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

(11) EP 2 559 635 A1

(12) EUROPEAN PATENT APPLICATION

(43) Date of publication:
20.02.2013 Bulletin 2013/08

(51) Int Cl.:
B65D 83/08 *(2006.01)*

(21) Application number: **12180737.4**

(22) Date of filing: **16.08.2012**

(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

(30) Priority: **17.08.2011 US 201161524558 P**
15.08.2012 US 201213586046

(71) Applicant: **C.G. BRETTING MANUFACTURING CO., INC.**
Ashland, WI 54806 (US)

(72) Inventor: **Lauzon, James S.**
Bessemer, MI Michigan 49911 (US)

(74) Representative: **Lawrence, John**
Barker Brettell LLP
100 Hagley Road
Edgbaston
Birmingham
B16 8QQ (GB)

(54) Folded sheet product and packaging arrangement

(57) A folded product and packaging arrangement (200) utilizes quarter folded and interfolded sheets (100) forming a more-or-less square or cube shaped stack/clip (120) of interfolded sheets (100) closely matching the inside profile of a substantially cube-shaped package (202), substantially completely filling the package, and allows the same number of sheets provided by former packaging arrangements, which used rectangular sheets folded into U-shaped clips, in a package with a substantially square footprint and having only half the height of the previous packages. Alternatively, the new folding arrangement allows twice as many sheets to be provided in the same size package used in prior approaches requiring U-shaped folded clips of rectangular sheets. Stacked packages (202) inside of a cover (400) may be repositioned when an upper package is expended to present tissue from a fresh box through the top of the cover.

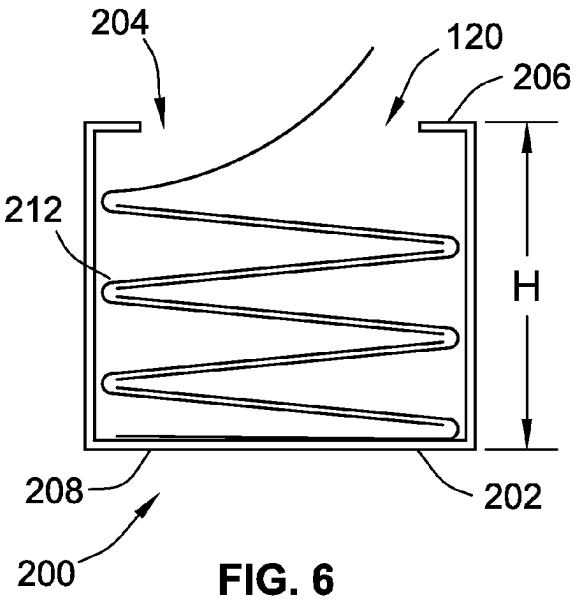


FIG. 6

EP 2 559 635 A1

Description

CROSS-REFERENCE TO RELATED PATENT APPLICATIONS

[0001] This patent application claims the benefit of U.S. Provisional Patent Application No. 61/524,558, filed August 17, 2011, the entire teachings and disclosure of which are incorporated herein by reference thereto.

FIELD OF THE INVENTION

[0002] This invention generally relates to folded sheet products, and more particularly to folded sheet products such as facial tissues dispensed from a pop-up type package.

BACKGROUND OF THE INVENTION

[0003] In current packaging for boutique/cubed cartons of interfolded facial tissue, the entire clip (or stack) of rectangular-shaped interfolded tissue sheets is folded in half, to form a U-shaped clip, and then inserted into a cube-shaped box, in the manner disclosed in the following U.S. patents: 3,881,632 to Early; 5,415,320 to North; 6,202,889 to Veith; and 6,685,050 to Schmidt. This approach to packaging results in substantial wasted volume inside of the cube-shaped box, in areas such as around the outer corners and in the center of the U-shaped clip, because the sheets cannot be bent sharply enough to totally fill the box and still allow extraction.

[0004] A standard box size for current packaging techniques is approximately 4½ inches wide, 4½ inches long, and 5 inches high. Such a typical box generally holds 70-90 sheets when the clip is folded into a U-shape. It is desirable to provide an improved product having a larger number of sheets available in the same volume as existing packages.

[0005] Another problem with the current type of packaging is that, for tall cartons, some form of center support must be provided for the U-shaped folded clip of tissue in order to keep the center portion of the clip close enough to the opening in the top of the package so that the sheets will feed effectively all the way to the bottom of the stack. The necessity for such a center support significantly increases the complexity and cost of the box, the package and the labor and cost required to produce the package. Having unusable space in the packages produced by current packaging methods and products is also environmentally not friendly in that resources in the package are not used to their full capability. Larger-than-necessary packages also undesirably increases shipping and storage costs, as well as undesirably increasing costs for recycling and/or disposing of the packaging once the contents are all dispensed.

[0006] U-shaped sheets are also somewhat difficult to pull from the package with one hand, particularly when the package is first opened and the sheets are tightly packed, and when the package is almost empty and doesn't weigh enough for the sheet to be pulled out without friction between the package and the sheet causing the package to be lifted off of the surface upon which it resting along with the tissue that the user is attempting to remove from the package. As a result, users often resort to a cover placed over the package to increase the weight of the combined cover and package, and thereby improve the dispensing characteristics. Such covers are also sometimes used primarily for decorative purposes.

[0007] An improved packaging approach and/or product addressing, among other things, one or more of the problems described above is desirable.

BRIEF SUMMARY OF THE INVENTION

[0008] The invention provides a more efficient stacked product and packaging arrangement therefor, through the use of quarter folded and interfolded sheets forming a more-or-less square or cube shaped stack/clip of interfolded sheets closely matching the inside profile of a substantially cube-shaped package. This new folding arrangement substantially completely fills the package, and allows the same number of sheets provided by former packaging arrangements, which used rectangular sheets folded into U-shaped clips, in a package with a substantially square footprint and having only half the height of the previous packages. Alternatively, the new folding arrangement allows twice as many sheets to be provided in the same size package used in prior approaches requiring U-shaped folded clips of rectangular sheets.

[0009] By moving away from the prior rectangular-shaped tissue profile, and using instead a new quarter folded and interfolded approach, the same 70-90 sheets of interfolded facial tissue can be packaged into a package such as a cardboard or paperboard box or a poly-wrapped (e.g. cellophane wrapped) package that is half the height of current packaging utilizing the U-shaped folded clip. The new tissue folding pattern starts with an essentially square sheet of tissue which is folded in half a first time to form a rectangular shaped folded sheet, and then the sheet is folded a second time to form an approximately square folded sheet. The twice-folded sheets are interfolded with one another to form an interfolded stack of sheets.

