



(12) **EUROPEAN PATENT APPLICATION**

(43) Date of publication:
07.11.2007 Bulletin 2007/45

(51) Int Cl.:
A47G 7/06 (2006.01) **B65D 5/00** (2006.01)
B65D 5/36 (2006.01) **B65D 5/24** (2006.01)

(21) Application number: **07107445.4**

(22) Date of filing: **03.05.2007**

(84) Designated Contracting States:
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC MT NL PL PT RO SE SI SK TR
Designated Extension States:
AL BA HR MK YU

(71) Applicant: **The Idea Network Ltd.**
Bristol BS6 7SF (GB)

(72) Inventor: **Lott, James**
Bristol, BS6 7SF (GB)

(74) Representative: **Franzolin, Luigi et al**
STUDIO TORTA S.r.l.,
Via Viotti, 9
10121 Torino (IT)

(30) Priority: **03.05.2006 US 416067**

(54) **Foldable container**

(57) A container (2) movable between an expanded position and a collapsed position. The container (2) comprises a substantially rectangular base panel (12), four side walls (4-7) hingedly connected to each other and to the base panel (12), a median fold line (96) crossing opposite two of the four side walls (5,7) and the base panel so that each of the opposite side walls and the base panel are foldable along the median fold line (96), and two bottom fold lines (92,94) formed on the base panel (12) and extending substantially diagonally across the base panel so that the base panel is also foldable along the bottom fold lines. The side walls of the container have top edges (9) defining an open top of the container. The container is formed of a substantially flat, single-piece blank (8).

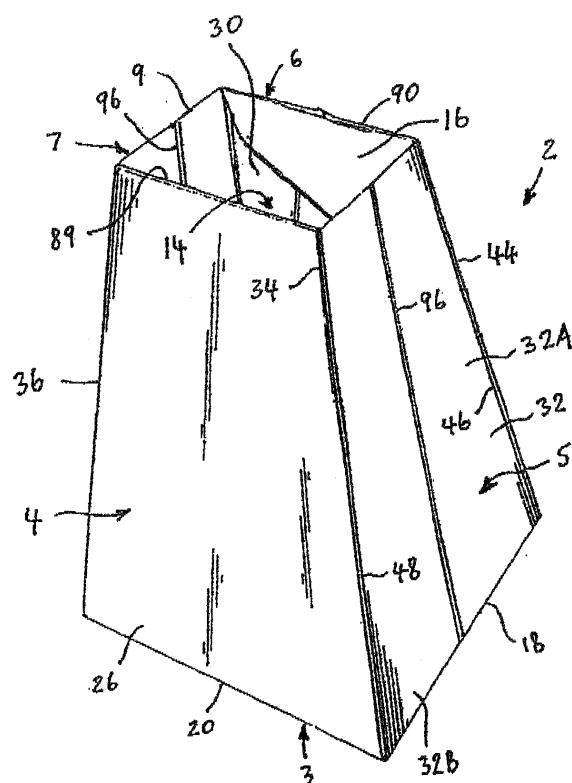


Fig. 1

Description

BACKGROUND OF THE INVENTION

1. Field of the Invention

[0001] The present invention relates generally to containers in general, and more particularly, to a foldable container.

2. Description of the Prior Art

[0002] In an office, store, merchandising or any other environment, many different types of containers are abundantly used for collecting and storing various articles. Typically, known prior art container devices are of a totally rigid, noncollapsible construction and, importantly, few of the known devices are designed to be transported in a disassembled state for ease of portability, while providing a design which is easy to assemble on-site. A totally rigid construction makes the known devices bulky, awkward and difficult to transport from one location to another. Moreover, the containers of a truncated pyramid shape, which are highly desirable as vases due to their stability, are difficult to make in a rigid form (the open neck being narrower than the base). Therefore, there exists a need for an inexpensive container assembly, especially of a truncated pyramid shape, which can be easily and conveniently employed in a wide variety of environments, both indoors and outdoors, which container assembly can be stored and shipped in a compact, flat folded package and can be easily and readily assembled.

[0003] Furthermore, flowers are among the most often given and most widely appreciated gifts. However, it is not always possible to quickly obtain a vase. The flowers can therefore not be put in water immediately, and the durability of the often expensive bouquet decreases. This situation is known for example from a sick-visit in a hospital, where there often is a shortage of vases. Another example may be receptions where the number of flower bouquets can be very large, but the possibility of putting the flowers in water is missing. For this reason, many flower givers thus settle for cellophane or paper-wrapped flowers with a tie string, together with a plain note card. This is typically a leaky and unimpressive manner of presentation, albeit inexpensive. It would be preferable to present flowers with an attractive, convenient, and decorative vase that even has an appropriate theme for the occasion, yet is inexpensive.

[0004] Folding paper containers are known in the prior art for holding or carrying objects. While known foldable containers, have proven to be acceptable for various applications, such devices are nevertheless susceptible to improvements that may enhance their performance and lower cost. With this in mind, a need exists to develop improved foldable containers that advance the art.

SUMMARY OF THE INVENTION

[0005] According to a first aspect of the present invention, there is provided a container intended to hold a liquid and formed of a single-piece sheet of a stiff but foldable material. The container of the present invention is movable between an expanded position and a folded position. The container comprises a substantially rectangular bottom wall defined by four sides thereof, and four side walls hingedly connected to each other and to the bottom wall. The side walls include first and second pairs of opposite side walls. The container of the present invention further comprises a median fold line crossing the second pair of opposite side walls and the bottom wall so that each of the opposite side walls and the bottom wall are foldable along the median fold line, and two bottom fold lines formed on the bottom wall and extending substantially diagonally across the bottom wall so that the bottom wall is foldable along the bottom fold lines.

[0006] According to a second aspect of the present invention, there is provided a blank for forming a foldable container. The blank of the present invention is formed from a substantially flat single-piece sheet of foldable material and comprises a substantially rectangular base panel having four sides, four side panels radially outwardly extending from corresponding sides of the base panel and separated therefrom by four base fold lines defining the four sides of said base panel, and four sets of web panels each provided between each two of the side panels. Each of the sets of web panels has a plurality of web panels hingedly connected to each other along web fold lines. The four side panels include first and second pairs of opposite side panels. The blank of the present invention further includes a plurality of side fold lines radially outwardly extending from the bottom panel for separating the sets of web panels and the side panels, a median fold line crossing the second pair of opposite side panels and the base panel so that each of the second pair of opposite side panels and the base panel are foldable along the median fold line, and two bottom fold lines formed on the bottom panel and extending substantially diagonally across the base panel so that the base panel is foldable along the bottom fold lines.

[0007] With this invention, the foldable side walls can be imprinted, embossed, engraved, etched or otherwise decorated with indicia and can be easily and simultaneously used as a sign to promote the sale of goods and/or services in a commercial setting to promote an activity or event, or to convey any particular message in an office or other environment. Because the foldable blank of this invention is easily manufactured and shipped, this enables a user to imprint a company logo, advertising promotional material, or any other message on the body panel and to display the same when the present device is utilized as a promotional container. Since the blank is made of a lightweight, preferably resilient or flexible, material as will be hereinafter explained, it can be easily manufactured, transported and assembled for use as a

container assembly. The present assembly affords a user a simple arrangement to assemble, particularly, in a commercial environment where one is promoting and merchandising goods and/or services for short period of time with the constant need to replace one advertisement with another in a simple and inexpensive manner.

[0008] Therefore, the present invention provides a foldable container which can easily receive printing to promote goods and/or services, convey a message or present a unique design. The construction and operation of a container assembly can be packaged, stored and shipped in a substantially flat condition, and can be easily assembled without the use of tools or other fastener means for assembling the same. It will be appreciated that the present invention presents a container of very simple design and construction that is inexpensive to produce from a single-piece blank.

