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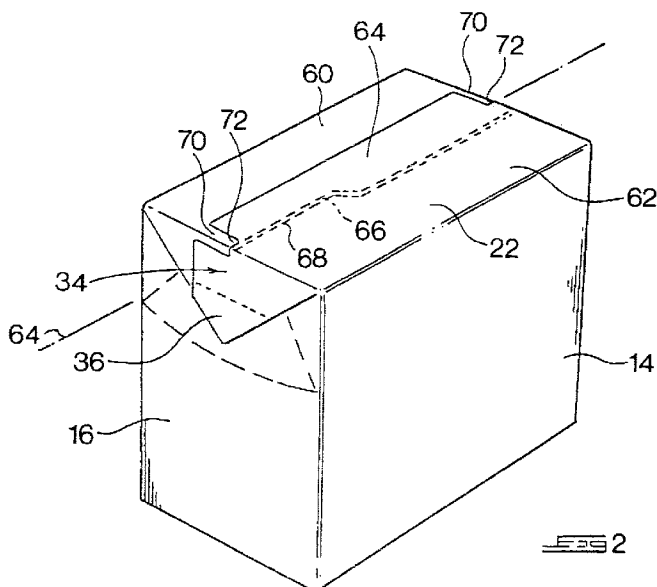
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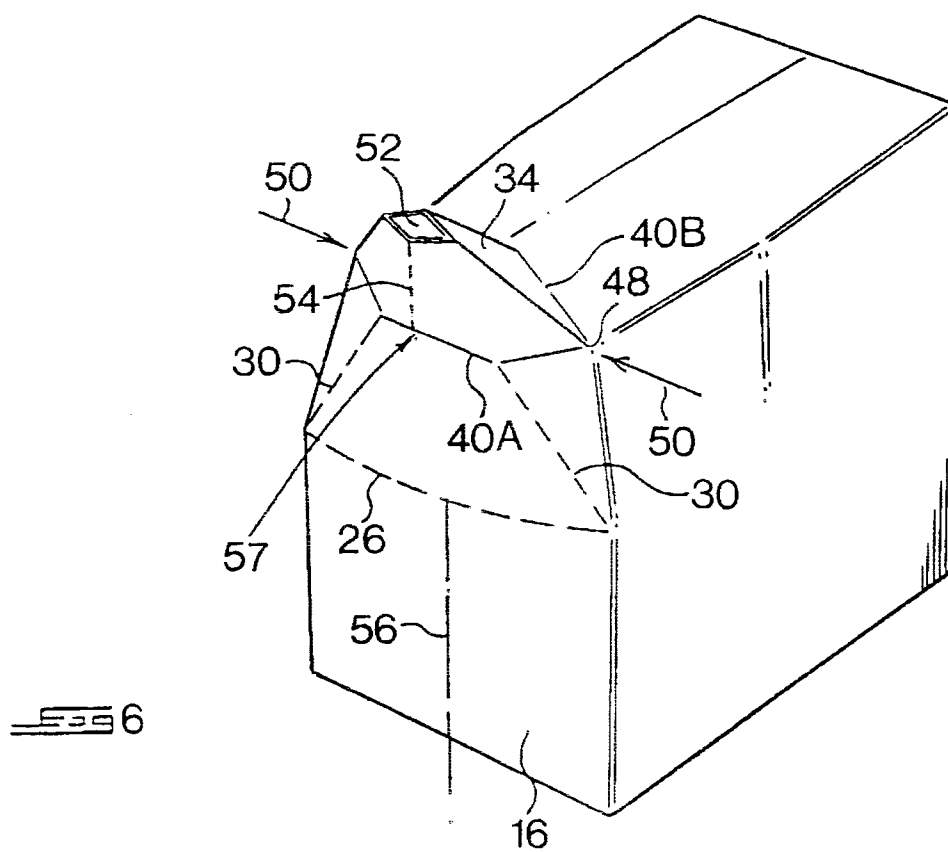
(54) **Bag-in-box container with integral pouring spout**

(57) A fluid container comprises a prismatic box folded from flexible sheet material. An integral pouring spout formation (34) is located at the interface between the front (16) and top (22) walls of the box. The pouring spout formation comprises a lower projecting wall which folds along a lower fold line (40A) with respect to the front wall, an upper projecting wall which folds along an upper fold line (40) with respect to the top wall, and a front wall portion (32) formed in an upper part (32) of the front wall. The spout formation is foldable between the closed position in which it lies against the front wall and an erect position in which it projects above the top wall.

The upper part of the front wall is connected to the lower part thereof along an arcuate front wall fold line (26) terminating at respective opposite edges of the front wall. A pair of spout defining fold lines (30) extend from the opposite ends of the front wall fold line towards a pouring spout formation (34) at an acute angle relative to the respective edges of the front wall. The arrangement is such that, with the pouring spout in the erect position the upper corners (50) of the box on either side of the front wall can be pressed together which will have the effect of causing the container walls to deflect about their respective fold lines so that the pouring spout formation adopts an open generally tubular configuration.



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Description

THIS invention relates to fluid containers and methods of manufacture thereof.

French patent 2552403 discloses a fluid container for holding granular or powdery products. The fluid container is in the form of a bag-in-the-box container having a prismatic configuration. One of the ears of the bag locates within a corresponding projecting triangular ear extending from a top corner of the box. In order to dispense the granular contents of the container, the ear is lifted from a position in which it is folded down against a side wall of the box to a position in which the ear extends at right angles from the side wall. The entire ear, which remains in a flat unopened form, is then snipped off at its base at the top corner of the box so as to define an opening in the fluid container. An opening of this type has a number of disadvantages. First, the opening is relatively large and unstructured, which means that the contents of the container can not be poured from the container in a controlled fashion. Second, the opening cannot be re-sealed or at least closed off once it has been opened, as a result of which the contents of the container are exposed to spillage and odour contamination. Insofar as a pouring spout exists, it is substantially flush with the top and side walls of the container, as a result of which, were liquid to be dispensed from the container, the residue would tend to drip down the side wall after pouring had taken place.

French patent 2680763 discloses a similar type of bag-in-the-box container having a pair of triangular ears extending from the top corners of the box. The bag has corresponding ears located within the triangular ears, and is designed to hold granular or powdery contents. A tip of the ear can be snipped off so that the remainder of the ear serves as a crude type of pouring spout. The pouring spout remains essentially closed and flattened when the spout is folded upwardly into a raised pouring position, for the reason that the folding axis of the spout is essentially coincident with the top and bottom fold lines at the top corner of the box where the spout is joined to the box. In addition, the spout is in the form of a loose flap which is not self-sustaining when in the raised pouring position. These drawbacks prevent fluids from being dispensed from the spout in a controlled and directed fashion.

