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Office européen des brevets



(11) Publication number : **0 302 563 B1**

(12)

EUROPEAN PATENT SPECIFICATION

(45) Date of publication of patent specification :
09.10.91 Bulletin 91/41

(51) Int. Cl.⁵ : **B65D 5/48, B65D 5/36**

(21) Application number : **88201630.6**

(22) Date of filing : **29.07.88**

(54) **A collapsible tray with partition wall.**

(30) Priority : **30.07.87 NL 8701800**

(43) Date of publication of application :
08.02.89 Bulletin 89/06

(45) Publication of the grant of the patent :
09.10.91 Bulletin 91/41

(84) Designated Contracting States :
BE DE ES FR NL

(56) References cited :
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GB-A- 971 272
GB-A- 2 115 384
NL-A- 7 205 527
US-A- 2 850 223
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EP 0 302 563 B1

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Description

This invention relates to a collapsible transport or display container in the form of a folding tray made from a blank, said tray being provided at least with a bottom wall and upright front, rear and side walls, which tray, from a flat, folded storing position, wherein the respective upright walls are collapsed over the bottom wall, can be transformed into the position of use by erection of the collapsed walls.

Collapsible trays of this kind, an example of which is described in GB-A-971,272, are used frequently for packaging vegetables and fruits and also, in a lighter construction, for cakes, as transport and/or display box.

When an intermediate wall is desired in the interior of such collapsible trays, one has to use hitherto loose insert walls, which have to be positioned after the box has been brought in the position of use.

It is an object of the present invention to provide a collapsible tray of the above described type having at least one integrated intermediate wall.

To that end, the tray according to the present invention is provided with an intermediate wall formed by doubling up an intermediate bottom wall portion and hingedly connected to the respective tray bottom wall panel, said intermediate wall being collapsed over the bottom panel in the storing position of the tray and when the tray is in the erected position of use, is coupled at least in its upright position to adjacent front and rear tray walls.

A collapsible container of this kind with intermediate wall can be made using as the starting point a blank having a bottom wall panel which is connected through fold lines to front, rear and side wall panels, while in the corner areas one of the adjacent wall panels is fitted with a substantially rectangular, hinging connecting flap and the other wall panel has a substantially 45° fold line which extends from the respective corner point of the bottom and which bounds a substantially isosceles-triangular connecting area adhesively connectible to the rectangular connecting flap in the area bounding the hinge line of said connecting flap, wherein according to the present invention, the bottom panel, for locally forming an intermediate wall, is provided with three parallel fold lines which bound two intermediate wall panels foldable upwards from the bottom surface, the front and rear wall panels each comprise two portions separated by a discontinuity, and which are interconnectible, thereby shortening the respective wall panels to an extent corresponding with the shortening of the bottom wall panel occurring as a result of the upfolding and face to face positioning of the intermediate wall panels, and the side edges of said wall the intermediate panels and the adjoining upright front and rear tray wall panels are provided with cooperating

coupling means.

For forming a collapsible tray from a blank, the front, rear and side walls are erected and interconnected in known manner at the corners of the bottom panel by means of the rectangular connecting flaps and the triangular connecting areas so that the wall panels are collapsible over the bottom panel and the intermediate wall is formed by the intermediate wall panels being folded up from the bottom panel and interconnected in a face to face relationship, while the ends of the upright wall portions located on either side of the local discontinuity are interconnected to form continuous walls. The resulting tray has collapsible upright walls and one or more intermediate walls collapsible onto the tray bottom.

Said cooperating coupling means for locking the intermediate wall panels can be locking lips and lip-receiving cut-outs.

The upright front and rear wall panel portions on either side of the discontinuity near the or each intermediate wall panel may be provided with facing end portions interconnectible overlappingly for forming continuous upright walls.

In a preferred embodiment, one end portion of the facing end portions of the upright front and rear wall panels present on either side of each discontinuity near the end of an intermediate wall panel may be hinged to the respective wall panel portion and in said end portion, a connecting area may be bounded by a 45° fold line, said area being attachable to the intermediate wall such that similarly as near the corners of the collapsible tray, by erecting the collapsed wall, also the intermediate wall is pulled upwards from the flat position on the tray bottom (Fig. 9).