BRIEF DESCRIPTION OF THE DRAWINGS

[0009] Other objects and advantages of the invention will become apparent from a study of the following specification when viewed in light of the accompanying drawings, wherein:

Fig. 1 is a perspective view of a container according to the preferred embodiment of the present invention in a fully deployed position;

Fig. 2A is a first side view of the container according to the preferred embodiment of the present invention in the fully deployed position;

Fig. 2B is a bottom view from below of the container according to the preferred embodiment of the present invention in the fully deployed position;

Fig. 2C is a second side view of the container according to the preferred embodiment of the present invention in the fully deployed position;

Fig. 2D is a top view of the container according to the preferred embodiment of the present invention in the fully deployed position;

Fig. 2E is a third side view of the container according to the preferred embodiment of the present invention in the fully deployed position;

Fig. 2F is a fourth side view of the container according to the preferred embodiment of the present invention in the fully deployed position;

Fig. 3A is a perspective view from above of the container according to the preferred embodiment of the present invention in a partially deployed position;

Fig. 3B is a perspective view from below of the container according to the preferred embodiment of the present invention in the partially deployed position;

Fig. 4 is a perspective view of the container according to the preferred embodiment of the present invention in a fully folded position;

Fig. 5 is a side view of the container according to the preferred embodiment of the present invention in the fully folded position;

Fig. 6 is a perspective view of the container according to the preferred embodiment of the present invention in a partially folded position;

Fig. 7 is a plan view of a single-piece blank used to construct the container according to the preferred embodiment of the present invention;

Figs. 8-10 schematically show successive stages in folding parts of the blank illustrated in Fig. 7 to form one of a first pair of side walls of the container according to the preferred embodiment of the present invention that comprises a plurality of plies of a sheet material of the blank.

DETAILED DESCRIPTION OF PREFERRED EMBODIMENT

[0010] Referring now to the illustrations for a better understanding of the invention, it will be seen that this invention is a foldable container indicated generally by reference numeral 2, which may be intended to hold a liquid, such as water, so as to act as a vase for flowers.

[0011] The container 2 of the present invention is movable between a deployed (or erected) position (or state) (illustrated in Figs. 1 and 2A-2F) and a folded (or collapsed) position (or state) (illustrated in Figs. 4 and 5). Figs. 3A and 3b show the perspective views of the container 2 in a partially deployed position, i.e. the intermediate stage close to be fully erected, while Fig. 6 show the perspective views of the container 2 in a partially folded position, i.e. the intermediate stage close to be fully collapsed. In the upright position illustrated in Figs. 1 and 2A-2F, the container 2 can stand stably upright on a flat surface (not shown), such as table or the like to hold water and act as the vase for flowers.

[0012] The container 2 is of a generally truncated pyramid shape in which the truncated pyramid is a four side truncated pyramid having a substantially rectangular, flat bottom wall 3 considerably larger than an open top 14. Preferably, the bottom wall 3 is substantially square in shape. The container 2 further comprises a plurality of side walls 4, 5, 6 and 7 hingedly connected to each other and to the bottom wall 3. The side walls 4-7 have top edges 9 defining the open top 14 of the container 2. The side walls 4, 5, 6 and 7 of the container 2 include a first pair of the opposite side walls 4 and 6, and a second pair of the opposite side walls 5 and 7. Moreover, each of the second pair of the opposite side walls 5 and 7 is provided with a median fold line 96 so that the side walls 5 and 7 are foldable along the median fold line 96. Each of the first pair of the opposite side walls 4 and 6 is not foldable. As illustrated in Figs. 1, 2A, 2D, 2E, 3A and 3B, the median fold line 96 is formed on the second pair of the opposite side walls 5 and 7 between the top edges 9 thereof and the bottom wall 3. Furthermore, the base panel 12 is provided with bottom fold lines 92, 94 and 96 formed on the bottom wall 3 and extending substantially along axes of symmetry thereof so that the base panel is foldable along the bottom fold lines 92, 94 and 96.

[0013] The container 2 is formed from a blank 8 in the form of a single-piece, substantially flat sheet cut out from a sheet of any appropriate relatively stiff but foldable material, as illustrated in Fig. 7. For instance, the blank 8 may be formed of a paper, a cardboard, a cellulose material, a sheet of plastic material, or any other appropriate relatively stiff but foldable material. Preferably, the material of the blank 8 is printable, and may be provided with any appropriate logo or advertisement printed or artistic design or written message or any combination of the previous thereon.

[0014] Further preferably, the sheet of the blank 8 is liquid-proof or water-proof (water-impermeable). However, the sheet of the blank 8 which is not liquid-proof is also within the scope of the present invention. Examples of the liquid-proof material for the sheet of the blank 8 may be a cellulose material, a paper or cardboard having a suitable water-resistant layer of plastic (such as polyethylene or polyester) laminate on an inner side thereof. Alternatively, the blank 8 may be formed entirely of a plastic material. Moreover, the plastic material of the blank 8 may be waterproofed by a layer of coating of a water-proof emulsion thereon, and/or such emulsion may be incorporated into the structure of the sheet material forming the blank 8, for example whilst the sheet material is being manufactured. Also, the sheet of the blank 8 may be laminated or coated in some way.

[0015] The blank 8 is indented or creased to form a plurality of fold (or crease) lines depicted by dash lines in Fig. 7. The blank 8 according to the present invention has a substantially polygonal outer periphery 10 and is integrally formed with tabs 15 and 16 extending radially outwardly from the outer periphery 10 of the blank 8 at two substantially diametrically opposed locations. In the blank 8, dash lines indicate fold (or crease) lines formed by grooves or linear indentations in the blank material. Moreover, the blank 8 includes a substantially rectangular base panel 12 and four trapezoidal side panels: a first side panel 26, a second side panel 28, a third side panel 30 and a fourth side panel 32. The first side panel 26 and the third side panel 30 define a first pair of the opposite side panels, while the second side panel 28 and the fourth side panel 32 define a second pair of the opposite side panels. Preferably, the base panel 12 is substantially square in shape. The base panel 12 is demarcated by four base fold lines: a first base fold line 18, a second base fold line 20, a third base fold line 22 and a fourth base fold line 24. Each of the base fold lines 18, 20, 22 and 24 defines a respective one of four sides of the rectangular base panel 12. In other words, the first base fold line 18 defines a first side of the base panel 12, the second base fold line 20 defines a second side thereof, the third base fold line 22 defines a third side thereof, and the fourth base fold line 24 defines a fourth side thereof. Each of the side panels 26, 28, 30 and 32 radially outwardly extends from the corresponding side of the base panel 12 and is separated therefrom by the base fold lines 18, 20, 22 and 24. More specifically, the first side panel 26

extends from the first side 18 of the base panel 12, the second side panel 28 extends from the second side 20 thereof, the third side panel 30 extends from the third side 22 thereof, and the fourth side panel 32 extends from the fourth side 24 thereof.