[0010] The invention thus provides a number of potential advantages. For example, the same number of sheets currently provided in a package utilizing a U-shaped clip can now be provided in a package one half of that size, or alternately twice the number of facial tissues can be provided in the same size package as is currently utilized. This results in saving shipping costs for customers, shelf space required for retailers, and a potential savings in natural resources.

[0011] Furthermore, according to another aspect of the invention, existing decorative tissue dispensers can be used with the invention by simply inserting two boxes of

tissue according to the invention into the dispenser, with one box on top of the other. When the tissue in the top box is exhausted, the top and bottom box are simply interchanged, and tissue is dispensed from the top box sitting on top of the lower empty box within the decorative dispenser. Another advantage of this approach is that the center supports utilized in prior packaging approaches to support the bight of the U-shaped clip of interfolded tissue are not required, thus saving on cost and conserving resources.

[0012] A particular embodiment of the invention provides a folded product and package arrangement that includes a stack of interfolded substantially square sheets of tissues and a package. The substantially square sheets of tissue are folded substantially in half a first time along a first fold line to form a rectangular-shaped, once-folded sheet having a double thickness, and then having the once-folded, double thickness rectangular sheet folded substantially in half a second time about a second fold line extending substantially perpendicular to the first fold line, to thereby form a twice-folded sheet having a substantially square periphery having four stacked panels of substantially one quarter the size of the sheet before folding. These sheets are then interfolded and the formed stack is not then U-shape folded. The package has a substantially square footprint encompassing the stack.

[0013] In one embodiment, the interfolded substantially square sheets of tissue have a single-fold configuration wherein first and second panels of a sheet are positioned within an upstream sheet and third and fourth panels of the sheet are positioned within a downstream sheet.

[0014] In one embodiment, the second fold lines of the interfolded sheets are parallel to one another.

[0015] In one embodiment, each sheet has an unfolded width and an unfolded length of between about six and ten inches and each panel has a length and a width of between three inches and five inches.

[0016] In one embodiment, the package has a substantially square bottom defining the substantially square footprint, the panels of the sheets are substantially parallel to the substantially square bottom.

[0017] In one embodiment, a width of the panels is substantially equal to a width of the bottom of the package and a length of the panels is substantially equal to a length of the bottom of the package. In one more particular embodiment, the dimensions of the panels are no less than 85%, no less than 90% or no less than 95% of the corresponding dimensions of the bottom of the package. In embodiments where the package is provided entirely by a thin wrapper, the dimensions of the stack are substantially equal to the dimensions of the package.

[0018] In one embodiment, the entire stack is not U-shape folded within the package such that the panels of each sheet remain parallel to the bottom of the package, the bottom being opposite the side having the opening through which the sheets are dispensed from the package.

[0019] In another embodiment, a product and packaging arrangement including two or more folded product and package arrangements and a cover is provided. Each folded product and package arrangement includes a stack of interfolded substantially square sheets of tissue folded substantially in half a first time along a first fold line to form a rectangular-shaped, once-folded sheet having a double thickness, and then having the once-folded, double thickness rectangular sheet folded substantially in half a second time about a second fold line extending substantially perpendicular to the first fold line, to thereby form a twice-folded sheet having a substantially square periphery having four stacked panels of substantially one quarter the size of the sheet before folding; and a package having a substantially square footprint encompassing the stack. The cover is adapted to sit over the stacked product and package arrangements and has an opening in a top end thereof for access to tissues dispensed from a top one of the stacked product and package arrangements.

[0020] In one embodiment, a lower one of the stacked product and package arrangements has dispensed substantially all of the product enclosed therein and supports at least one of the stacked product and package arrangements as the product is dispensed therefrom.

[0021] In one embodiment, the package of each folded product and package arrangement has rigid sidewalls to support the upper one of the stacked products after all of product enclosed therein has been dispensed as the product is being dispensed from the supported one of the product and package arrangement. The rigid sidewalls may provide self-supporting characteristics to the package.

[0022] In one embodiment, the cover has a bottom opening sized larger than the square footprint of the packages, the bottom opening being on in a bottom end opposite the opening in the top end.

[0023] A method for using a product and package arrangement as described above is provided. the method includes sequentially performing the steps of: a) covering a stack of the two or more product and package arrangements; b) dispensing tissue through the top of the cover from an uppermost one of the stacked product and package arrangements; c) exchanging placement in the stack or the uppermost one of the product and package arrangements with another one of the product and package arrangements in the stack; and d) dispensing tissue through the top of the cover from the another one of the stacked product and package arrangements.

[0024] Other aspects, objects and advantages of the invention will be apparent from the written description herein and the accompanying drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

[0025] The accompanying drawings illustrate several aspects of exemplary embodiments of the present invention and, together with the description, serve to explain

the invention. In the drawings:

FIG. 1 is top simplified illustration of a sheet according to an embodiment of the invention;

FIG. 2 is a top simplified illustration of the sheet of FIG. 1 after it has been once folded;

FIG. 3 is a top simplified illustration of the sheet of FIG. 2 after it has been twice folded to form four panels of equal size;

FIG. 4 is a simplified and exaggerated side view illustration of the twice folded sheet of FIG. 3;

FIG. 5 is a side view illustration of a partial stack or clip of interfolded sheets showing the single-fold pattern of interfolding according to an embodiment of the present invention;

FIG. 6 is a simplified side view illustration of a product and packaging arrangement according to an embodiment of the present invention;

FIG. 7 is a simplified side view illustration of a prior art product and packaging arrangement using non-square rectangular folded sheets having a length that is significantly greater than a length of the package in which the sheets are stored such that the sheets must be placed in the packaging in a U-shaped configuration. FIGS. 6 and 7 are considered to have the same number of sheets;

FIG. 8 is a bottom view illustration of the package of the product and packaging arrangement of FIG. 7 showing the similar shape and size for the footprint of the package as compared to the footprint of the quarter-folded sheet of FIG. 3;

FIG. 9 is a cross-section illustration of a pair of product and packaging arrangements positioned within a cover;

FIG. 10 is a cross-sectional illustration of FIG. 9 showing the top product and packaging arrangement substantially exhausted of its product; and

FIG. 11 is similar to FIG. 10 but has the top and bottom packages of FIG. 10 switched so that the empty package supports the still full product and package arrangement.

[0026] While the invention is described herein in connection with certain exemplary embodiments, there is no intent to limit it to those embodiments. On the contrary, the intent is to cover all alternatives, modifications and equivalents as included within the spirit and scope of the invention.

DETAILED DESCRIPTION OF THE INVENTION

[0027] Exemplary embodiments of the invention are described above and shown in the accompanying drawings.