US patent 4,245,743 to Heuberg discloses a tear-open bag-in-the-box container in which an entire top portion of the box is torn away. A cross seam of the bag is glued to the tear-away portion of the box, and is provided with an appropriate tearing nick. As a result, tearing away of the top portion of the box results in part of the cross seam of the bag being simultaneously torn away. The bag within the box then forms a pouring spout through which the liquid contents of the container can be dispensed. As the bag is typically formed from a non-rigid material, the resultant spout will tend to be non-rigid, and may be prone to collapsing. A further draw-

back is that the spout opening is exposed and cannot be closed after use, as a result of which a container of this type is only suited to applications in which the entire liquid contents of the container are dispensed in a single pouring operation.

According to the invention there is provided a fluid container comprising a prismatic box folded from flexible sheet material, the box having four rectangular side walls, one of which is a front wall, a bottom wall, and a top wall, an integral pouring spout formation being formed at the interface between the front wall and the top wall, the pouring spout formation comprising a lower projecting wall which folds along a lower fold line with respect to the front wall, an upper projecting wall which folds along an upper fold line with respect to the top wall, and a front wall portion formed in an upper part of the front wall, the pouring spout formation being foldable between a closed position in which it lies against the front wall, and an erect position in which it projects up above the top wall, the upper part of the front wall being connected to the lower part of the front wall along a front wall fold line which is generally parallel to the lower fold line, the front wall fold line terminating at or towards respective opposite edges of the front wall, a pair of spout defining fold lines being formed in the upper part of the front wall and extending respectively from the opposite ends of the front wall fold line towards the pouring spout formation at an acute angle relative to the respective edges of the front wall, the arrangement being such that, with the pouring spout in the erect position the upper corners of the box on either side of the front wall can be pressed together which will have the effect of causing the container walls to deflect about their respective fold lines thereby allowing the pouring spout formation to adopt an open generally tubular configuration.

Further there is provided for the front wall fold line to be of arcuate shape which is concave in an upwardly facing direction.

In one form of the invention, the lower projecting wall may have a centre fold line therein which is coincident with a vertical plane which bisects the front wall along the longitudinal centre-line thereof.

In an alternative preferred form of the invention, the spout-defining fold lines may extend into the lower projecting wall and meet at an apex.

Conveniently, the spout-defining fold lines in conjunction with the first wall fold line define a uniplanar, preferably sector-shaped panel when the pouring spout is in the erect position.

Advantageously, a top fold line is defined or definable along a longitudinal centre line of the top wall and the upper projecting wall.

At least some of the fold lines may be defined by cut lines which pass through the sheet material.

A pre-filled fluid type bag may be arranged to fit into the box, the bag having an inner spout located within the spout formation, with the tip of the inner spout being arranged to nest within the tip of the pouring spout for-

mation, so that both tips can simultaneously be removed in a single removal operation to obtain access to the contents of the bag.

The inner spout may be glued within the pouring spout formation. In particular, the inner spout may be glued within the pouring spout formation at a location away from the tips in such a way that the walls of the inner spout adhere to the pouring spout even after removal of the tips so as to hold the inner spout open in concert with the pouring spout formation.

The top wall may be comprised of a pair of panels, one of which terminates on the longitudinal centre line of the top wall and thereby defines a natural fold line about which the top wall will crease when the upper corners of the box are pressed together. Optionally the other panel may have a fold line therein which is co-linear with the edge of the said one panel.

The invention extends to a blank for a fluid container of the typed described.

These and further features of the invention will be made apparent from the description of a preferred embodiment thereof given below by way of example. In the description reference is made to the accompanying drawings but the specific features shown in the drawings should not be construed as limiting on the invention.

The terms "side", "front", "bottom" and "top" should not be seen as being limiting even as far as the customary orientation of the fluid container is concerned, and should be constituted purely in the relative sense, and that they describe the position of the walls of the container relative to one another.

The following is a description of some specific embodiments of the invention, reference being made to the accompanying drawings, in which:

- Figure 1** shows a plan view of a blank from which a first embodiment of a fluid container of the invention is formed;
- Figure 2** shows a perspective view of the container formed from the blank of Figure 1 with the pouring spout thereof in a closed position;
- Figure 3** shows a similar view to that of Figure 2 with a pouring spout in a partially lifted position;
- Figure 4** shows a similar view to that of Figures 2 and 3 with the pouring spout in a fully erect position;
- Figure 5** shows a similar view to that of Figure 4 with the pouring spout ready to be opened;
- Figure 6** shows a similar view to that of

Figure 5 with the pouring spout in an open position;

Figure 7 shows a side view of the container with the pouring spout in a fully open position;

Figure 8 shows a side view of the container with the pouring spout in a partially closed position;

Figure 9 shows a plan view of a blank from which a second embodiment of a fluid container of the invention is formed; and

Figures 10 to 12 show a perspective view of the container formed from the blank of Figure 1 with the pouring spout thereof in the respective fully erect, ready-to-be-opened and fully open positions corresponding to the Figures 4 to 6 positions of the first embodiment.

Referring initially to Figure 1, a carton blank 10 comprises a unitary sheet of flexible sheet material which is cut and creased to form a series of generally rectangular panels which are joined together along fold lines indicated at numeral 12. The panels define four side walls 14, and one of those side walls is referred to in this specification as a front wall and is numbered 16. The blank also defines a bottom wall 18 which is formed of four separate panel pieces, namely side flaps 19 and end flaps 20, which can be folded together to close off the bottom of the container in a paste-down closure configuration. It should be noted that the side flaps 19 are chamfered or tapered whereas the end flaps 20 are square ended which will assist in maintaining the prismatic configuration of the container when erected. One of the side flaps 19 includes a rectangular opening 21 therein which defines an air vent in the base of the container once formed. This vent 21 provides an air evacuation passage which will allow air to escape from the container when the container has been filled. This air vent 21 will be particularly required where the container is to be filled with a bag of fluid such as will be the case where the container comprises the outer box of a bag-in-the-box container system.

The container is also provided with a top wall 22 which is formed of two panels 60 and 62 which will also be folded together to form the top wall.

The top wall 22 will be described in more detail herebelow.

The front wall 16 has a series of fold lines formed therein. Firstly, the front wall includes a front wall fold line 26 which is approximately two thirds up the height of the front wall and is of arcuate shape being concave

in an upward facing direction. The front wall fold line 26 terminates at opposite edges 28 of the front wall. A pair of spout defining fold lines 30 formed in the upper portion 32 of the front wall extend upwardly towards the spout 34 of the formed container (as discussed in more detail below) from the respective opposite ends of the front wall fold line 26. It should be noted that, for the configuration of box shown in the drawings, the upper portion 32 of the front wall is located approximately two thirds up the height of the front wall. However, for different configurations of the box the proportions could be quite different. For example, a particularly tall box might have the upper portion thereof occupying only approximately one eighth the height of the box. A very squat box, on the other hand, might have the upper portion thereof occupying approximately half the height of the front wall.