[0016] The side panels 26, 28, 30 and 32 are provided to form the side walls 4-7 of the container 2 and are demarcated further by side fold lines 34, 36, 38, 40, 42, 44, 46 and 48. As illustrated, the tabs 15 and 16 are provided adjacent to the opposite side panels 26 and 30, respectively. Each of the trapezoidal side panels 26, 28, 30 and 32 progressively tapers in the direction away from the base panel 12 to the outer periphery 10. Between each two adjacent trapezoidal side panels 26 and 28, 28 and 30, 30 and 32, and 32 and 26 is a respective set of four substantially triangular web panels hingedly connected to each other. Each of the triangular web panels widens toward the periphery 10 from an acute angle apex at a respective corner of the base panel 12. Each set of the triangular web panels is depicted with the reference characters 50A, 52A, 54A and 56A; 58A, 60A, 62A and 64A; 50B, 52B, 54B and 56B; and 58B, 60B, 62B and 64B. The above triangular web panels are demarcated at least in part by web fold lines 66, 68, 70, 72, 74, 76, 80, 82, 84, 86 and 88. Furthermore, tab fold lines 89 and 90 extend across a root of each tab 15 and 16.

[0017] The blank 8 is crossed by a medial fold line 96 so as to divide each of the second pair of the truncated trapezoidal side panels 28 and 32 along its intended height into two substantially equal areas 28A, 28B and 32A, 32B and to divide the base panel 12 into two substantially equal rectangles. In other words, the median fold line 96 extends substantially along an axis of symmetry of the opposite side panels 28 and 32 and the base panel 12. Furthermore, the base panel 12 is crossed with two diagonal first and second bottom fold lines 92 and 94. Consequently, if the base panel 12 is square, according to the preferred embodiment of the present invention, the bottom fold lines 92, 94 and the median fold line 96 extend substantially along axes of symmetry of the base panel 12.

[0018] In the preferred embodiment of the present invention, as illustrated in Fig. 7, each of angles A defined between the fold lines 20 and 38, 20 and 40, 22 and 46, and 22 and 48 is substantially 78°, each of angles B defined between the fold lines 70 and 38, 72 and 40, 82 and 46, and 84 and 48 is substantially 31°, each of angles C defined between the fold lines 70 and 68, 72 and 74, 80 and 82, and 84 and 86 is substantially 26.5°, each of angles D defined between the fold lines 66 and 68, 74 and 76, 78 and 80, and 86 and 88 is substantially 25.5°, each of angles E defined between the fold lines 66 and 36, 76 and 42, 44 and 78, and 34 and 88 is substantially 30°, and each of angles F defined between the fold lines 18 and 36, 18 and 34, 20 and 42, and 20 and 44 is substantially 79°.

[0019] The container 2 may be formed from the blank 8 using an origami method. More specifically, the method

for forming the container 2, as shown in Figs. 1 and 2A-2F, from the blank 8, shown in Fig. 7, according to one of the exemplary embodiments of the present invention is schematically illustrated in Figs. 8-10 and comprises the following steps. First, the base panel 12 is left comparatively flat and the trapezoidal side panels 26, 28, 30 and 32 are folded into a somewhat upright position about the fold lines 18, 20, 22 and 24. Then, the blank 8 is folded with respect to the side panels 26 and 30 inwardly of the container 2, leaving two opposite side panels 28 and 32 of the blank 8. As a result, each of the second pair of the side panels 28 and 32 defines one of the first pair of the side walls 5 and 7 of the container 2 and is formed by a single ply of the material forming the blank 8. By contrast, each of the first pair of the side walls 4 and 6 of the container 2 comprises a plurality of folded overlying plies including the respective one of the first pair of the side panel 26 and 30. The base panel 12 defines the bottom wall 3 formed by a single ply of the material forming the blank 8.

[0020] More specifically, the forming of the side wall 4 including the side panel 26 according to one of the exemplary embodiments of the present invention is schematically depicted in detail in Figs. 8-10. The substantially similar procedure is carried out for the side wall 6 of the container 2 including the side panel 30. First, as illustrated in Fig. 8, the triangular web panel 54A is folded about the fold line 68 internally of the side panel 28, to overlie the triangular web panel 52A. Similarly, the triangular web panel 62B is folded about the fold line 86 to overlie the triangular web panel 60B. Then, the overlying web panels 52A and 54A are folded inwardly about the fold lines 66 and 70, respectively, so that the web panel 52A juxtaposes the web panel 50A. Next, the adjacent web panels 50A and 56A are folded inwardly about the fold lines 36 and 38, respectively, so that the overlying web panels 52A and 54A are now sandwiched between the adjacent and overlying web panels 50A, 56A and the side panel 26, as schematically illustrated in Fig. 9. Subsequently, the overlying web panels 60B and 62B are folded inwardly about the fold lines 84 and 88, respectively, so that the web panel 62B juxtaposes the web panel 64B. Next, the adjacent web panels 58B and 64B are folded inwardly about the fold lines 48 and 34, respectively, so that the overlying web panels 60B and 62B are now sandwiched between the adjacent and overlying web panels 58B, 64B and the web panel 56A, as schematically illustrated in Fig. 10. In other words, the folded web panels 50A, 52A, 54A and 56A are sandwiched between the web panels 58B, 60B, 62B and 64B, and the side panel 26. Then, the tab 15 is folded inwardly of the container 2 about the fold line 89 toward the side panel 26 so as to overlie the web panel 58B and to sandwich the web panels 50A, 52A, 54A, 56A and 58B, 60B, 62B, 64B between the side panel 26 and the tab 15. Finally, the tab 15 and the web panels 50A, 52A, 54A, 56A and 58B, 60B, 62B, 64B are secured to the side panel 26 by any appropriate means known in the art, such as adhesive

bonding, thus defining the side wall 4 of the container 2. It would be appreciated that any other sequence of folding the web panels 50A, 52A, 54A, 56A and 58B, 60B, 62B, 64B inwardly of the container 2 adjacent to the side panel 26 to form the side wall 4 is within the scope of the present invention.

[0021] As noted above, the substantially similar procedure is carried out for the side wall 6 of the container 2 including the side panel 30. In other words, the side wall 6 is defined by the side panel 30, the tab 16 and the web panels 50B, 52B, 54B, 56A and 58A, 60A, 62A, 64A sandwiched between the side panel 30 and the tab 16.

[0022] It will be appreciated that the method for forming the container 2, as shown in Figs. 8-10, from the blank 8, shown in Fig. 7, represents just one of a number of other methods of forming the container 2 from the blank 8. Any other appropriate method or sequence of folding the blank 8 to form the container 2 is within the scope of the present invention. It will be also appreciated that the particular method for forming the container 2 from the blank 8 is generally a matter of preference or choice.

[0023] The blank 8 may be imprinted, embossed or otherwise decorated with indicia such as a company logo, promotional material, or other data. The foldable blank 8 forming the container 2 can be packaged, stored and furnished in substantially flat form and can be easily assembled.

[0024] In Figs. 1 and 2A-2F the container 2 is shown in an operational, deployed state for use, for example, as a vase for flowers which can be natural since the container 2 may be impervious to water. The fold line 96 together with the fold lines 92 and 94 give the container 2 a concertina-like construction enabling it to be folded into a flat state (folded position) as shown in Figs. 4 and 5. The container 2 can be expanded (for example by manual pull) from the folded position into the expanded position (as shown in Figs. 1 and 2A-2D). The resilience provided by the nature of the material, for example a paper, forming the blank 8 combined with the effect of the fold lines 92, 94 and 96 in the base panel 12 can cause or assist the container 2 to spring or pop up from its folded position in Figs. 4 and 5 into the expanded position in Figs. 1 and 2A-2D, with the base panel 12 adopting a convex (or slightly convex) configuration inwardly of the container 2.

[0025] A decorative surrounding band 102 (shown in Fig. 4) may surround the flat container 2 to hold it in the folded position until the expanded container 2 is needed. In the expanded state of the container 2 as shown in Figs. 1 and 2A-2F, the inclination angle between the areas 28A and 28B, and 32A and 32B may be obtuse.