[0028] FIG. 1 is a simplified illustration of a sheet 100 according to an embodiment of the present invention prior to being folded and interfolded with one or more second or third sheets of similar form. When the sheet 100 is finally folded, it will be quarter folded to provide for improved packaging in a package 200, see e.g. FIG. 6 over prior art designs.

[0029] The sheet 100 has a width *W* and a length *L* in its unfolded state as illustrated in FIG. 1. The illustrated sheet, preferably, has a substantially square profile such that the width *W* and length *L* are substantially equal to one another such that the sheet 100 begins with a substantially square outer periphery. However, it is contemplated that in alternative embodiments, the width *W* and length *L* may be different such that sheet 100 has a substantially rectangular outer periphery.

[0030] The sheet 100 generally has four edges 106A-106D. The first and second edges 106A, 106B extend between the third and fourth edges 106C, 106D while the third and fourth edges 106C, 106D extend between the first and second edges 106A, 106B. The first and second edges 106A, 106B are generally parallel to one another and extend generally perpendicular to the third and fourth edges 106C, 106D, which also extend parallel to one another.

[0031] FIG. 2 illustrates sheet 100 after a first folding step where the sheet has been folded in half about a first fold line 102. The sheet 100 has now been folded in half to form a rectangular-shaped, once folded sheet having a double thickness. More particularly, there are now two interconnected panels that overlap one another having the rectangular shape generally illustrated in FIG. 2. The two panels are connected to one another by first fold line 102.

[0032] The first fold line 102 runs substantially perpendicular to first and second edges 106A and 106B of sheet 100, which are on opposite sides of sheet 100. The first fold line 102 runs substantially parallel to third and fourth edges 106C and 106D of sheet 100, which are on opposite sides of sheet 100 and that run perpendicular to first and second edges 106A and 106B. In FIG. 2, a first half of the first and second edges 106A, 106B, respectively, overlaps a second half of the corresponding one of the first and second edges 106A, 106B. As such, the width *W1* of this once-folded sheet is half of width *W* of the unfolded sheet 100 (FIG. 1). Further, third edge 106C lays on top of fourth edge 106D. Thus, fourth edge 106D is illustrated with a dashed lead line for reference number 106D. The length of this once-folded sheet remains the same as the original unfolded sheet 100.

[0033] FIG. 3 illustrates sheet 100 after a second folding step where the sheet 100 has been folded about a second fold line 104, which is substantially perpendicular

to first fold line 102 and perpendicular to third and fourth edges 106C, 106D. The previously previous rectangular-shaped, once-folded sheet having a double thickness (i.e. two interconnected panels) has been folded in half about second fold line 104 to form a twice-folded sheet. In the twice-folded state, the sheet 100 forms four stacked and interconnected panels of substantially one-quarter the size of the sheet 100 before folding. This twice-folded state of sheet 100 can also be referred to as "quarter-folded."

[0034] Due to this folding step, the first edge 106A, now overlaps the second edge 106B and the third and fourth edges 106C, 106D are now folded in half. Further, first fold line 102 forms one side of the peripheral shape of the quarter folded sheet 100 and second fold line 104 forms another, perpendicular, side of the peripheral shape of the quarter folded sheet 100.

[0035] Each of the four panels has a substantially rectangular periphery, square in the illustrated embodiment, having a width *W1* that is one-half of the width *W* of the original sheet 100, due to the first folding operation about first fold line 102, and a length *L1* that is one-half of the length *L* of the original sheet 100, due to the second folding operation about the second fold line 104.

[0036] FIG. 4 is a schematic simplified and exaggerated side view of the sheet 100 when viewed about arrow 110 of FIG. 3 and generally parallel to second fold line 104 and first and second edges 106A, 106B.

[0037] FIG. 5 is a simplified illustration of a portion of a stack 120 or clip of interfolded, quarter folded sheets 100A-100E. Here, adjacent sheets are interfolded along the second fold line of each sheet to form a single-fold pattern of interfolded sheets. With the sheets 100A-100E being quarter folded, other than the first and last sheet in the clip or stack, each sheet receives four quarter panels in the opening 122B-122D formed by the sheet. More particularly, two overlapped panels of an upstream sheet and two overlapped panels of a downstream sheet are received in opening 122B-122D formed by a particular sheet. In other words, a double thickness of each adjacent sheet is received in each opening of an individual sheet. Further, other than the first and second sheets 100A, 100E, two overlapped panels of a given sheet 100 are positioned within the opening 122 of the immediately upstream sheet 100 while the other two overlapped panels of the sheet 100 are positioned within the opening 122 of the immediately downstream sheet 100. While shown in FIG. 5 with significant spacing between adjacent sets of panels, this is merely done for illustrative purposes. Typically, the panels will lay flat on top of one another. Again, FIG. 5 is exaggerated for illustrative purposes. This exaggeration and simplification has been used in numerous of the following illustrations as well.

[0038] Because the sheets are interfolded along the second fold lines 104, the second fold line 104 of the sheets form the left and right sides of the stack of sheets. In this configuration, the second fold lines 104 of all the sheets are parallel to one another. The sheets that open to the right have their second fold line forming the left side of the stack and the sheets that open to the left have their second fold line forming the right side of the stack. It should be noted that left and right as used herein are merely used to describe relative orientation only.

[0039] FIG. 6 is a schematic representation of a product and packaging arrangement 200 according to an embodiment of the present invention. The product and packaging arrangement 200 includes a stack 120 of interfolded, quarter folded sheets 100 within a package 202. Further, the package 202 is typically formed from folded cardboard or paperboard such that it is generally rigid such as is known in standard packaging. Prior to being shipped, these product and packaging arrangements 200 will be wrapped, typically, in a cellophane wrapper.

[0040] In an alternative embodiment, the package 202 could be provided solely by a wrapper formed from cellophane or other thin polymeric material, also referred to as a polywrap. In such an embodiment, the thin wrapper will include an opening in the top thereof. The opening could be provided by a die-cut or perforated slit or panel that can be opened by the user to access the sheets stored therein.

[0041] In some embodiments, an attachment device may be placed to the outside of the package 202 to secure the entire product and packaging arrangement 200 to an object such as the dashboard of a car, a wall in a bathroom, under a desk, etc. For instance, the attachment device could be double sided non-marring tape, could be hook or loop material, or other adhesive type material or mechanism.