The front wall 16 and top wall 22 of the container embody the more important inventive concepts of this invention. As shown in Figures 2 to 8, the container, when in its folded configuration defines an integral pouring spout 34 the tip 36 of which will be snipped off in order to open the container and provide access to the contents thereof. The pouring spout, as shown in Figure 2, is of generally triangular shape when folded in a closed configuration and when in this configuration the container is relatively rigid and is of prismatic rectangular shape. The pouring spout 34 will generally be glued against the front wall 16 adding to the rigidity of the structure. The glue on the underside of the pouring spout will be of a non-permanent type which will allow the pouring spout to be lifted free of the front wall 16 in order to open the container.

Figure 3 depicts the manner in which the pouring spout 34 is lifted free of the front wall 16. The pouring spout rotates in the direction of arrow 38 about fold line 40, the fold line 40 being defined at the interface between the top wall 22 and the front wall 16. The pouring spout 34 is defined by a pair of triangular panels, namely a lower projecting wall 42 which is an extension of the front wall 16 and an upper projecting wall 44 which is an extension of the top wall 22. The panels 42 and 44 are in face-to-face contact when the box is in a closed configuration as shown in Figure 2, and will remain in face-to-face contact as the pouring spout is lifted in the direction of arrow 38 towards its open position. Each of the panels 42, 44 is connected to its respective panel along a fold line, numbered 40A and 40B respectively.

As shown in Figure 4, the pouring spout 34 can be rotated through approximately 180° about fold line 40 so that it is fully erect. In this position the tip 36 may be snipped off as indicated at numeral 46 to open the pouring spout. Once the tip 36 has been snipped off the pouring spout 34 can be released and it will tend to move back towards a half open position as shown in Figure 5 of the drawings. It will now be a simple matter to fully open the pouring spout into a dispensing configuration by compressing together the upper corners of the box, that is, the upper corners 48 of the front panels 16. The

manner in which the corners are pressed together is indicated by arrows 50 shown in Figure 6 of the drawings. As the corners 48 are pressed together the spout 34 will pop open into a generally cone shaped tubular pouring spout defining a relatively large dispensing opening 52 at the point where the tip of the pouring spout has been snipped off.

The relatively large dispensing opening 52 provided by snipping off the tip of the pouring spout is advantageous for the dispensing of many dispensable relatively flowable fluid and particulate materials. It will be noted that the dispensing opening 52 has a diamond shaped configuration which "pouts" in an open mouthed pour-friendly shape. Of course, the size of the opening will depend on the point along the spout where the tip is cut off. But, if the spout is cut off at the point indicated by dotted lines 53 a relatively large opening will be achieved when the spout is in its erected or open position. The large size spout will be convenient for pouring flowable particulate materials of the type which it may be convenient to store in a box of the kind described herein. It is envisaged that particles which will be dispensable through the opening 52 than would be of larger diameter than would be possible the case with other containers of this general type.

As the corners 48 are pressed together the upper part 32 of the front wall 16 will bow outwardly. This outward bowing of the upper part 32 of the front wall will be facilitated by the fold lines in the front wall. As will be clear from Figure 6 of the drawings the arcuate front wall fold line 26 will define the lower edge of the outwardly bowed portion. The spout defining fold lines 30 will likewise encourage the formation of the spout. The panel 42 also has a fold line 54 therein which lies on the longitudinal centre line of the front panel 16 which is indicated by dotted lines 56. The dispensing opening 52 thus formed is of diamond shape and the opening will remain open due to the nature and position of the fold lines.

The fold lines 30 and 54 and, optionally the fold lines 26, may be further weakened by providing a series of short cuts through the sheet material along the respective fold lines. This will increase the ability of the material to fold along the fold lines and also induce the formation of the spout when the upper corners of the container are pressed together in the direction of arrows 50.

To close the pouring spout the pressure will be released from the corners 48 and the pouring spout will be nipped between thumb and forefinger and pressed down against the front wall 16. To assist with closure it might be necessary to depress the upper part of the front wall to counteract the bias in the outwardly bowed form which that part of the front wall adopts on opening. The upper part of the front wall will be pressed in the region indicated at numeral 57 of the drawings. The natural rigidity of the sheet material from which the container is formed will then induce the container to remain in this semi-closed configuration. The container in its open

condition is shown in Figure 7 of the drawings whereas the container in its semi-closed condition is shown in Figure 8 of the drawings. With the spout semi-closed as shown in Figure 8, odour contamination of the contents of the container will be avoided and in advertent spillage will also be prevented.

The top wall of the container is, as mentioned above, formed of two separate panels which close off the top of the container after the contents of the container have been inserted into the container. The top wall, as shown clearly in Figures 2 and 3 is formed of a pair of side panels 60 and 62. The panel 60 underlies the panel 62. The panel 60 has an outer edge 68 which extends along the longitudinal centre line 64 of the top wall 22. The panel 62 has a fold line 66 which overlies the terminating edge 68 of the panel 60. Thus, when the pouring spout is pressed into its open position the top wall 22 will fold naturally along the fold line 66, particularly because the fold line 66 overlies the edge 68 of the panel 60. The fold thus created along the centre-line 64 will facilitate formation of the spout and will result in the diamond shape of the opening 52.

One further point of importance relating to the formation of the top wall 22 is that the panel 62 has notches 70 cut into opposite ends thereof, the notches 70 each terminating in a shoulder 72 which is aligned along the longitudinal centre-line 64 of the top wall 22. When the box is assembled, the edge 68 of the panel 60 will butt up against the shoulders 72 thus ensuring that the edge 68 is located and aligned along this longitudinal centre-line 64 of the container. This arrangement ensures that during formation of the spout a natural fold will be created along the fold line 66.

One further point of interest is that the panel 62 has a glue line, indicated at numeral 74 in Figure 1, applied thereto. That glue line 74 provides a permanent seal for the container when the panel 62 seals with the panel 60 and any attempt to tamper with the contents of the box will be immediately evident should that attempt at tamper be by lifting the panel 62 free from the panel 60. The glue line 74 will need to be ripped which will be immediately evident to the purchaser or user of the container. The glue line 74 extends into the tags 76 to ensure sealing of the entire container.

A closure triangular flap 78 will be provided at the rear upper side of the formed box. This closure flap will be similar to that of the pouring spout except that the fold lines 26, 30, 54 will not be provided in the various panels so that spout formation on that side of the box will not really be practicable. The closure flap 78 will generally be permanently secured to the rear wall of the container using a relatively permanent glue to discourage lifting of that end of the box for opening. The permanent closure of that end of the box will maintain the overall rigidity of the box after the pouring spout has been opened.

The side walls of the box have a glue tab 80 formed along one end of the sheet of material and glue will be

applied along that tab in known manner. A V-shaped notch 82 in the tag allows for folding of the rear closure flap 78 of the box without causing distortion of the box at that region during box formation.