[0026] The container 2 may be supplied with flowers, for example a bouquet, to provide a readily utilizable vase. Such a vase formed from a one-piece sheet will not leak easily because the blank 8 can be made of a water impermeable material. The geometry of the side panels and the web panels of single-piece blank 8 and the folding arrangement of the container 2 is such that it

allows the container 2 to hold a level of water high enough for the bouquet of natural flowers without leaking the water.

[0027] The present invention therefore provides a foldable container which can easily receive printing to promote goods and/or services, convey a message or present a unique design. The construction and operation of a container assembly can be packaged, stored and shipped in a substantially flat condition, and can be easily assembled without the use of tools or other fastener means for assembling the same. It will be appreciated that the present invention presents a container of very simple design and construction that is inexpensive to produce from a single-piece blank.

[0028]) The foregoing description of the preferred embodiment of the present invention has been presented for the purpose of illustration in accordance with the provisions of the Patent Statutes. It is not intended to be exhaustive or to limit the invention to the precise forms disclosed. Obvious modifications or variations are possible in light of the above teachings. The embodiment disclosed hereinabove was chosen in order to best illustrate the principles of the present invention and its practical application to thereby enable those of ordinary skill in the art to best utilize the invention in various embodiments and with various modifications as are suited to the particular use contemplated, as long as the principles described herein are followed. Thus, changes can be made in the above-described invention without departing from the intent and scope thereof. It is also intended that the scope of the present invention be defined by the claims appended thereto.

Claims

1. A container movable between an expanded position and a folded position, said container comprising:

a substantially rectangular bottom wall defined by four sides thereof;
 four side walls hingedly connected to each other and to said bottom wall, said four side walls including first and second pairs of opposite side walls;
 said side walls having top edges defining an open top of said container;
 a median fold line crossing said second pair of opposite side walls and said bottom wall so that each of said opposite side walls and said bottom wall being foldable along said median fold line;
 and
 two bottom fold lines formed on said bottom wall and extending substantially diagonally across said bottom wall so that said bottom wall being foldable along said bottom fold lines.

2. The container as defined in claim 1, wherein said

second pair of opposite side walls and said bottom wall are foldable along said median fold line inwardly to said container.

3. The container as defined in claim 2, wherein said bottom wall is foldable along said bottom fold lines inwardly to said container.
4. The container as defined in claim 1, wherein said bottom wall is substantially square in shape.
5. The container as defined in claim 1, wherein said side walls are substantially trapezoidal in shape so that parallel sides of said trapezoidal side walls extend along said sides of said bottom wall.
6. The container as defined in claim 5, wherein each of said trapezoidal side walls progressively tapers in the direction away from said bottom wall.
7. The container as defined in claim 6, wherein said median fold line extends across said opposite side walls and said bottom wall substantially along axes of symmetry thereof.
8. The container as defined in claim 1, wherein said container is formed of a substantially flat single-piece blank.
9. The container as defined in claim 8, wherein said blank is made from water-impermeable material.
10. The container as defined in claim 1, wherein said container is formed from a blank of a substantially flat single-piece sheet of foldable material, said blank comprising:

a substantially rectangular base panel defining said bottom wall and having four sides;
 four side panels radially outwardly extending from corresponding sides of said base panel and separated therefrom by four base fold lines defining said four sides of said base panel, said four side panels including first and second pairs of opposite side panels;
 four sets of web panels each provided between each two of said side panels, each of said sets of web panels including a plurality of web panels hingedly connected to each other;
 a plurality of fold lines radially outwardly extending from said bottom panel for separating said sets of web panels and said side panels;

said median fold line crossing said second pair of opposite side panels and said base panel so that each of said second pair of opposite side panels and said base panel being foldable along said median fold line;

wherein each of said second pair of said opposite side walls is defined solely by one of said second pair of said opposite side panels; and wherein each of said first pair of opposite side walls is defined by one of said first pair of opposite side panels and two sets of said web panels folded about said web fold lines and said side fold lines adjacent to corresponding one of said first pair of opposite side panels and secured thereto.

11. The blank as defined in claim 10, wherein said web panels are substantially triangular in shape so as to widen toward a periphery of said blank from an acute angle apex at a respective corner of said base panel.

12. The blank as defined in claim 10, wherein each of said sets of web panels includes four web panels.

13. The blank as defined in claim 12, wherein said web panels are substantially triangular in shape so as to widen toward a periphery of said blank from an acute angle apex at a respective corner of said base panel.

14. A blank for forming a foldable container, said blank comprising:

a substantially rectangular base panel having four sides;

four side panels radially outwardly extending from corresponding sides of said base panel and separated therefrom by four base fold lines defining said four sides of said base panel, said four side panels including first and second pairs of opposite side panels;

four sets of web panels each provided between each two of said side panels, each of said sets of web panels including a plurality of web panels hingedly connected to each other along web fold lines;

a plurality of side fold lines radially outwardly extending from said bottom panel for separating said sets of web panels and said side panels; a median fold line crossing said second pair of opposite side panels and said base panel so that each of said second pair of opposite side panels and said base panel being foldable along said median fold line; and

two bottom fold lines formed on said bottom panel and extending substantially diagonally across said base panel so that said base panel being foldable along said bottom fold lines;

said blank being formed from a substantially flat single-piece sheet of foldable material.

15. The blank as defined in claim 14, wherein said web panels are substantially triangular in shape so as to widen toward a periphery of said blank from an acute

angle apex at a respective corner of said base panel.

16. The blank as defined in claim 14, wherein each of said sets of web panels includes four web panels.

17. The blank as defined in claim 16, wherein said web panels are substantially triangular in shape so as to widen toward a periphery of said blank from an acute angle apex at a respective corner of said base panel.

18. The blank as defined in claim 14, wherein said base panel is substantially square in shape.

19. The blank as defined in claim 14, wherein said side panels are substantially trapezoidal in shape so that parallel sides of said trapezoidal side panels extend along said sides of said base panel.

20. The blank as defined in claim 19, wherein each of said trapezoidal side walls progressively tapers in the direction away from said base panel.

21. The blank as defined in claim 14, wherein said median fold line extends across said second pair of opposite side panels and said base panel substantially along axes of symmetry thereof.

22. The blank as defined in claim 14, wherein said sheet of said blank is made from water-impermeable material.

23. The blank as defined in claim 14, further comprising at least two tabs extending radially outwardly from an outer periphery of said blank at locations adjacent to the other opposite pair of said side panels and hingedly connected thereto.

24. The blank as defined in claim 14, wherein said blank is foldable to form a container comprising:

a substantially rectangular single-ply bottom wall defined by said base panel;

four side walls hingedly connected to each other and to said bottom wall, said side walls having top edges defining an open top of said container, said four side walls including first and second pair of opposite side walls;

wherein each of said second pair of said opposite side walls is defined solely by one of said second pair of opposite side panels;

wherein each of said first pair of opposite side walls is defined by one of said first pair of opposite side panels and two sets of said web panels folded about said web fold lines and said side fold lines adjacent to each of said first pair of opposite side panels and secured thereto.