[0042] The package 202 includes an opening 204 in a top 206 thereof through which sheets are dispensed from the package 202. When one sheet is pulled through the opening 204 a portion of the next sheet in the stack 120 is drawn out of the opening due to the interfolded relationship between adjacent sheets. The foot print of the package 202 generally defined by the bottom 208 and top 206 of the package is substantially the same as the foot print of the stack 120 when the stack 120 is not positioned within the internal cavity 212 of the package 202. With reference to FIG. 8, the bottom 208 of package 202 is illustrated and is substantially the same in shape and size as the foot print defined by the twice folded, quarter folded sheet 100 of FIG. 3. The width *W2* and length *L2* of the package 202 defined, in this instance, by the bottom 208 is substantially equal to or slightly larger than the width *W1* and length *L1* of the twice folded quarter folded sheet 100 of FIG. 3. For instance, the dimensions of the foot print of the package 202 may be greater than the dimensions of the quarter folded panels of sheet 1 by 35% or less. Preferably, the dimensions of the foot print of the package 202 are less than 25% greater than the dimension of the quarter folded panels. Even more preferably, the dimensions of the foot print of the packages 202 is less than 10 % greater than the dimensions of the quarter folded panels.

[0043] Due to the relative size and shape of the foot

print of the package 202 and the dimensions of the quarter folded sheets, the panels of the individual sheets remain substantially horizontal within the package 202. This is unlike the prior art product and packaging arrangement 300 illustrated in FIG. 7 and as discussed above. In the illustrated embodiment, because the sheets are better sized for the package in which they are positioned, there is not wasted space within the internal cavity 212 of the package 202. It is noted that the prior art has a stack of sheets that are only once folded in half and thus the length of the sheets is greater than the length of the package. Further, the two product and package arrangements 200 and 300 have the same number of sheets.

[0044] Due to the better use of space within the package 202, each package 202 has a height *H* that is approximately one half the height *H1* of package 302 of the prior art.

[0045] FIG. 9 illustrates a further benefit of embodiments of the present invention. More particularly, due to the reduced height *H* of the package 202 due to the quarter folded sheets, two product and package arrangements 200 can be positioned in a single cover 400. This provides multiple improvements over the prior art.

[0046] First, the height between the bottom 208 of the package 202 and the top of the package 206 for the particular product and package arrangement 200A from which product is being dispensed is reduced in half such that there is no need to provide any internal support for keeping the end portion of the sheets of the stack close enough to the opening in the top of the package so that the sheets will feed effectively from the package 202 all the way to the bottom of the stack, such as illustrated in FIG. 9.

[0047] Additionally, twice as many sheets may be loaded into a single cover 400. More particularly, as illustrated in FIGS. 9 and 10, two product and package arrangements 200 can be stacked within a prior art cover 400 such that twice as many sheets can be loaded into the cover 400. Cover 400 includes an opening 402 in a top 404 thereof through which sheets 100 are accessed and dispensed from a corresponding package 202.

[0048] Once, the sheets in the top product and package arrangement 200A have all been or substantially all been dispensed from the package 202A, such as illustrated in FIG. 10, the emptied package 202A can be switched with the bottom product and package arrangement 200B, as illustrated in FIG. 11. In FIG. 11, the empty package 202A now supports the bottom product and package arrangement 200B from which sheets are now being dispensed.

[0049] An embodiment of the present invention also relates to the use of such an arrangement. One such method includes covering a stack of one or more product and package arrangements 200 with a cover 400. Next, sheets are dispensed through the top 404 of the cover 400 from the upper most one of the stacked product and package arrangements 200. Once all or substantially all of the sheets of the upper most one of the stacked product and package arrangements 200 is exhausted, the package 202 of that upper most product and package arrangement 200 is exchanged with another one of the product and package arrangements 200 in the stack of product and package arrangements 200, and particularly one of the product and package arrangements 200 whose sheets have not been exhausted. Thereafter, sheets 100 are dispensed from other one of the product and package arrangements 200.

[0050] While the method and embodiments using stacks of product and package arrangements uses two product and package arrangements, alternative embodiments may utilize more than two product and package arrangements in the stack.

[0051] All references, including publications, patent applications, and patents cited herein are hereby incorporated by reference to the same extent as if each reference were individually and specifically indicated to be incorporated by reference and were set forth in its entirety herein.

[0052] The use of the terms "a" and "an" and "the" and similar referents in the context of describing the invention (especially in the context of the following claims) is to be construed to cover both the singular and the plural, unless otherwise indicated herein or clearly contradicted by context. The terms "comprising," "having," "including," and "containing" are to be construed as open-ended terms (i.e., meaning "including, but not limited to,") unless otherwise noted. Recitation of ranges of values herein are merely intended to serve as a shorthand method of referring individually to each separate value falling within the range, unless otherwise indicated herein, and each separate value is incorporated into the specification as if it were individually recited herein. All methods described herein can be performed in any suitable order unless otherwise indicated herein or otherwise clearly contradicted by context. The use of any and all examples, or exemplary language (e.g., "such as") provided herein, is intended merely to better illuminate the invention and does not pose a limitation on the scope of the invention unless otherwise claimed. No language in the specification should be construed as indicating any non-claimed element as essential to the practice of the invention.

[0053] Preferred embodiments of this invention are described herein, including the best mode known to the inventor for carrying out the invention. Variations of those preferred embodiments may become apparent to those of ordinary skill in the art upon reading the foregoing description. The inventor expects skilled artisans to employ such variations as appropriate, and the inventors intend for the invention to be practiced otherwise than as specifically described herein. Accordingly, this invention includes all modifications and equivalents of the subject matter recited in the claims appended hereto as permitted by applicable law. Moreover, any combination of the above-described elements in all possible variations thereof is encompassed by the invention unless otherwise indicated herein or otherwise clearly contradicted

by context.

Claims

1. A folded product and package arrangement, comprising:

   a stack of interfolded substantially square sheets of tissue folded substantially in half a first time along a first fold line to form a rectangular-shaped, once-folded sheet having a double thickness, and then having the once-folded, double thickness rectangular sheet folded substantially in half a second time about a second fold line extending substantially perpendicular to the first fold line, to thereby form a twice-folded sheet having a substantially square periphery having four stacked panels of substantially one quarter the size of the sheet before folding; and
   a package having a substantially square footprint encompassing the stack.

2. The folded product and package arrangement of claim 1, wherein the interfolded substantially square sheets of tissue have a single-fold configuration wherein first and second the panels of a sheet are positioned within an upstream sheet and third and fourth panels of the sheet are positioned within a downstream sheet.

3. The folded product and package arrangement of claim 1 or claim 2, wherein the second fold lines of the sheets are parallel to one another.

4. The folded product and package arrangement of claim 1 or claim 2 or claim 3, wherein each sheet has an unfolded width and an unfolded length of between about 6 and 10 inches and each panel has a length and a width of between three inches and five inches.