For the purpose of fitting the collapsible tray with a carrier grip, according to the present invention, the intermediate wall panels can each be extended by a hand grip or carrier grip panel so that, when the tray is erected, a hand grip projects above the tray. In order to use this tray with a lid, the hand grip can be turned down through 90°.

As an alternative of the embodiment wherein by erection of the upright box walls from the collapsed storing position towards the position of use, the intermediate wall is erected to the position of use as well, a further preferred embodiment is proposed requiring a smaller area in its collapsed position.

In this embodiment of a collapsible transport or display container in the form of a folding tray made from a blank, said tray being provided at least with a bottom wall and upright front, rear and side walls, which tray, from a flat, folded storing position, wherein the respective upright walls are collapsed over bottom wall portions, can be transformed into the position of use by erection of the collapsed walls, according to the invention. The tray is provided with an intermediate wall formed by doubling up an intermediate bottom wall panel portion and hingedly connected to

adjacent bottom wall panel portions, said intermediate wall being connected at its ends to each of the adjacent portions of the upstanding front and rear walls by means of hingedly arranged connecting flaps and connecting areas bounded by 45° hinge lines, such that the upright wall portions are collapsible over the respective bottom wall portions while these bottom wall portions on both sides of the intermediate wall are simultaneously folded together thereby enclosing said intermediate wall.

It is observed that containers made from blanks and having an intermediate wall formed by bending upwards and doubling up the central portion of the bottom panel and coupling the resulting intermediate wall to adjoining upright side walls, are known per se. For example, US-A-4,362,262 describes a tray of this kind, wherein the intermediate panels of the bottom are provided with end flaps, which are placed in the erected tray against the upright side walls and, if desired, are glued thereto. Thus, a tray with a stable intermediate wall can be formed, however, not in the form of a collapsible tray.

US-A-3,721,380 describes a shallow, nestable tray of which an intermediate wall formed by doubling up an intermediate bottom portion is connected to the side walls in such a manner that the intermediate wall can be collapsed onto the bottom panel for nesting the trays.

GB-A-2,115,384 further discloses a tray having integral partitions wherein the partitions are formed by partly folding up intermediate bottom wall panels out of the plane of said wall, thereby forming roof-shaped projections with the purpose of forming a nestable tray, consequently no collapsible tray either but a tray fixedly formed in the position of use.

Some embodiments of the collapsible tray with intermediate wall will now be described, by way of example, with reference to the accompanying drawings, in which :

Fig. 1 shows a first embodiment of a blank of the collapsible tray ;

Figs. 2-4 show intermediate phases of the manufacture of the tray ;

Fig. 5 shows the tray substantially in the storage or transport position ;

Fig. 6 shows the tray in an intermediate step during the transformation of the tray to the position of use ;

Fig. 7 shows the tray in the position of use ;

Fig. 8 shows a blank of a collapsible tray in a variant embodiment ;

Fig. 9 is a detail view of the connection of the intermediate wall with an upright wall in the variant embodiment shown in Fig. 8 ;

Fig. 10 shows a blank of a collapsible tray in a further variant embodiment, having a hand grip ;

Figs. 11, 12 show the collapsible tray made from the blank shown in Fig. 10 in erected state, with

the hand grip in the position of use or turned down through 90° ;

Fig. 13 shows a blank of another embodiment of the collapsible tray with an intermediate wall ; and Figs. 14-16 show the collapsible tray made from the blank of Fig. 13, respectively in the position of use, partly collapsed and almost in the storing position.

As shown in Fig. 1, a blank for manufacturing a collapsible tray having a partition, is provided with a two-part bottom panel whose portions 1a, 1b are separated by intermediate wall panels 2a, 2b. The respective panels are connected by fold lines 3, 4, 5.