Referring now to Figure 9, a carton blank 84 of a second preferred embodiment of the invention is shown. Those parts of the blank which are identical are indicated with the same numerals, and those which are substantially identical use the same numerals suffixed by an "A". The front wall 16A is provided with an arcuate fold line 26A terminating at opposite edges 28 of the front wall. A pair of spout defining fold lines 30A are formed in the upper portion 32A of the front wall, and extend upwardly through the fold line 40A defined at the interface between the lower projecting wall 42A and the front wall 16A to an apex 86 in the lower projecting wall 42A. Those portions of the spout defining fold lines which extend into this wall are indicated at 30B, and are in the form of continuous folds. In contrast, the fold lines 30A and 26A are formed with short fold lines 88 having intervening spaced apart nicks 90 to facilitate folding. The fold lines 30B divide the lower projecting wall into a lower triangular panel 92 and an upper inverted V-shaped panel 94.

The upper projecting wall 44A is defined by upper triangular panels 96 and 98, with an upper panel tag 76A being joined to the triangular panel 96 along a fold line 66A which extends into the side panel 60A at 66B so as to partly separate the side panel 60A from a panel tag 76B. Both the panel tags 76A and 76B are formed with glue lines 74A.

The upper end of the triangular panel 98 is defined by an edge 100 which is angled downwardly from right to left, with the result that it is not coincident with the fold line 66A. This allows the edge 100 to nest snugly beneath the fold line 66A of the side panel 60A when the blank is assembled into a container. A similar downwardly angled edge 102 defines the upper edge of a triangular panel 104 forming part of the closure flap 78A.

It can be seen in the detail at 108 how the fold lines 110 joining the end flaps 20A and the respective front wall 16A and side wall 14A are slightly set back relative to the fold lines 112 joining the side flaps 19A and the side walls 14A. This allows the side flaps 19A to be folded down after the end flaps 20A, with the end flaps 20A being sufficiently inwardly displaced so as to ensure that the folded down end flaps 20A do not interfere with the folded down side flaps 19A.

A glue tag 80A extends along the right side edge of the blank, and is joined to that side wall 14A which effectively forms the rear wall, in that it is directly opposite the front wall 16A when the container is assembled. As a result, the rear closure flap 78A of the box is not formed with a double layer, which is liable to distort the closure flap when the box is assembled. The various angled edges 82A of the glue flap 80A are also designed with a view to ensuring that distortion of the assembled box does not take place.

Referring now to Figures 10 to 12, a box 114 is shown formed from the assembled blank 84. In Figure 10, which corresponds to the Figure 4 position of the first embodiment, the spout 34A of the box is shown in the fully erect position, just after a tip 36A of the spout has been snipped or torn off. The spout 34A is then folded down into the Figure 11 ready-to-be-opened position. In both the Figure 10 and 11 positions, the top wall 22A is uniplanar, and is formed from an underlying panel 62A and an overlying panel 60A. The panel 60A is formed with the crease 66B which overlies a top edge 68A of the panel 62A. The length of the edge 68A, which terminates at a tag 116, corresponds to the length of the crease 66B in the panel 60A and allows the crease 66B to bend over the edge so as to assist in bowing of the front part of the top wall 22A when the container is in its Figure 12 position. Once the end 36A of the spout has been snipped off, the spout 34A then tends to spring back towards its Figure 11 position, after which the corners 48A of the front panels are then pushed towards one another in the direction of arrows 50 so as to fully open the pouring spout 34A into the open pouring Figure 12 position.

In this position, it can clearly be seen how the triangular panel 92 and the upper portion 32A of the front wall adopt a uniplanar sector-shaped configuration, with the apex 86 constituting the focus of the arcuate front wall fold line 26A. It is also clear how the inverted V-shaped panel 94 folds into two planar portions 94B and 94C about a central fold line 120, with the panel portions 94B and 94C being co-planar with the respective triangular front wall panels 32B and 32C. The three uniplanar portions described above impart a rigid self-standing quality to the entire spout structure. In order to collapse the spout, the sector-shaped panel 92 and 32A is pushed inwardly, after which the lower and upper projecting walls of the spout formation may be folded down about the crease line 40A.

There may be many variations to the above described embodiment without departing from the scope of the invention. In particular, the actual shape and configuration of the various fold lines described need not be exactly as set out in the diagrams. For example, the front wall fold line 26 might conveniently be made to be a straight line which is parallel to fold line 40 rather than an arcuate line as shown. It is envisaged that an arcuate formation will be preferable and will induce better bowing of the upper portion of the front wall but a straight line will also operate satisfactorily in practice. Also, the various panels need not be exactly the same shape as described herein.

In addition, as was mentioned previously in the specification, the fluid container of the invention is designed to accommodate a pre-filled fluid-type bag for the storage of liquids and certain types of granular materials. A typical bag is indicated schematically in broken outline at 118 in Figure 7. This bag is similar to the bag described and illustrated in the applicant's copending in-

ternational patent application no. PCT/GB95/02690. It is formed with an integral inner spout formation 120, the upper and lower walls of which are glued at 122 to the interior walls of the spout formation 34 in such a way that the walls of the inner spout adhere to the pouring spout even after removal of the tips of the inner spout and pouring spout. The bag 118 is anchored within the box in such a way that when the pouring spout formation 34 is closed, the opposite walls of the inner spout 120 are sandwiched between the upper and lower fold lines 40 and 40A so that the contents of the bag are temporarily sealed, thereby preventing spillage and, to a certain degree, maintaining freshness. The method of inserting the pre-filled bag into the box is similar to that described and illustrated in the above international patent application.