5. The folded product and package arrangement of any preceding claim, wherein the package has a substantially square bottom defining the substantially square footprint, the panels of the sheets being substantially parallel to the substantially square bottom.

6. The folded product and package arrangement of claim 5, wherein a width of the panels is substantially equal to a width of the bottom of the package and a length of the panels is substantially equal to a length of the bottom of the package.

7. The folded product and package arrangement of claim 6, wherein

   (i) the dimensions of the panels are no less than eight-five percent of the corresponding dimensions of the bottom of the package; or
   (ii) the dimensions of the panels are no less than ninety percent of the corresponding dimensions of the bottom of the package; or
   (iii) the dimensions of the panels are no less than ninety-five percent of the corresponding dimensions of the bottom of the package.

8. The folded product and package arrangement of any preceding claim, wherein the entire stack is not U-shape folded within the package.

9. The folded product and package arrangement of any preceding claim, wherein the package is formed from a rigid packaging that is generally self-supporting.

10. The folded product and package arrangement of any preceding claim, wherein the packages are formed from a thin film.

11. A product and packaging arrangement comprising:

    two or more folded product and package arrangements, each folded product and package arrangement comprising:

    a stack of interfolded substantially square sheets of tissue folded substantially in half a first time along a first fold line to form a rectangular-shaped, once-folded sheet having a double thickness, and then having the once-folded, double thickness rectangular sheet folded substantially in half a second time about a second fold line extending substantially perpendicular to the first fold line, to thereby form a twice-folded sheet having a substantially square periphery having four stacked panels of substantially one quarter the size of the sheet before folding; and
    a package having a substantially square footprint encompassing the stack; and
    a cover adapted to sit over the stacked product and package arrangements and having an opening in a top end thereof for access to tissues dispensed from a top one of the stacked product and package arrangements.

12. The product and packaging arrangement of claim 11, wherein, a lower one of the stacked product and package arrangements has dispensed substantially all of the product enclosed therein.

13. The product and packaging arrangement of claim 12, wherein the package of each folded product and package arrangement has rigid sidewalls to support

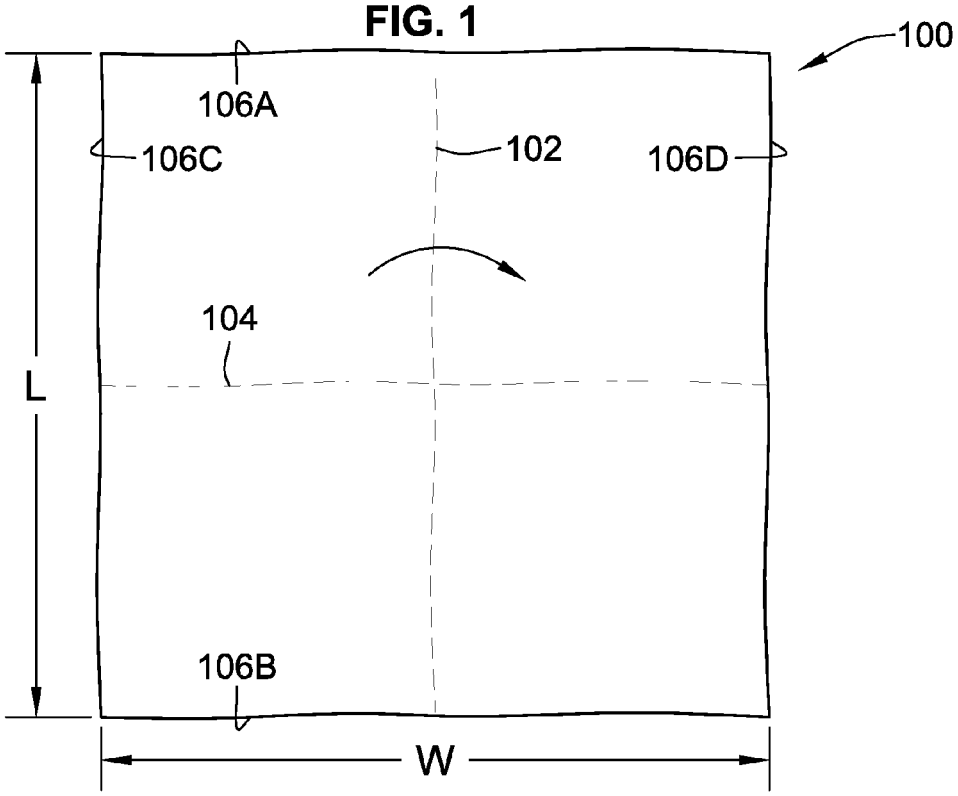
the upper one of the stacked products after all of product enclosed therein has been dispensed.

14. The product and packaging arrangement of claim 11, wherein the cover has a bottom opening sized larger than the square footprint of the packages, the bottom opening being on in a bottom end opposite the opening in the top end.

15. A method for using a product and package arrangement including two or more folded product and package arrangements and a cover, each folded product and package arrangement including a stack of interfolded substantially square sheets of tissue and a package, the stack of interfolded substantially square sheets of tissue being folded substantially in half a first time along a first fold line to form a rectangular-shaped, once-folded sheet having a double thickness, and then having the once-folded, double thickness rectangular sheet folded substantially in half a second time about a second fold line extending substantially perpendicular to the first fold line, to thereby form a twice-folded sheet having a substantially square periphery having four stacked panels of substantially one quarter the size of the sheet before folding, the package having a substantially square footprint encompassing the stack, the cover is adapted to sit over the stacked product and package arrangements and having an opening in a top end thereof for access to tissues dispensed from a top one of the stacked product and package arrangements, the method comprising sequentially performing the steps of:

(a) covering a stack of the two or more product and package arrangements;
(b) dispensing tissue through the top of the cover from an uppermost one of the stacked product and package arrangements;
(c) exchanging placement in the stack or the uppermost one of the product and package arrangements with another one of the product and package arrangements in the stack; and
(d) dispensing tissue through the top of the cover from the another one of the stacked product and package arrangements.