The bottom panels 1a, 1b are further connected by fold lines 6-11 to upright wall panels 12-15, whose panels 12, 14 likewise have a two-part design. The respective portions 12a, 12b ; 14a, 14b are separated by a discontinuity 16, 17. The end portions of panel portions 12a, 12b, 14a, 14b on either side of discontinuities 16, 17 are indicated at 12a', 12b', 14a' and 14b'.

Besides, locking lips 18 are indicated at the intermediate panels 2a, 2b and in panels 12, 14 are shown cavities 19 for receiving the locking lips 18.

For the corner connections conventional in collapsible trays, panels 13, 15 are provided at their ends with connecting flaps 21 connected thereto through fold lines 20 and the adjoining portions of panels 12, 14 are provided with connecting areas 23 connected thereto by 45° fold lines. It is clear that the connecting areas 23 bounded by a 45° fold line can also be formed in the connecting flaps.

Fig. 2 shows the first phase of the tray formation, wherein the intermediate wall portions 2a, 2b are folded upwards and are kept pressed against one another by overlapping attachment of the end portions 12a', 12b', and 14a' and 14b', respectively, of the upright wall panel portions 12a, 12b, and 14a, 14b, respectively.

Fig. 3 then shows the intermediate wall 2 folded down onto the plane of the bottom panels 1a, 1b.

Fig. 4 shows the next phase with the upright side walls 12, 14 collapsed onto the bottom 1, with the triangular connecting area portions 23 being folded back.

In the situation shown in Fig. 5, the walls 13, 15 are folded down with attachment flaps 21 previously folded inwards, while the triangular connecting areas 23 are glued to the opposite portions of the connecting flaps 21, after which the tray is ready and in the transport position.

For transforming the tray into the position of use, walls 13, 15 are erected, while likewise walls 12, 14 are set up by means of connections 21, 23. This is shown in Fig. 6. Fig. 7 shows the position of use with intermediate wall 2a placed upright between the walls and locked by lips 18 in the opposite cavities 14. This erection of intermediate wall 2a, b should be effected

separately by hand.

The variant embodiment shown in Figs. 8, 9 is distinct from the embodiment shown in Figs. 1-7 in that intermediate wall 2a, b need not be set upright by hand but is raised automatically during the erection of walls 12, 14.

While (see the blank in Fig. 8) the end portions 12b' and 14b' are designed similarly as in the embodiment shown in Figs. 1-7, end portions 12a' and 14a' are connected to the respective panel portions through a hinge line 24 and there is provided a fold line 25 bounding a triangular connecting area 26. Said connecting areas are adhered to the intermediate wall panel 2a in a tray forming phase corresponding to that shown in Fig. 5. Consequently, during erection of walls 12, 14, intermediate wall 2a, b will be pulled upwards, similarly as at the angular points. The fixation of the intermediate panel can be effected with the locking lips 18 and the cavities 19. The intermediate wall can also be locked in the horizontal state by lips 18 and additional cavities 27.

The tray variant shown in Figs. 10-12, between intermediate wall panels 2a, 2b, has hand grip panels 28a, 28b connected by hinge lines 27 to the intermediate wall panels and interconnected by a hinge line 29. The hand grip panels 28a, 29b contain openings 30 forming a carrier opening in panels 28a, 28b (see Figs. 11, 12) combined to a hand grip 28.

Hand grip 28, in the position of use of the tray, can be turned down through 90° in the plane of the upper edges of the collapsible tray (see Fig. 12) in order to enable the tray with hand grip to be closed by a lid (not shown).

The blank of Fig. 13 is distinct from the blank of Fig. 1 in that the central part has different features. The upright wall panels 12a, 12b ; 14a, 14b terminate near the bottom fold lines 3 and 4 and they are provided with 45° fold lines 22 bounding substantially isosceles-triangular connecting areas 31. The intermediate wall panels 2a, 2b are provided with rectangular connecting flaps 32 connected thereto by hinge lines 33. Said connecting flaps are adhesively connectable to the adjacent triangular connecting areas (see Fig. 14).