Claims

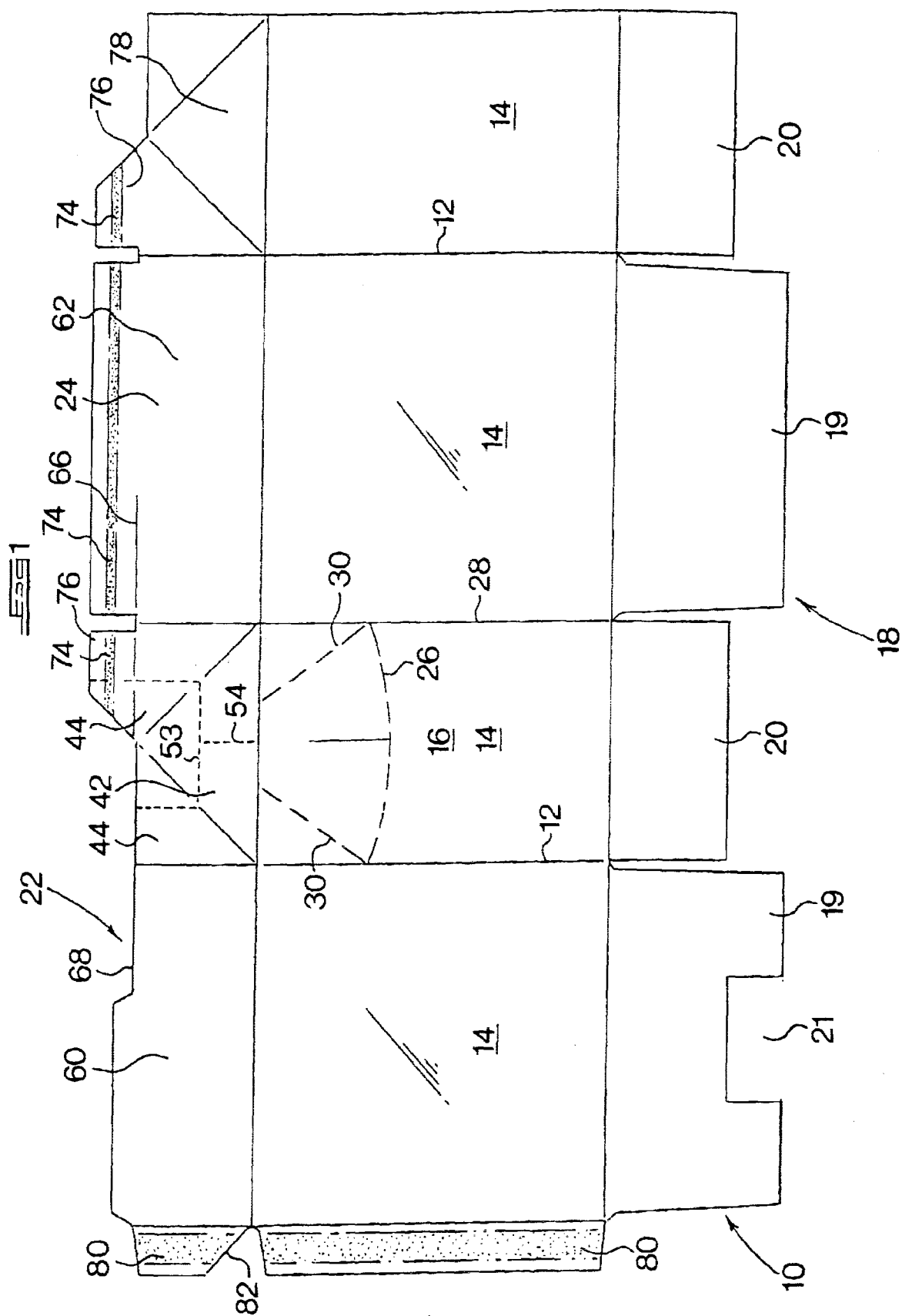
1. A fluid container comprising a prismatic box folded from flexible sheet material, the box having four rectangular side walls (14), one of which is a front wall, a rectangular bottom wall (18), and a rectangular top wall (22), and an integral pouring spout formation (34) being located at the interface between the front wall and the top wall, characterized in that the pouring spout formation (34) comprises a lower projecting wall (42) which folds along a lower fold line (40A) with respect to the front wall, an upper projecting wall (44) which folds along an upper fold line (40B) with respect to the top wall, and a front wall portion (32) formed in an upper part of the front wall, the pouring spout formation (34) being foldable between a closed position in which it lies against the front wall (14), and an erect position in which it projects up above the top wall (22), the upper part (32) of the front wall being connected to the lower part of the front wall along a front wall fold line (26) which is generally parallel to the lower fold line, the front wall fold line terminating at or towards respective opposite edges of the front wall, a pair of spout defining fold lines (30) being formed in the upper part of the front wall and extending respectively from about the opposite ends of the front wall fold line towards the pouring spout formation at an acute angle relative to the respective edges of the front wall, the arrangement being such that, with the pouring spout in the erect position the upper corners (50) of the box on either side of the front wall can be pressed together which will have the effect of causing the container walls to deflect about their respective fold lines thereby allowing the pouring spout formation (34) to adopt an open generally tubular configuration.
2. A fluid container according to claim 1 characterized in that the front wall fold line (26) is of arcuate shape,

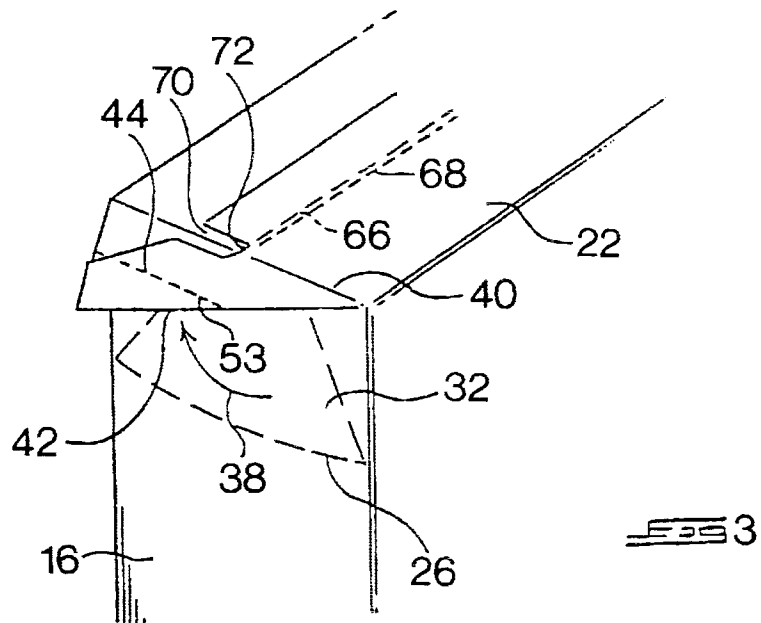
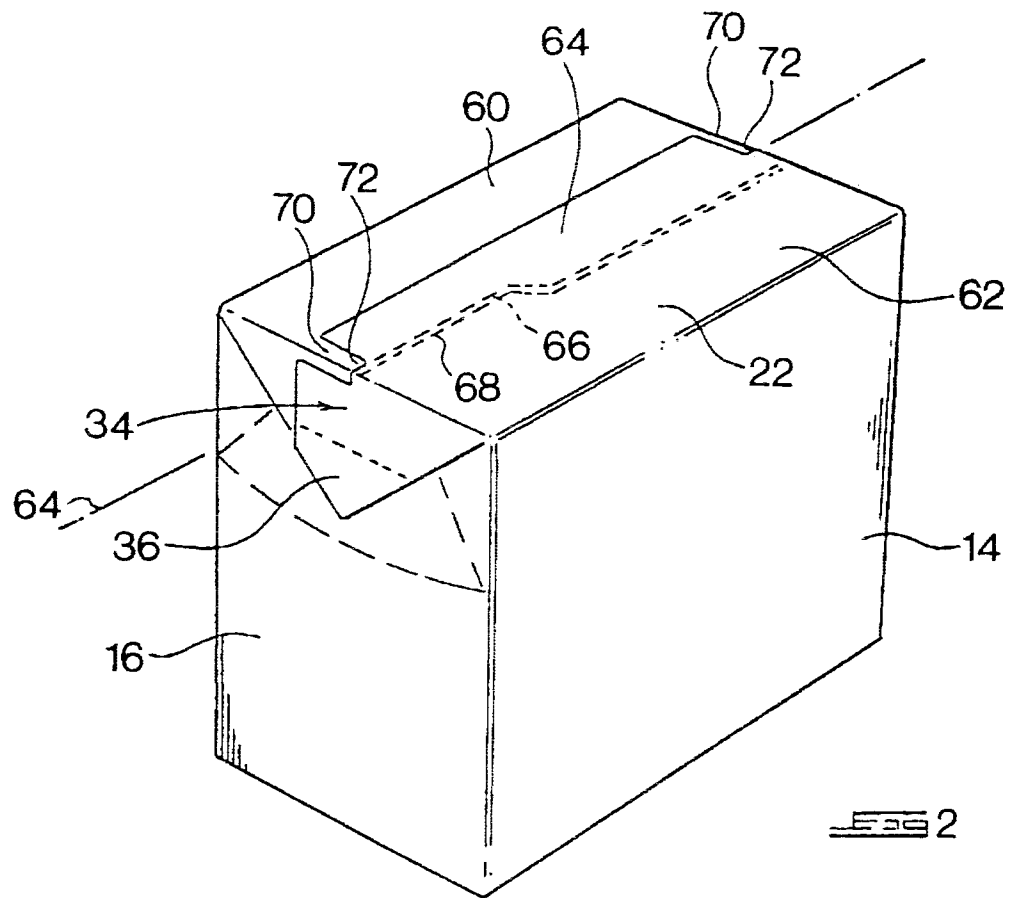
and is concave in an upwardly facing direction.

