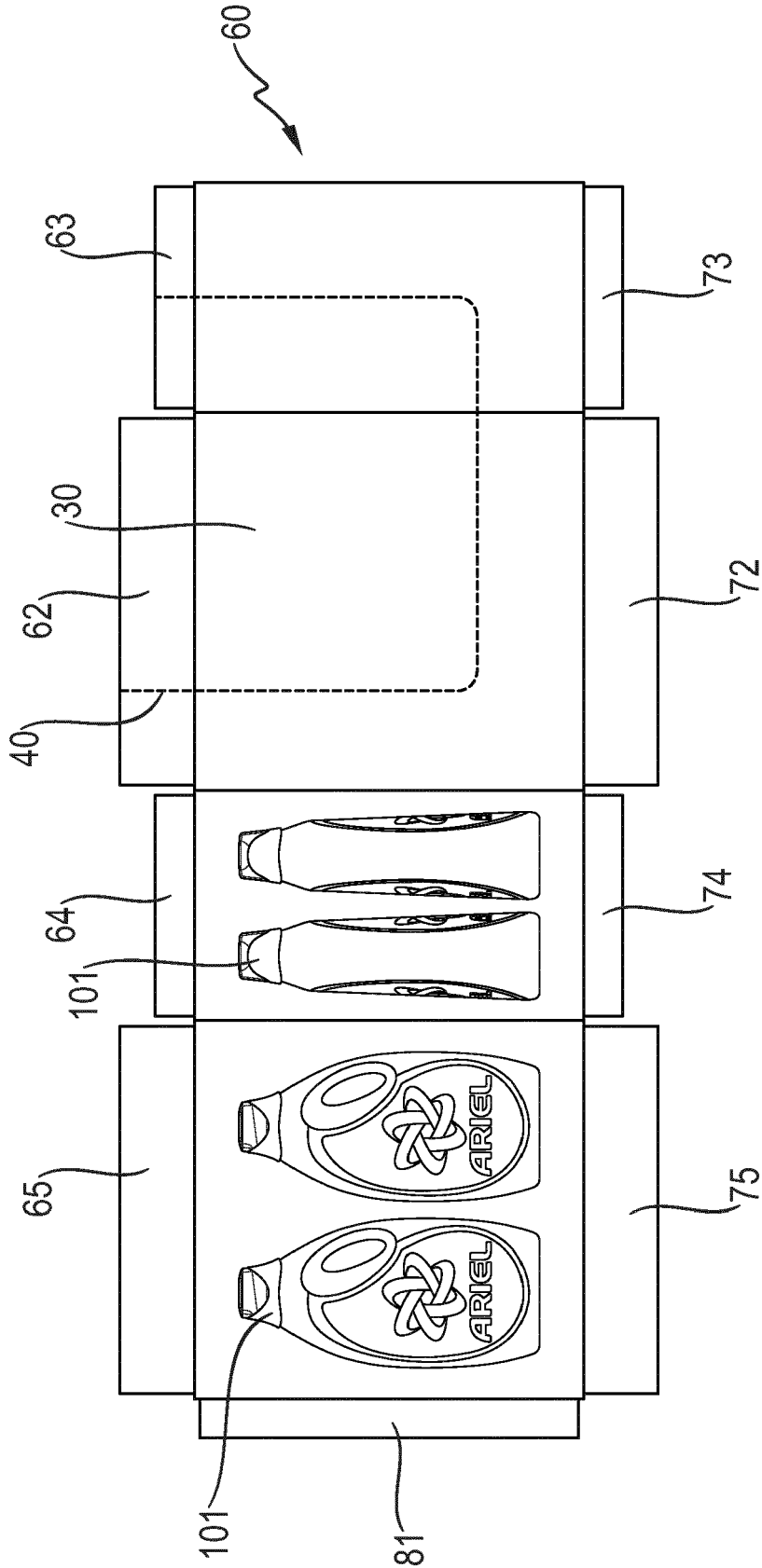


Fig. 2

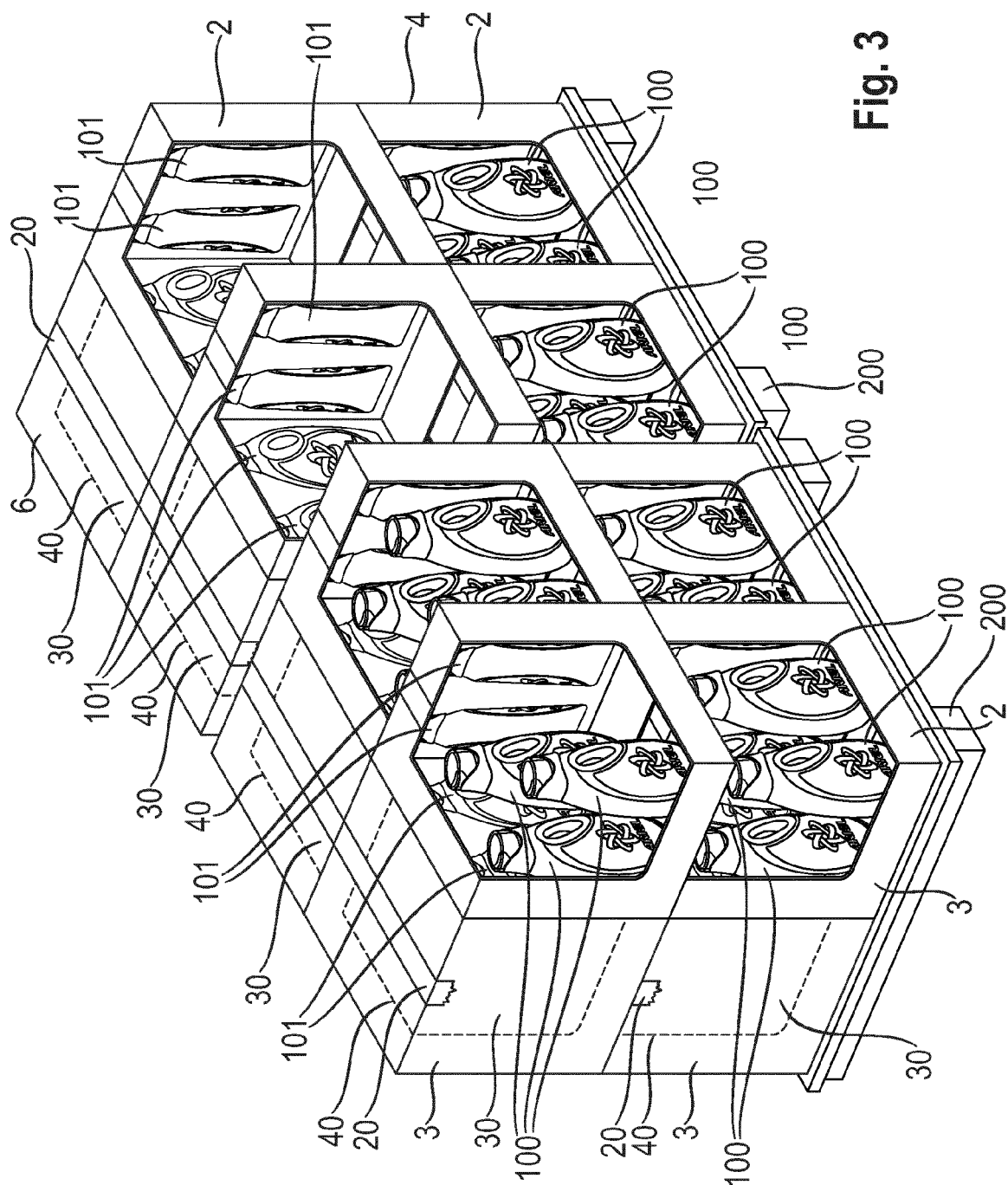


Fig. 3

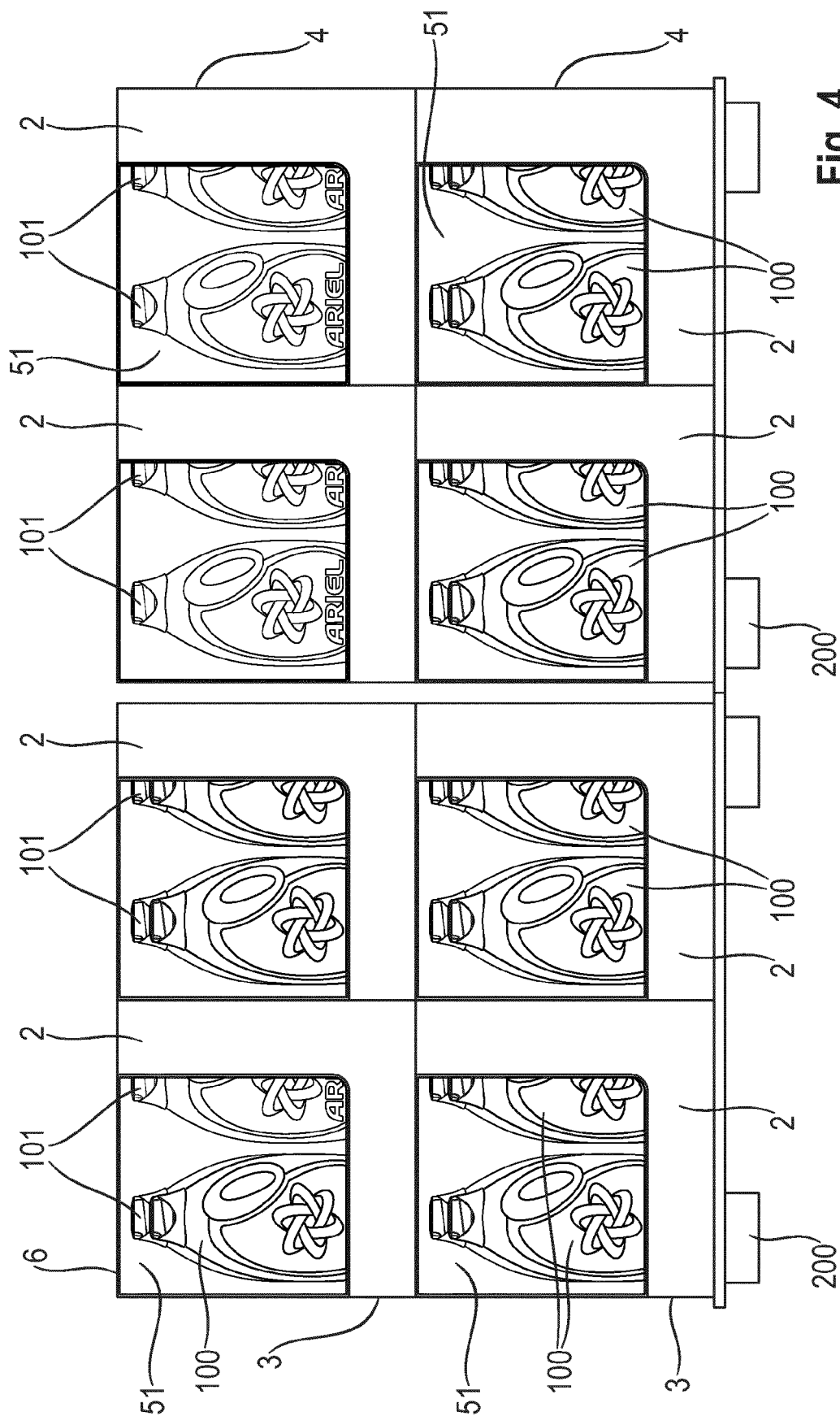


Fig. 4



EUROPEAN SEARCH REPORT

Application Number
EP 14 17 4960

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DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
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The present search report has been drawn up for all claims			
Place of search Munich		Date of completion of the search 18 November 2014	Examiner Serbescu, Anca
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)

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