A collapsible tray made from this blank is shown in Fig. 14 in its position of use. To transfer the tray to the almost collapsed position shown in Fig. 16, the bottom wall panels 1a and 1b are folded together simultaneously with collapsing the upright walls 12-15. This phase is shown in Fig. 15. In the collapsed storing position the intermediate wall 2 is enclosed between the bottom panels. The total area is about half the bottom area.

It is clear that various variants are conceivable within the scope of the present invention. For instance, an intermediate wall can be formed by intermediate panels folded from the plane of either of two opposite, upright walls. Besides, use can be made, for

stabilizing the tray in the position of use, of contact adhesive areas abutting in the transport position against areas that have been treated with an adhesive-repellent agent, however, in the position of use, adhere to opposite tray areas. An integrated partition according to the present invention provides an additional reinforcement when nesting filled trays.

Claims

1. A collapsible transport or display container in the form of a folding tray made from a blank, said tray being provided at least with a bottom wall (1a, 1b) and upright front (12), rear (14) and side walls (13, 15), which tray, from a flat, folded storing position, wherein the respective upright walls (12-15) are collapsed over the bottom wall (1a, 1b), can be transformed into the position of use by erection of the collapsed walls, characterized in that the tray is provided with an intermediate wall (2) formed by doubling up an intermediate bottom wall panel portion (2a, 2b) and hingedly connected to the respective tray bottom wall panel (1a, 1b), said intermediate wall being collapsed over the bottom panel (1) in the storing position of the tray and when the tray is in the erected position of use, is coupled at least in its upright position to adjacent front and rear tray walls (12, 14).

2. A blank for manufacturing a collapsible container as claimed in claim 1, comprising a bottom wall panel (1a, 1b), which is connected through fold lines (6-11) to front (12), rear (14) and side wall panels (13, 15) while in the corner areas one of the adjacent wall panels is fitted with a substantially rectangular, hinging connecting flap (21) and the other wall panel has a substantially 45° fold line (22), which extends from the respective corner point of the bottom and which bounds a substantially isosceles-triangular connecting area (23) being adhesively connectable to the rectangular connecting flap (21) in the area bounding the hinge line (20) of said connecting flap (21), characterized in that for locally forming an intermediate wall (2) the bottom panel (1a, 1b) is provided with three parallel fold lines (3, 4, 5) which bound two intermediate wall panels (2a, 2b) foldable upwards from the bottom surface, the front and rear wall panels (12, 14) each comprise two portions (12a, b ; 14a, b) separated by a discontinuity (16, 17), and which are interconnectible, thereby shortening the respective wall panels (12, 14) to an extent corresponding with the shortening of the bottom wall panel (1a, 1b) occurring as a result of the unfolding and face to face positioning of the intermediate wall panels (2a, 2b), and the side edges of the intermediate wall panels (2a, b) and the adjoining upright front and rear tray wall panels (12, 14) are provided with cooperating coupling means.

3. A blank as claimed in claim 2, characterized in that said coupling means comprise locking lips (18)

and lip-receiving cut-outs (19).

4. A blank as claimed in claim 2 or 3, characterized in that the upright front and rear wall panel portions (12, a, b; 14a, b) on either side of the discontinuity (16, 17) near the or each intermediate wall panel (2a, b) may be provided with facing end portions (12a', 12b'; 14a', 14b') interconnectible overlappingly for forming continuous upright walls (12, 14).

5. A blank as claimed in any one of claims 2-4, characterized in that one end portion (12a', 14a') of the facing end portions (12a', 12b'; 14a', 14b') of the upright front and rear wall panels (12, 14) located on either side of each discontinuity (16, 17) near the end of an intermediate wall panel (2a, b) is hinged (24) to the respective wall panel portion (12a, 14a), while in said end portion (12a', 14a') a connecting area (26) is bounded by a 45° fold line (25), said area being attachable to the intermediate wall (2a, b) such that similarly as near the corners of the collapsible tray, by erection of the collapsed walls (12, 14), also the intermediate wall (2a, b) is lifted from the flat position on the tray bottom.