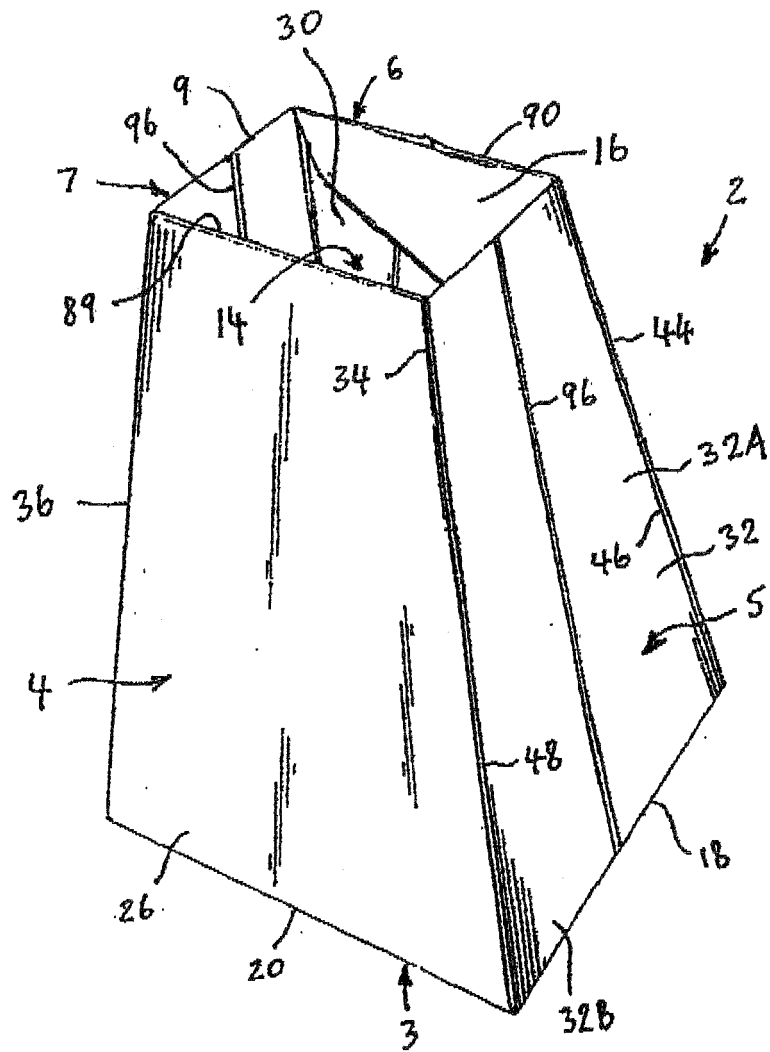


Fig. 1

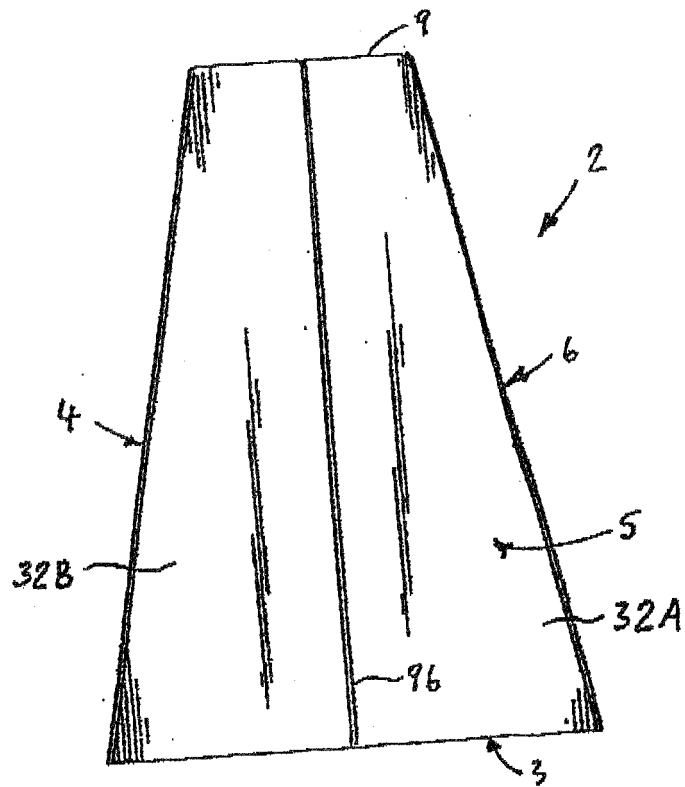


Fig. 2A

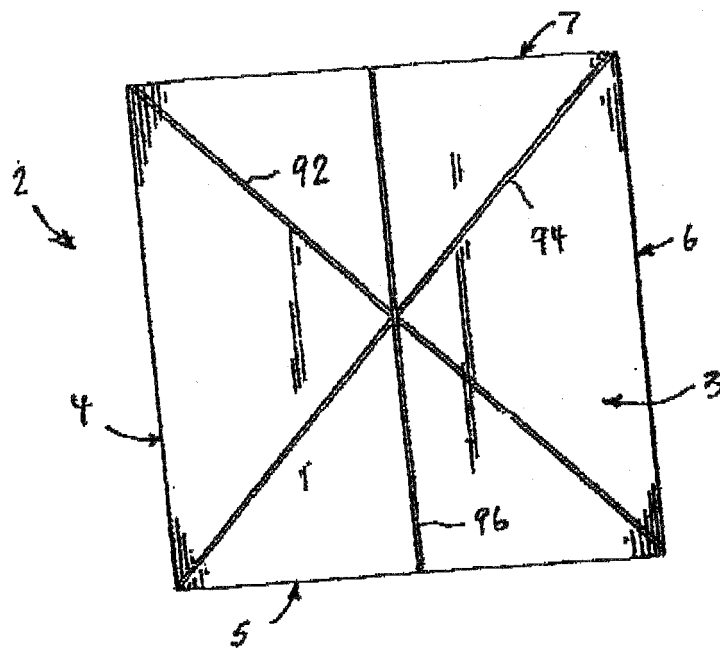


Fig. 2B

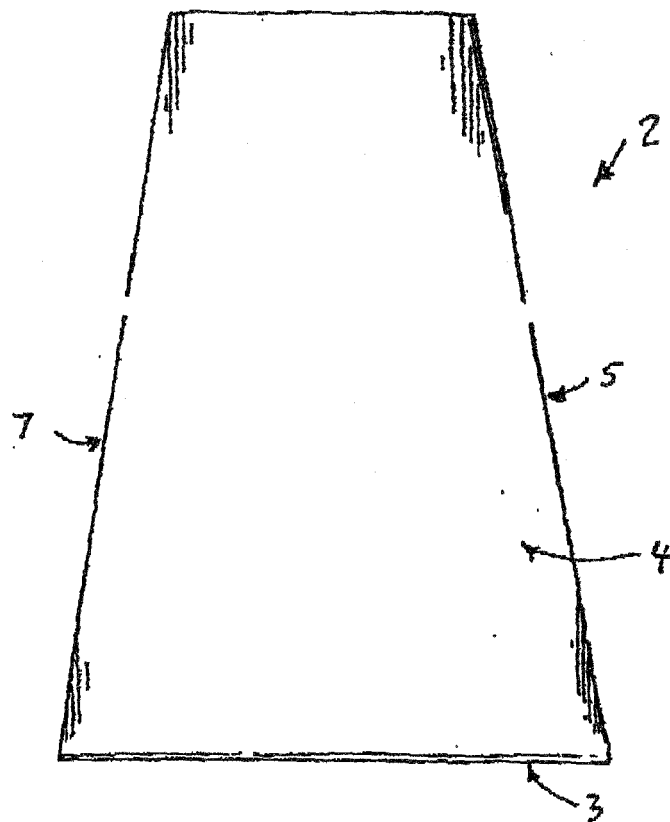


Fig. 2C