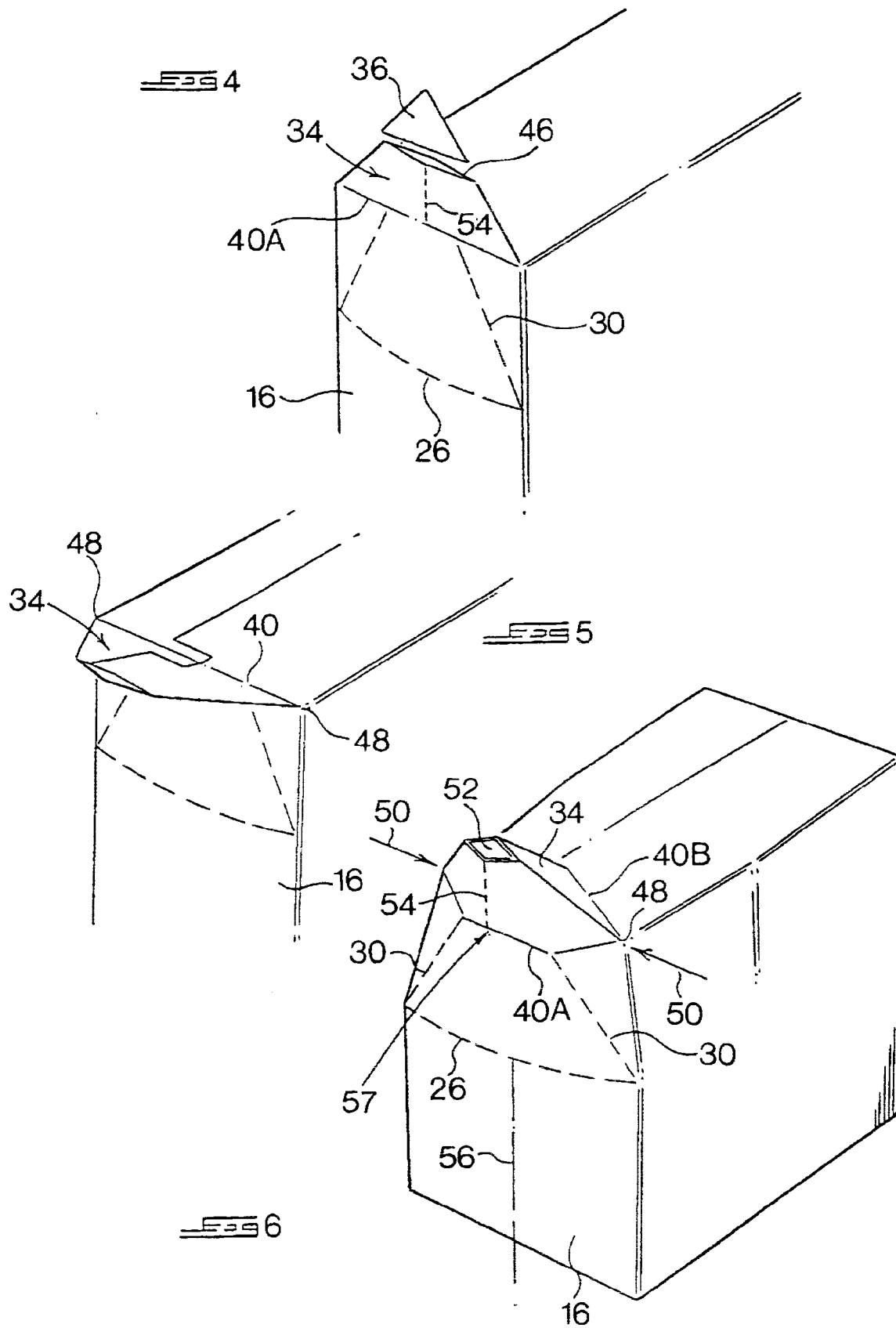
3. A fluid container according to either one of the preceding claims characterized in that the lower projecting wall (42) is formed with a centre fold line (54) therein which is coincident with a vertical plane which bisects the front wall along the longitudinal centre-line (56) thereof. 5
4. A fluid container according to any one of the preceding claims characterized in that the spout-defining fold lines (30A) extend into the lower projecting wall and meet at an apex (86). 10
5. A fluid container according to claim 4 characterized in that the spout-defining fold lines (30) in conjunction with the front wall fold line (26) define a uniplanar, sector-shaped panel (32A) when the pouring spout is in the erect position. 15
20
6. A fluid container according to any one of the preceding claims characterized in that a top fold line (66) is defined or definable along a longitudinal centre line of the top wall (22) and the upper projecting wall (44). 25
7. A fluid container according to any one of the preceding claims characterized in that the top wall (22) comprises a pair of overlapping adhesively joined panels (60;62), one (60) of which terminates on a longitudinal centre line (64) of the top wall and thereby defines a natural fold line (66) about which the other panel of the top wall (62) will crease when the upper corners of the box are pressed together. 30
35
8. A fluid container according to claim 7 characterized in that the other panel has a fold line (66) defined therein which is co-linear with the edge (68) of the said one panel (60). 40
9. A fluid container according to any one of the preceding claims characterized in that at least some of the fold lines (30;54;26) are defined by cut lines which pass through the sheet material. 45
10. A fluid container according to any one of the preceding claims characterized in that a pre-filled fluid type bag (118) is arranged to be fitted into the box, the bag having an inner spout (120) with the tip of the inner spout nesting within the tip of the pouring spout formation, so that both tips can simultaneously be removed in a single removal operation to obtain access to the contents of the bag. 50
11. A fluid container according to claim 10 characterized in that the walls of the inner spout (120) are glued within the pouring spout formation at a location (122) away from the tips in such a way that the 55