6. A blank as claimed in any one of claims 2-5, characterized in that the intermediate wall panels (2a, 2b) are interconnected through hand grip panels (28a, 28b), which are connected to the respective intermediate panels (2a, 2b) through fold lines (27) and are interconnected through a fold line (29).

7. A collapsible transport or display container in the form of a folding tray made from a blank, said tray being provided at least with a bottom wall (1a, 1b) and upright front (12), rear (14) and side walls (13, 15), which tray, from a flat, folded storing position, wherein the respective upright walls (12-15) are collapsed over bottom wall portions (1a, 1b), can be transformed into the position of use by erection of the collapsed walls, characterized in that the tray is provided with an intermediate wall (2) formed by doubling up an intermediate bottom wall panel portion (2a, 2b) and hingedly connected to adjacent bottom wall panel portions (1a, 1b), said intermediate wall (2) being connected at its ends to each of the adjacent portions (12a, 12b; 14a, 14b) of the upstanding front and rear walls (12, 14), by means of hingedly arranged connecting flaps (32) and connecting areas (31) bounded by 45° hinge lines (22), such that the upright wall portions (12-15) are collapsible over the respective bottom wall portions (1a, 1b) while these bottom wall portions on both sides of the intermediate wall (2) are simultaneously folded together thereby enclosing said intermediate wall (2).

8. A blank for manufacturing a collapsible container as claimed in claim 7, comprising a bottom wall panel (1a, 1b), which is connected through fold lines (6-11) to front (12), rear (14) and side wall panels (13, 15) while in the corner areas one of the adjacent wall panels is fitted with a substantially rectangular, hing-

ing connecting flap (21) and the other wall panel has a substantially 45° fold line (22), which extends from the respective corner point of the bottom and which bounds a substantially isosceles-triangular connecting area (23) being adhesively connectible to the rectangular connecting flap (21) in the area bounding the hinge line (20) of said connecting flap (21), characterized in that for locally forming an intermediate wall (2) the bottom panel (1a, 1b) is provided with three parallel fold lines (3, 4, 5) which bound two intermediate wall panels (2a, 2b) foldable upwards from the bottom surface, said front and rear wall panels (12, 14) each comprise two portions (12a, b; 14a, b) which terminate on either side of the intermediate wall panels (2a, 2b) and are provided with substantially isosceles-triangular connecting areas (31), said intermediate wall panels (2a, 2b) being provided at their ends with hingedly arranged connecting flaps (32), adhesively connectable to the adjacent connecting areas of said front and rear wall panel portions (12a, b; 14a, b).

Patentansprüche

1. Zusammenfaltbarer Transport- oder Ausstellungsbehälter in Form einer Faltlade, hergestellt aus einem Zuschnitt, wobei die Lade zumindest mit einem Boden (1a, 1b) und aufrechten Vorder- (12), Rück- (14) und Seitenwänden (13, 15) versehen ist und aus einer flachen, gefalteten Lagerform, bei der die jeweiligen aufrechten Wände (12-15) über dem Boden (1a, 1b) zusammengefoldet sind, durch Aufrichten der zusammengefoldeten Wände in Gebrauchsform verwandelt werden kann, **dadurch gekennzeichnet**, daß die Lade mit einer Zwischenwand (2) versehen ist, die durch Aufdoppeln eines zwischengeschobenen Bodenteils (2a, 2b) gebildet wird und die scharnierartig mit dem jeweiligen Ladebodenteil (1a, 1b) verbunden ist, wobei die Zwischenwand in der Lagerform der Lade über das Bodenteil (1) gefaltet wird, und, wenn die Lade in der aufgerichteten Gebrauchsform ist, zumindest in ihrer aufrechten Lage mit angrenzenden Vorder- und Rückwänden (12, 14) der Lade verbunden ist.