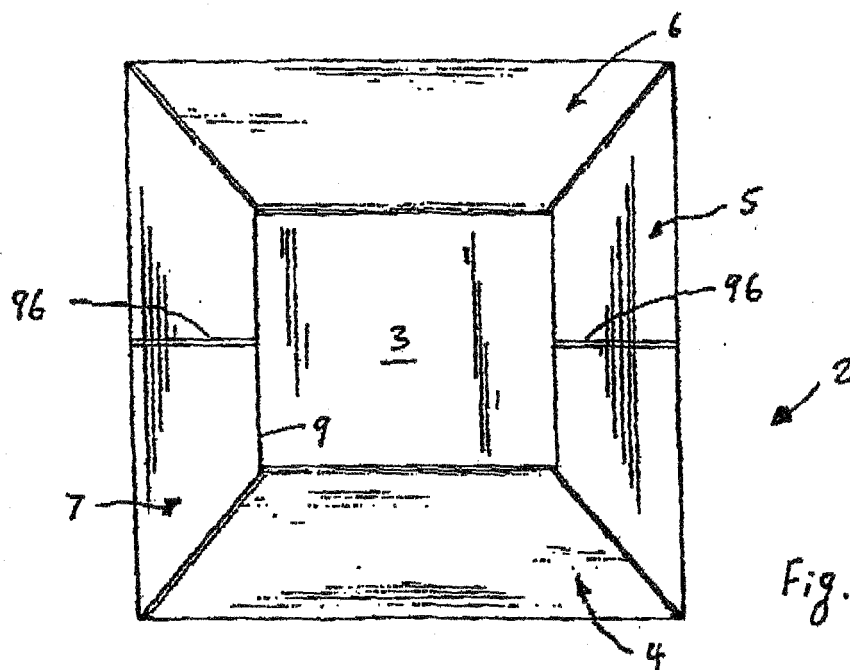


Fig. 2D

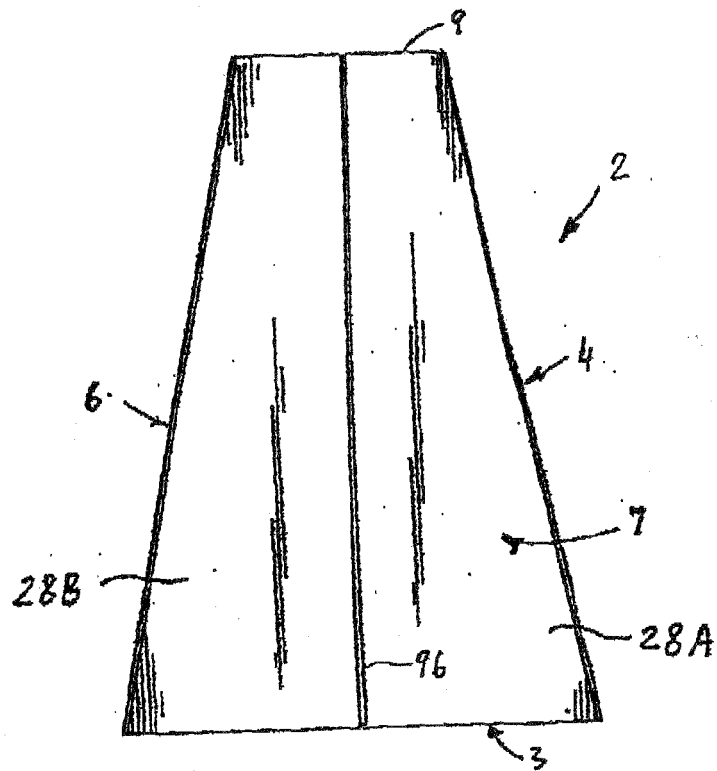


Fig. 2E

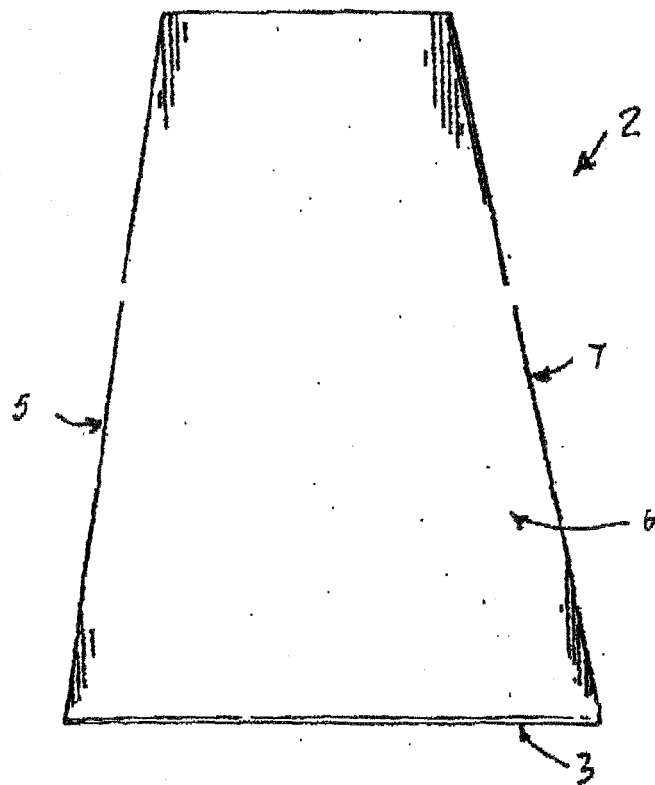


Fig. 2F

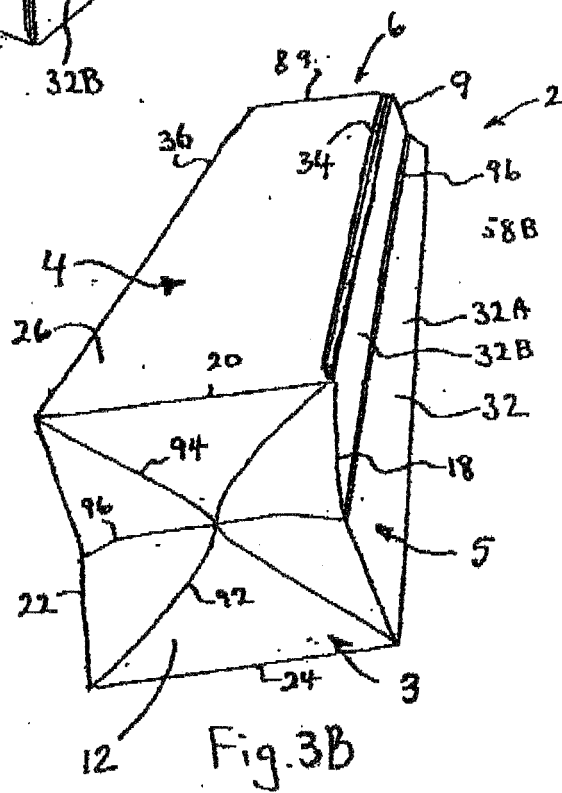
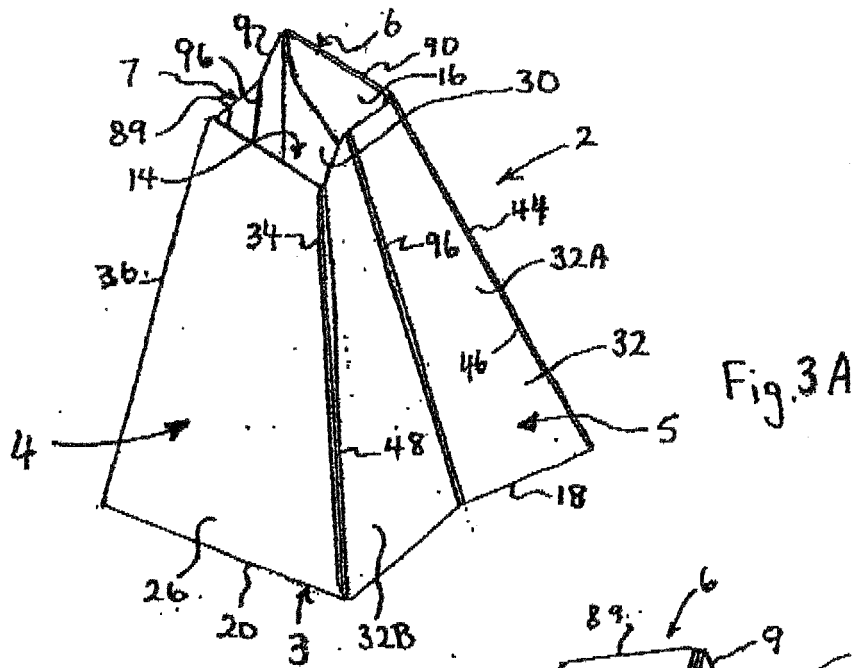