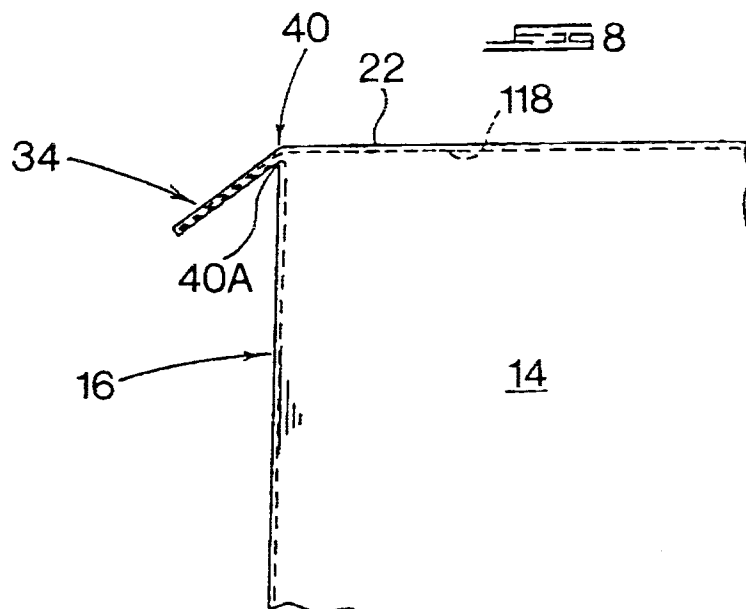
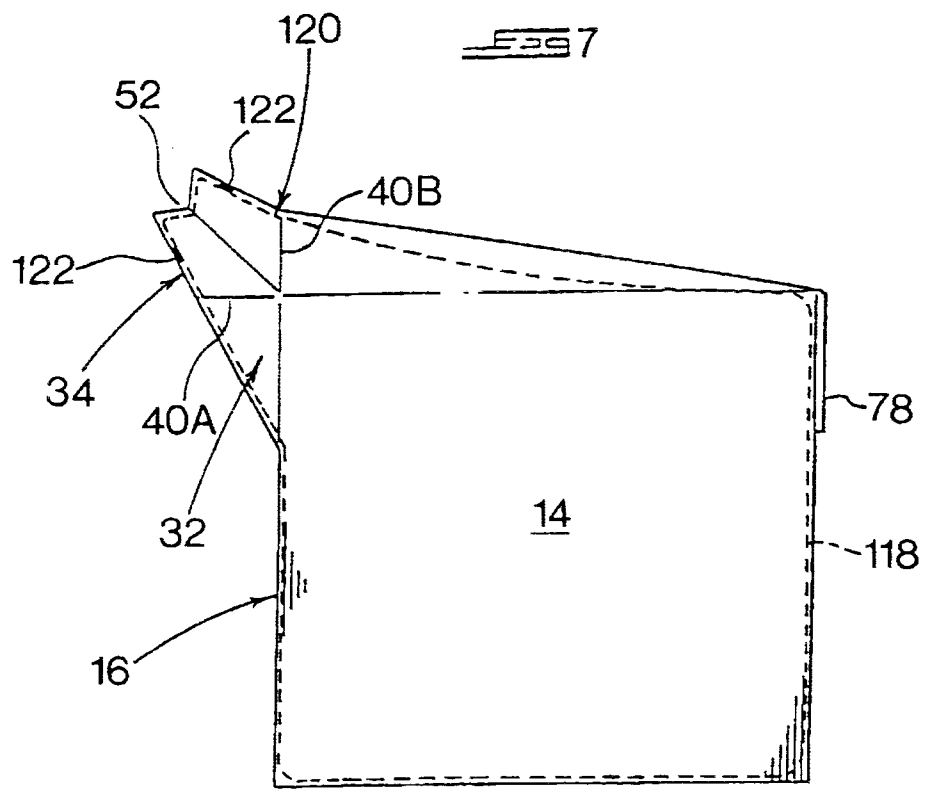
walls of the inner spout adhere to the pouring spout even after removal of the tips so as to hold the inner spout open in concert with the pouring spout formation (34).