FIG. 1



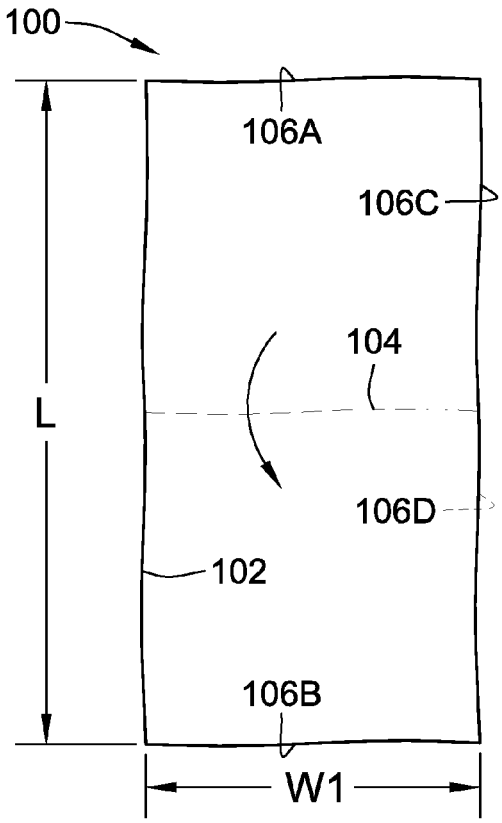


FIG. 2

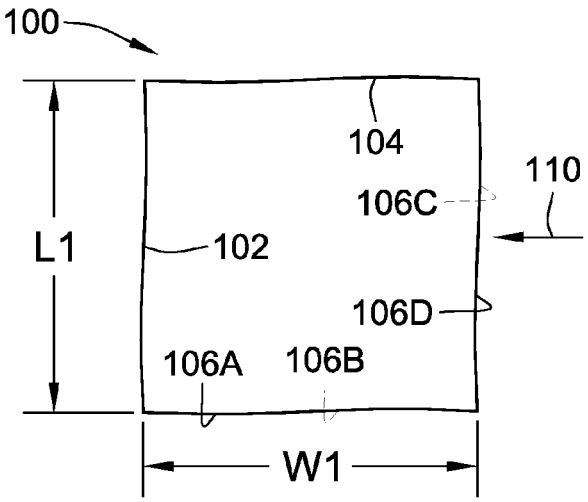


FIG. 3

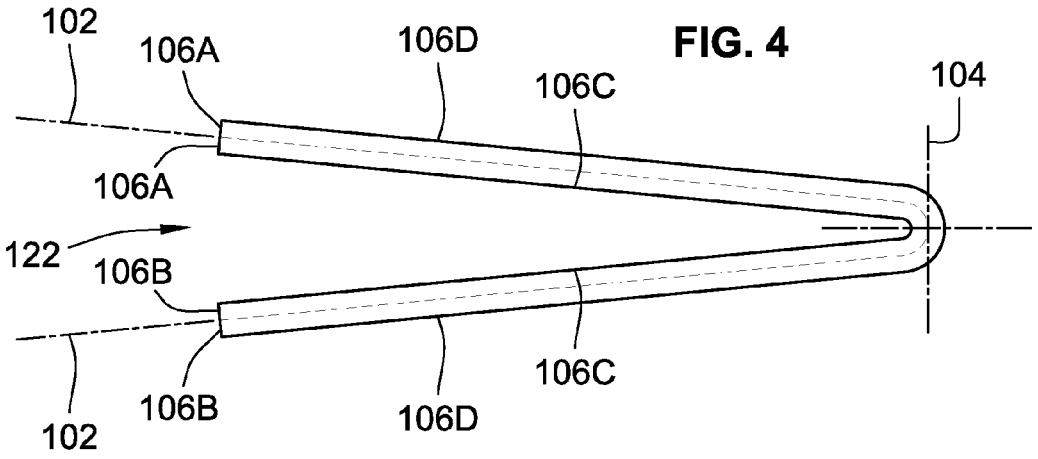

102
106A
106D
106C
104
106A
122
106B
106C
102
106B
106D

FIG. 4

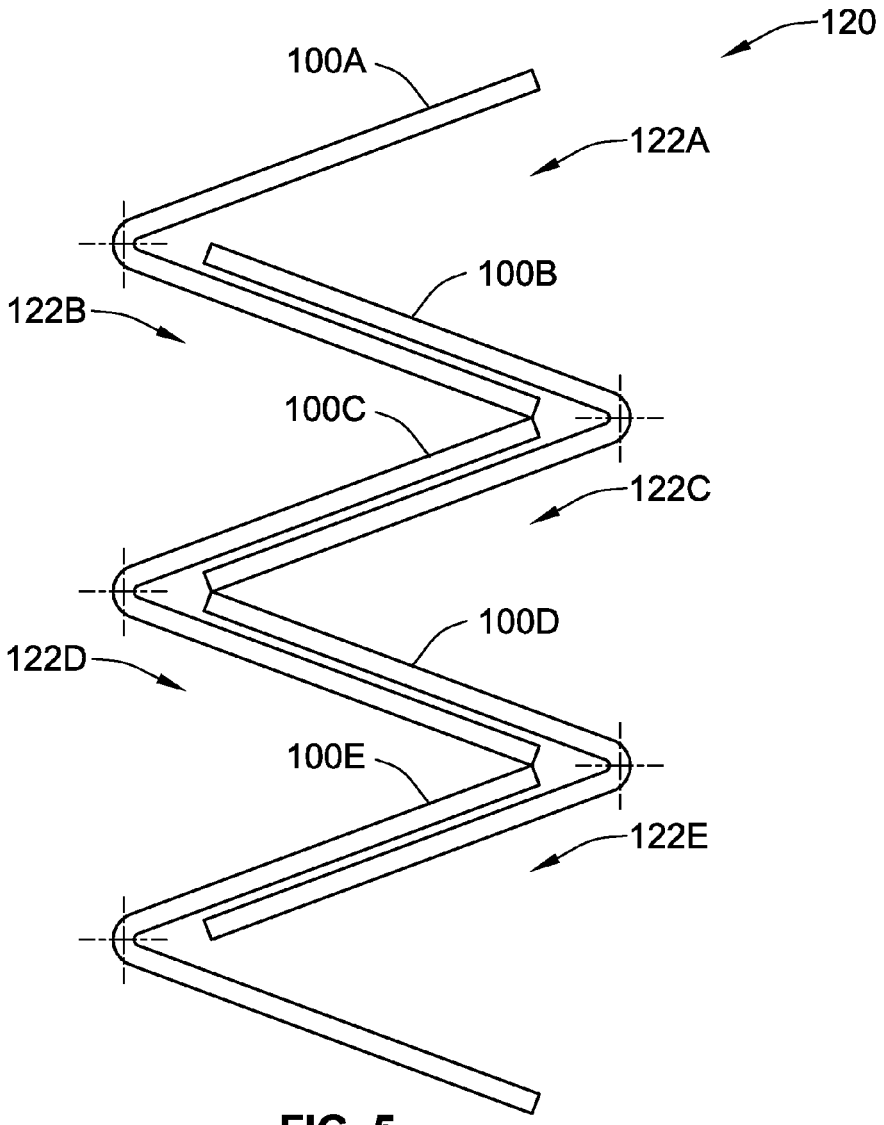