Fig. 4

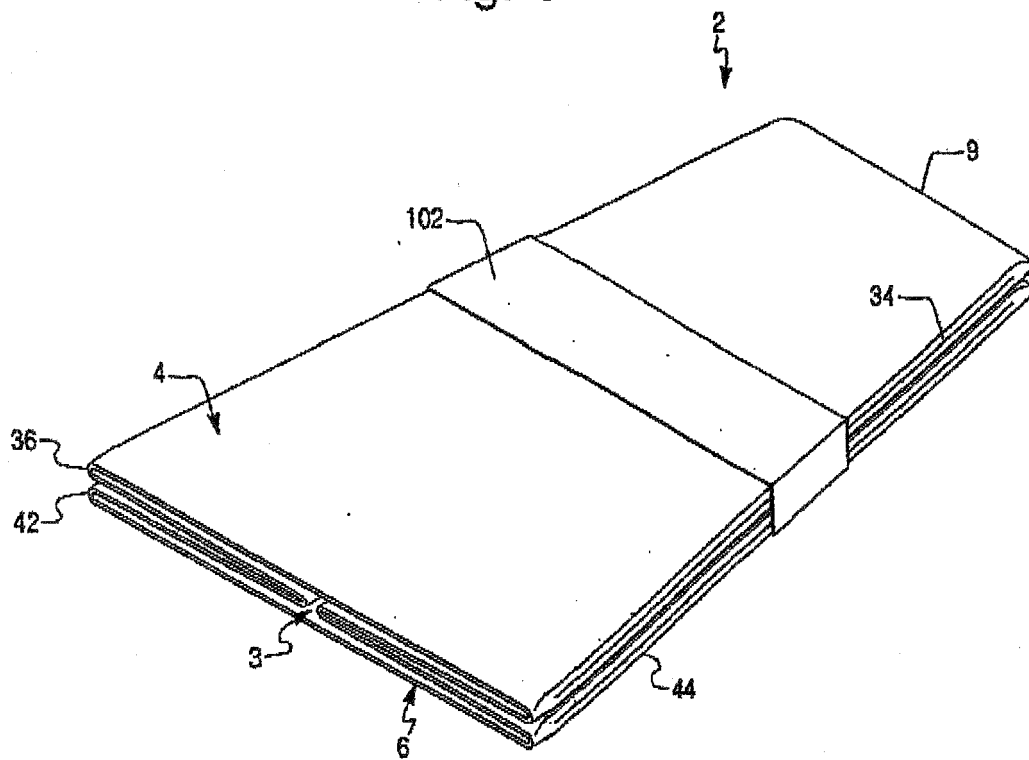


Fig. 5

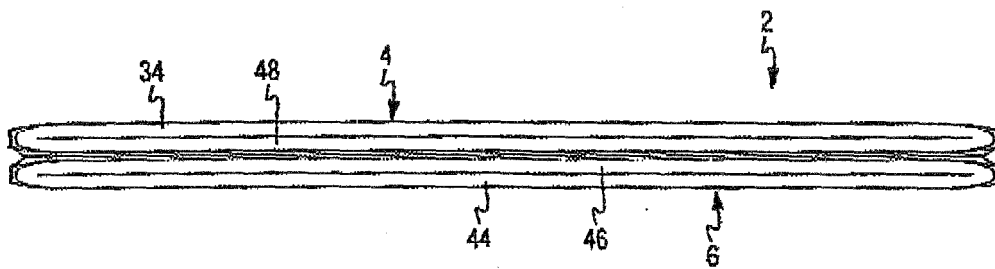


Fig. 6

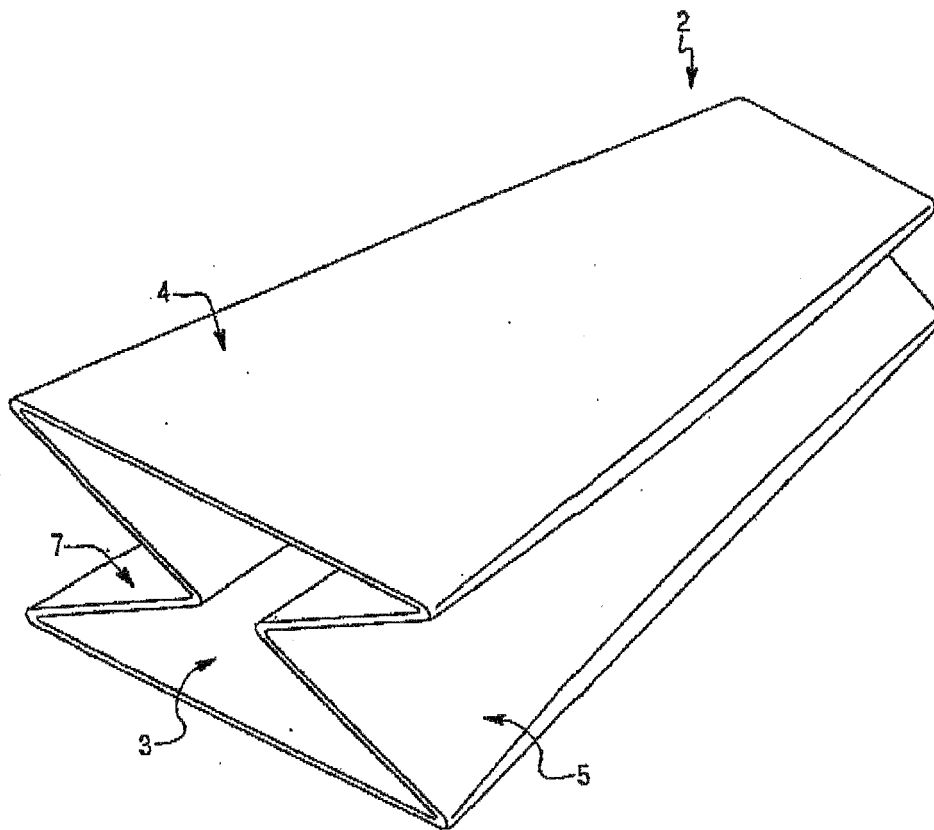
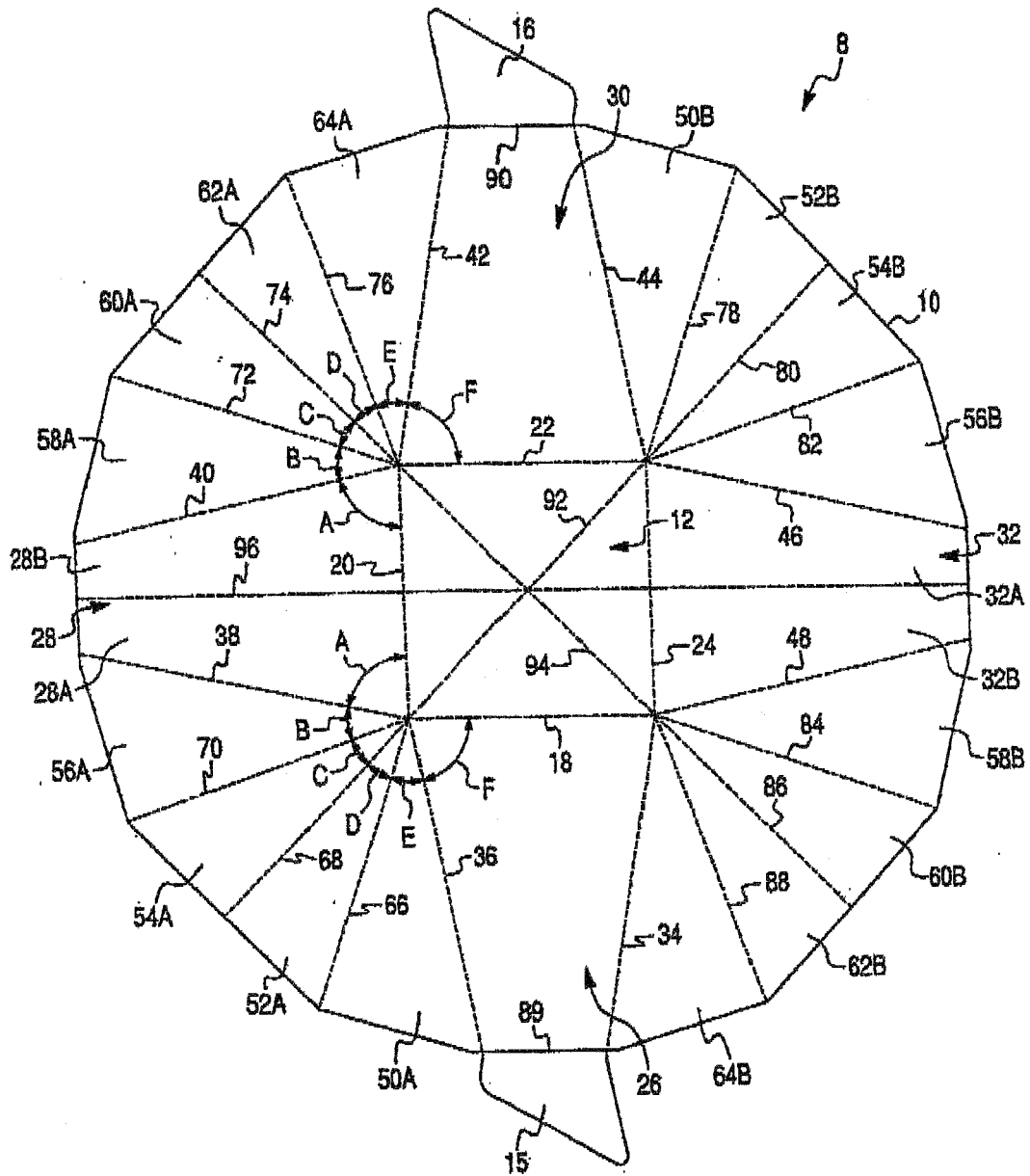


Fig. 7



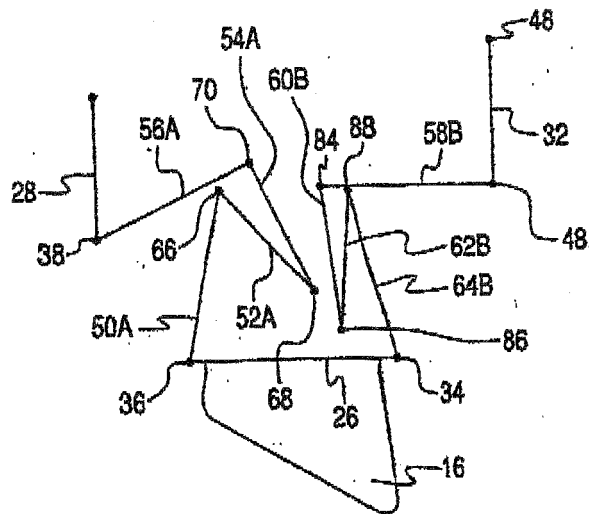


Fig. 8

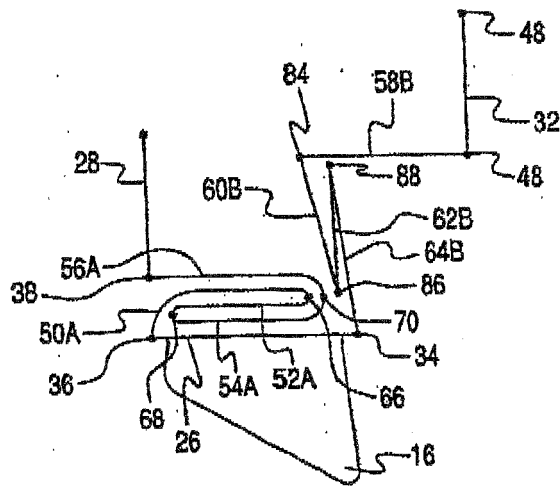


Fig. 9

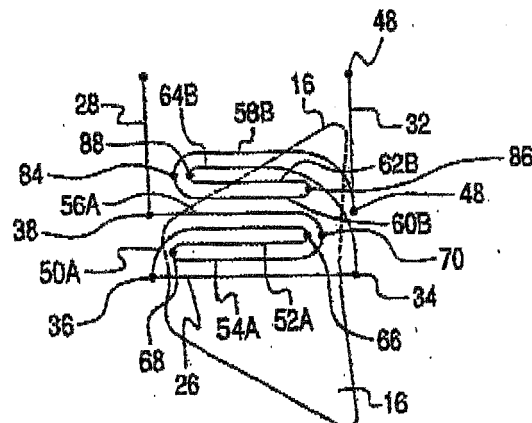


Fig. 10



European Patent
Office

EUROPEAN SEARCH REPORT

Application Number
EP 07 10 7445

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	GB 2 276 870 A (MAXWELL JOANNE SIMPSON [GB]) 12 October 1994 (1994-10-12)	1-5, 7-11, 13-15, 17-19, 21-24	INV. A47G7/06 B65D5/00 B65D5/36 B65D5/24
Y	* pages 3-5; figures 1-7 *	6,12,16, 20	
Y	FR 2 841 215 A1 (AU JARDIN DES ARTS [FR]) 26 December 2003 (2003-12-26) * page 12, line 33 - page 13, line 20; figures 1,10 *	6,12,16, 20	
X	GB 2 321 189 A (RUDOLF SUSAN MARION [GB]) 22 July 1998 (1998-07-22) * page 2, line 25 - page 3, line 30; figures 1-3 *	1-9	
A	US 3 119 494 A (ROSENSTIEL LEWIS S) 28 January 1964 (1964-01-28) * column 2, lines 15-64; figures 1-5 *	10,24	
			TECHNICAL FIELDS SEARCHED (IPC)
			A47G B65D
The present search report has been drawn up for all claims			
Place of search Munich		Date of completion of the search 17 July 2007	Examiner Grondin, David
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 07 10 7445

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.

17-07-2007

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
GB 2276870	A	12-10-1994	NONE	
FR 2841215	A1	26-12-2003	NONE	
GB 2321189	A	22-07-1998	NONE	
US 3119494	A	28-01-1964	CH 408770 A	28-02-1966
			DK 101963 C	14-06-1965
			GB 943614 A	04-12-1963