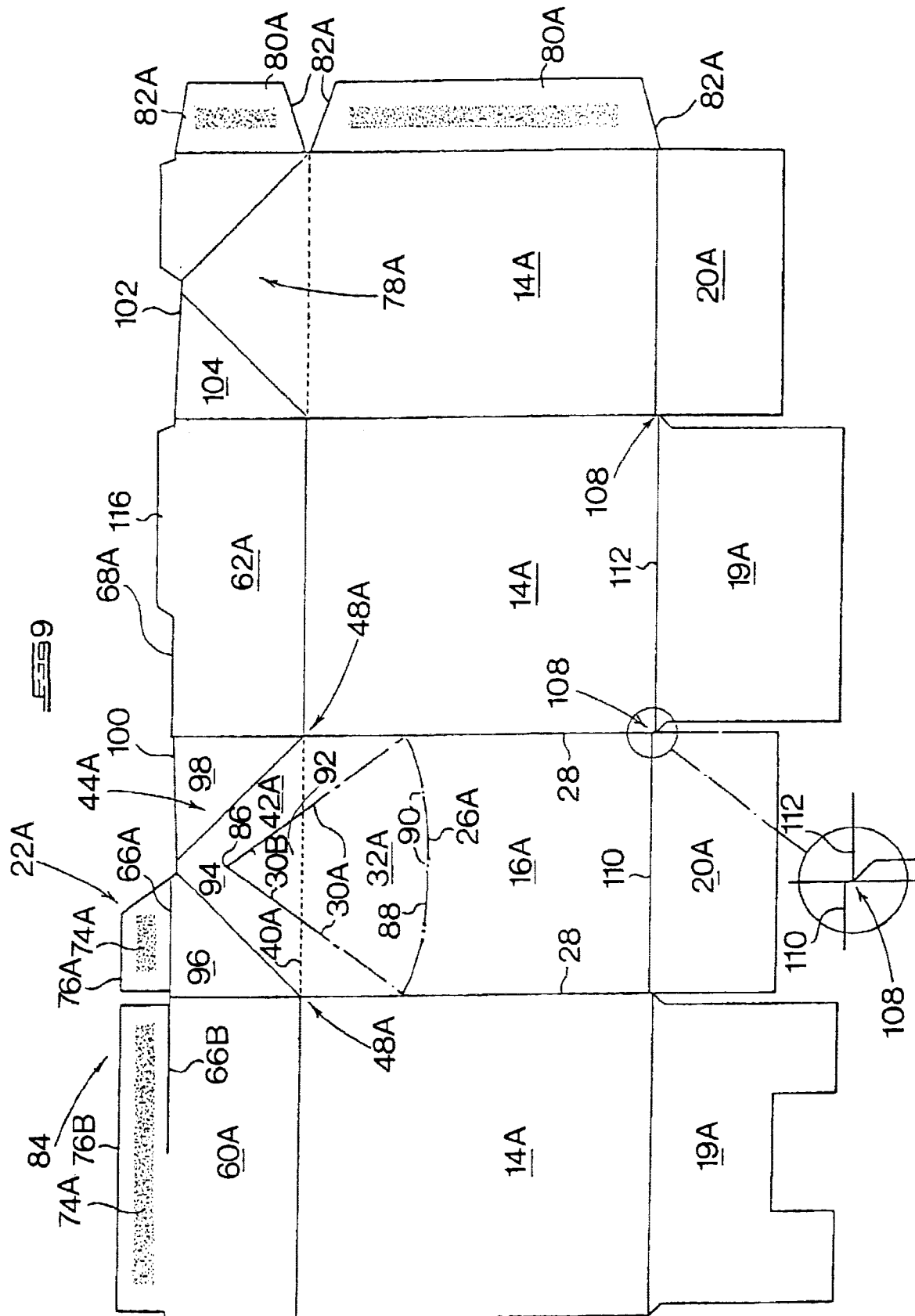
12. A blank (10) for a fluid container characterized in that the fluid container is of the type according to any one of the preceding claims 1 to 11.

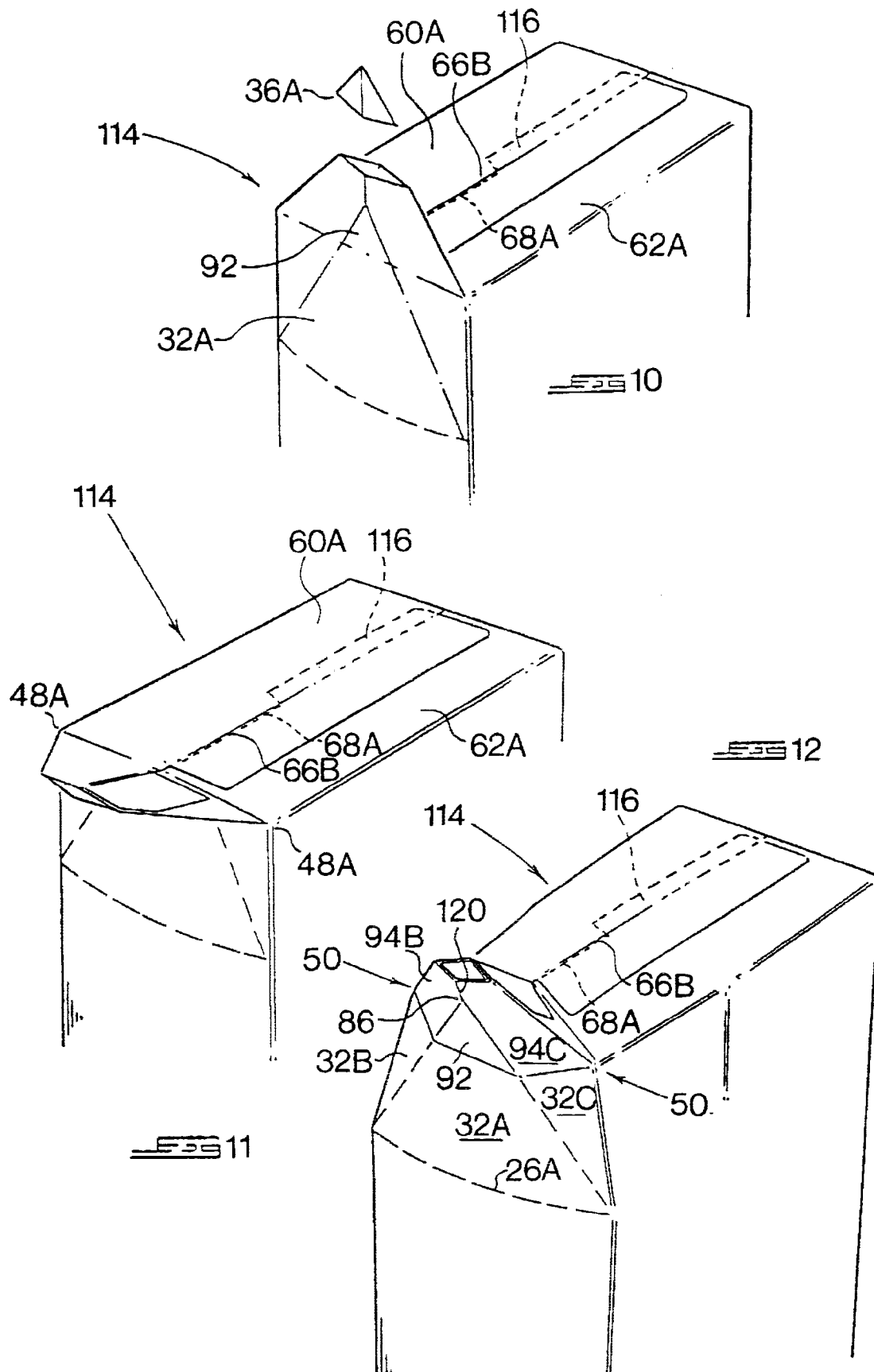














European Patent
Office

EUROPEAN SEARCH REPORT

Application Number
EP 97 30 8607

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.6)
X	EP 0 709 295 A (ELOPAK SYSTEMS AG) * the whole document *	1,3-9,12	B65D77/06 B65D5/74
Y	---	2,10,11	
Y	US 4 546 884 A (KUCHENBECKER) * the whole document *	2	
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Y	AU 15741 66 A (PEMBROKE CARTON) * the whole document *	10,11	
A,D	WO 96 15047 A (M-PAK LTD) * the whole document *	1-12	
A	EP 0 132 824 A (A. COORS CO.) * the whole document *	1-12	
			TECHNICAL FIELDS SEARCHED (Int.Cl.6)
			B65D
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 12 February 1998	Examiner Pernice, C
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			

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