120
100A
122A
100B
122B
100C
122C
100D
122D
100E
122E

FIG. 5

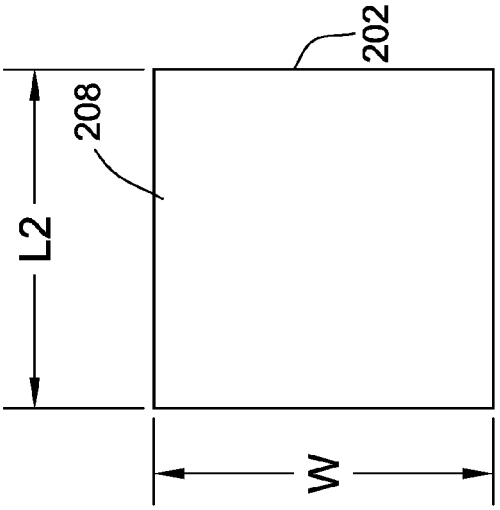


FIG. 8

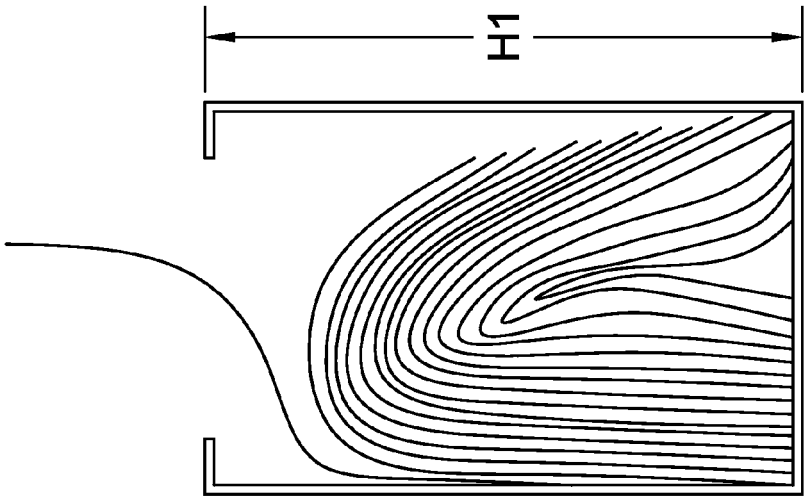


FIG. 7
(PRIOR ART)

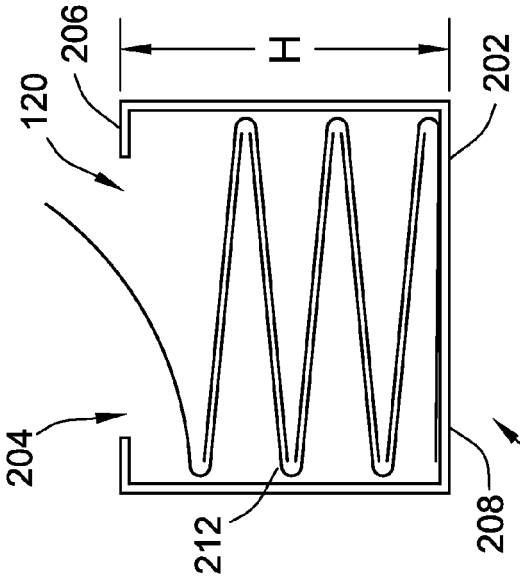
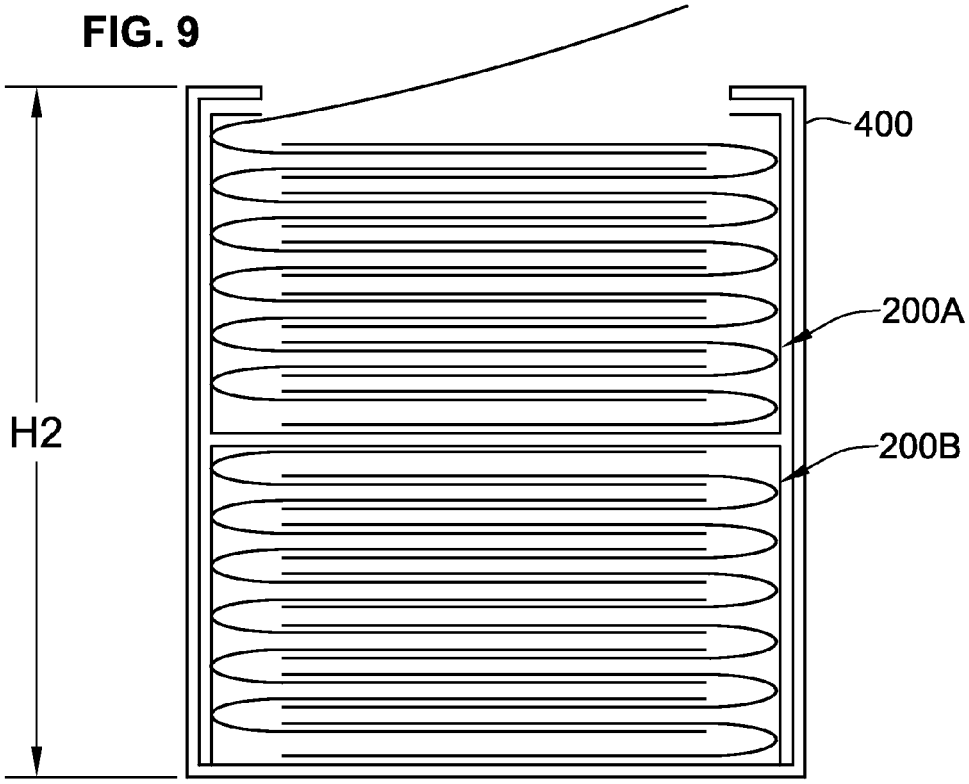