2. Zuschnitt zur Herstellung eines zusammenfaltbaren Behälters nach Anspruch 1, umfassend ein Bodenteil (1a, 1b), das über Faltlinien (6-11) mit Vorder- (12), Rück- (14) und Seitenwandteilen (13, 15) verbunden ist, während in den Eckflächen eines der angrenzenden Wandteile mit einer im wesentlichen rechtwinkligen, beweglich verbundenen Verbindungsklappe (21) ausgestattet ist, und der andere Wandteil eine im wesentlichen 45°-Faltlinie (22) aufweist, die sich vom jeweiligen Eckpunkt des Bodens erstreckt, und die eine im wesentlichen gleichschenkelig-dreieckige Verbindungsfläche (23) begrenzt, die sich durch Kleben mit der rechtwinkligen Verbin-

dungsklappe (21) in der Fläche, die die Verbindungslinie (20) der Verbindungsklappe (21) begrenzt, verbinden läßt, dadurch gekennzeichnet, daß für das örtliche Bilden einer Zwischenwand (2) das Bodenteil (1a, 1b) mit drei parallel laufenden Faltlinien (3, 4, 5), die zwei von der Bodenoberfläche hochklappbare Zwischenwandteile (2a, 2b) begrenzen, versehen ist, daß die Vorder- und Rückwandteile (12, 14) jeweils zwei durch eine Unterbrechung (16, 17) getrennte Abschnitte (12a, b ; 14a, b) aufweisen, die sich miteinander verbinden lassen, wodurch die jeweiligen Wandteile (12, 14) zu einem der Verkürzung des Bodenteils (1a, 1b) entsprechenden Ausmaß verkürzt werden, was als Ergebnis des Auffaltens und des Aufrichtens der Zwischenwandteile (2a, 2b) erfolgt, so daß diese aufeinanderliegen, und daß die seitlichen Kanten der Zwischenwandteile (2a, b) und die angrenzenden aufrechten Vorder- und Rückwandteile (12, 14) der Lade mit zusammenpassenden Einrichtungen zu ihrer Verbindung versehen sind.

3. Zuschnitt nach Anspruch 2, dadurch gekennzeichnet, daß die Verbindungseinrichtungen Verschußlaschen (18) und Schlitzte (19) zur Aufnahme der Laschen umfassen.

4. Zuschnitt nach Anspruch 2 oder 3, dadurch gekennzeichnet, daß die aufrechten Vorder- und Rückwandteile (12a, b ; 14a, b) auf jeder Seite der Unterbrechung (16, 17) in der Nähe des oder jedes Zwischenwandteils (2a, 2b) versehen sein können mit sich gegenüberstehenden Endteilen (12a', 12b' ; 14a', 14b'), die sich zur Bildung durchgehender aufrechter Wände (12, 14) überlappend miteinander verbinden lassen.

5. Zuschnitt nach einem der Ansprüche 2-4, dadurch gekennzeichnet, daß ein Endteil (12a', 14a') der sich gegenüberstehenden Endteile (12a', 12b' ; 14a', 14b') der aufrechten Vorder- und Rückwandteile (12, 14), das sich auf jeder Seite jeder Unterbrechung (16, 17) nahe dem Ende eines Zwischenwandteiles (2a, 2b) befindet, scharnierartig (24) mit dem jeweiligen Wandteil (12a, 14a) verbunden ist, während in dem Endteil (12a', 14a') eine Verbindungsfläche (26) von einer 45°-Faltlinie (25) begrenzt wird, wobei diese Fläche an der Zwischenwand (2a, b) befestigt werden kann, so daß ähnlich nahe den Ecken der zusammenfaltbaren Lade durch Aufrichten der zusammengefalteten Wände (12, 14) auch die Zwischenwand (2a, b) von der flachen Lage auf dem Ladeboden angehoben wird.

6. Zuschnitt nach einem der Ansprüche 2-5, dadurch gekennzeichnet, daß die Zwischenwandteile (2a, 2b) miteinander verbunden sind durch Handgriffteile (28a, 28b), die mit den jeweiligen Zwischenwandteilen (2a, 2b) durch Faltlinien (27) und miteinander über eine Faltlinie (29) verbunden sind.