FIG. 6

FIG. 9



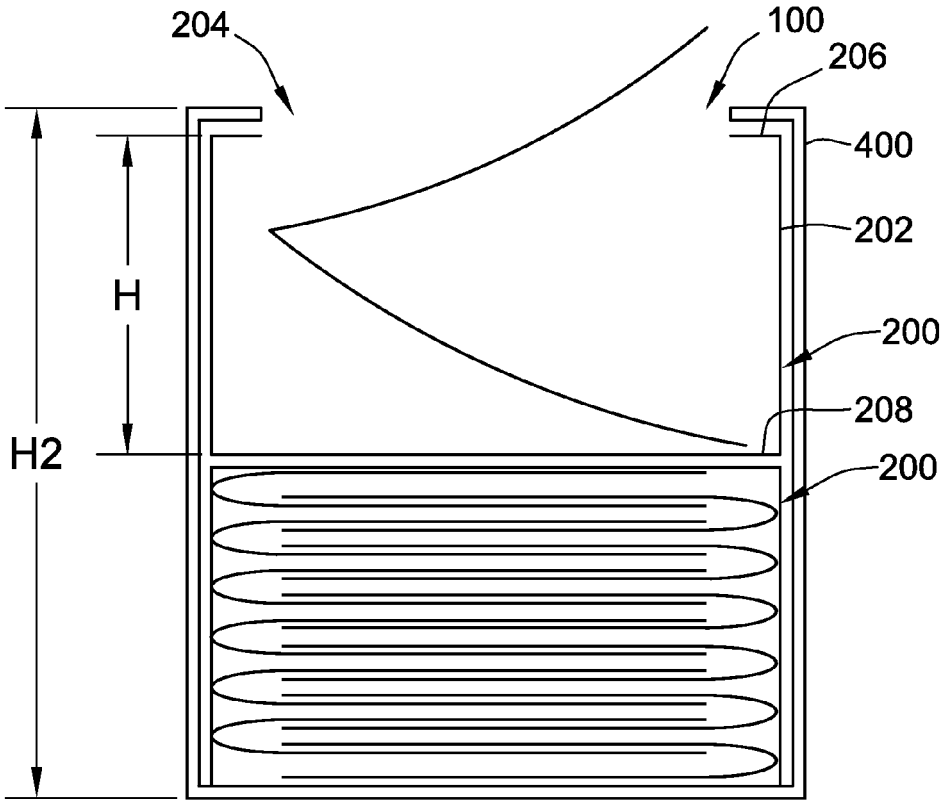
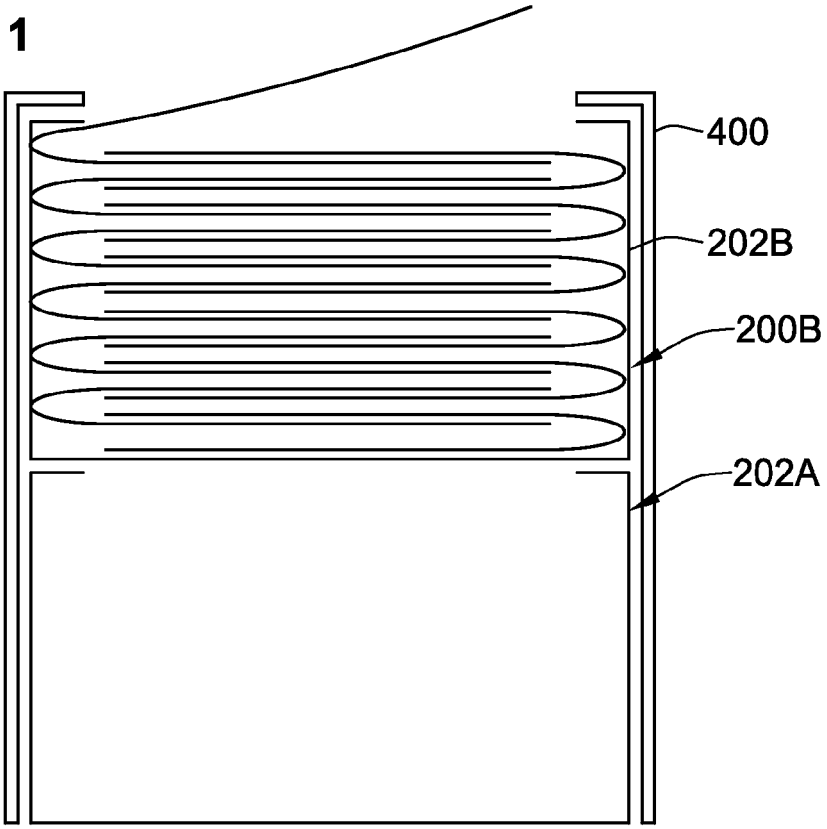


FIG. 10

FIG. 11



Europäisches Patentamt
European Patent Office
Office européen des brevets

EUROPEAN SEARCH REPORT

Application Number
EP 12 18 0737

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
Y A	EP 0 302 382 A1 (KIMBERLY CLARK CO [US]) 8 February 1989 (1989-02-08) * page 2, line 34 - line 36 * * page 3, line 35 - line 50 * * figures 2, 4 * -----	1-10 11,15	INV. B65D83/08
Y	US 2007/045335 A1 (SZYMONSKI KRZYSZTOF A [US] ET AL SZYMONSKI KRZYSZTOF ANDRZEJ [US] ET A) 1 March 2007 (2007-03-01) * paragraph [0015] * -----	1-10	
Y	EP 1 213 230 A1 (UNI CHARM CORP [JP]) 12 June 2002 (2002-06-12) * paragraph [0024] * -----	10	

TECHNICAL FIELDS SEARCHED (IPC)

B65D
A47K

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
The Hague	22 November 2012	Bridault, Alain

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

1

EPO FORM 1503 03.82 (P04C01)

ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO. EP 12 18 0737

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.

22-11-2012

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
EP 0302382 A1	08-02-1989	AU 2027388 A	09-02-1989
		EP 0302382 A1	08-02-1989
		JP 1084877 A	30-03-1989
		MX 170203 B	11-08-1993
US 2007045335 A1	01-03-2007	AU 2006285339 A1	08-03-2007
		CA 2619747 A1	08-03-2007
		CN 101253107 A	27-08-2008
		EP 1919798 A1	14-05-2008
		JP 2009505919 A	12-02-2009
		KR 20080039451 A	07-05-2008
		US 2007045335 A1	01-03-2007
		WO 2007027263 A1	08-03-2007
		ZA 200800897 A	26-08-2009
EP 1213230 A1	12-06-2002	CN 1365939 A	28-08-2002
		DE 60108468 D1	24-02-2005
		DE 60108468 T2	23-03-2006
		EP 1213230 A1	12-06-2002
		JP 3788574 B2	21-06-2006
		JP 2002173183 A	18-06-2002
		KR 20020046196 A	20-06-2002
		SG 103327 A1	29-04-2004
		TW 590000 U	01-06-2004
		US 2002070141 A1	13-06-2002

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 61524558 A **[0001]**
- US 3881632 A, Early **[0003]**
- US 5415320 A, North **[0003]**
- US 6202889 A, Veith **[0003]**
- US 6685050 A, Schmidt **[0003]**