7. Zusammenfaltbarer Transport- oder Ausstellungsbehälter in Form einer Faltlade, hergestellt aus einem Zuschnitt, wobei die Lade zumindest mit einem

Boden (1a, 1b) und aufrechten Vorder- (12), Rück- (14) und Seitenwänden (13, 15) versehen ist und aus einer flachen, gefalteten Lagerform, bei der die jeweiligen aufrechten Wände (12-15) über Bodenteil (1a, 1b) zusammengefaltete sind, durch Aufrichten der zusammengefalteten Wände in Gebrauchsform verwandelt werden kann, dadurch gekennzeichnet, daß die Lade mit einer Zwischenwand (2) versehen ist, die durch Aufdoppeln eines zwischengeschobenen Bodenteils (2a, 2b) gebildet wird und die scharnierartig mit angrenzenden Bodenteilen (1a, 1b) verbunden ist, wobei die Zwischenwand (2) an ihren Enden mit jedem der angrenzenden Teile (12a, 12b ; 14a, 14b) der aufrechten Vorder- und Rückwände (12, 14) mit Hilfe von gelenkig angeordneten Verbindungsklappen (32) und Verbindungsflächen (31), die durch 45°-Scharnierlinien (22) begrenzt sind, verbunden ist, so daß sich die aufrechten Wandteile (12-15) über die jeweiligen Bodenteile (1a, 1b) zusammenfallen lassen, während diese Bodenteile auf beiden Seiten der Zwischenwand (2) gleichzeitig zusammengefaltete werden und dadurch die Zwischenwand (2) einschließen.

8. Zuschnitt zur Herstellung eines zusammenfaltbaren Behälters nach Anspruch 7, umfassend ein Bodenteil (1a, 1b), das über Faltlinien (6-11) mit Vorder- (12), Rück- (14) und Seitenwandteilen (13, 15) verbunden ist, während in den Eckflächen eines der angrenzenden Wandteile mit einer im wesentlichen rechtwinkligen, beweglich verbundenen Verbindungsklappe (21) ausgestattet ist, und der andere Wandteil eine im wesentlichen 45°-Faltlinie (22) aufweist, die sich vom jeweiligen Eckpunkt des Bodens erstreckt, und die eine im wesentlichen gleichschenkelig-dreieckige Verbindungsfläche (23) begrenzt, die sich durch Kleben mit der rechtwinkligen Verbindungsklappe (21) in der Fläche, die die Verbindungslinie (20) der Verbindungsklappe (21) begrenzt, verbinden läßt, dadurch gekennzeichnet, daß für das örtliche Bilden einer Zwischenwand (2) das Bodenteil (1a, 1b) mit drei parallel laufenden Faltlinien (3, 4, 5), die zwei von der Bodenoberfläche hochklappbare Zwischenwandteile (2a, 2b) begrenzen, versehen ist, daß die Vorder- und Rückwandteile (12, 14) je zwei Teile (12a, b ; 14a, b) umfassen, die auf beiden Seiten der Zwischenwandteile (2a, 2b) enden und mit im wesentlichen gleichschenkelig-dreieckigen Verbindungsflächen (31) versehen sind, wobei die Zwischenwandteile (2a, 2b) an ihren Enden mit scharnierartig angeordneten Verbindungsklappen (32) versehen sind, die sich durch Kleben mit den angrenzenden Verbindungsflächen der Vorder- und Rückwandteile (12a, b ; 14a, b) verbinden lassen.

Revendications

1. Récipient de transport ou d'étalage repliable

sous la forme d'un plateau pliable fabriqué à partir d'un flan, ledit plateau étant pourvu d'au moins une paroi de fond (1a, 1b) et de parois verticales avant (12), arrière (14) et latérales (13, 15), lequel plateau, à partir d'une position de stockage aplatie repliée, dans laquelle les parois verticales respectives (12 à 15) sont repliées sur la paroi de fond (1a, 1b) peut être transformé en position d'utilisation par le dressage des parois repliées caractérisé en ce que le plateau est prévu avec une paroi intermédiaire (2) formée par le doublage d'une partie de panneau de paroi de fond intermédiaire (2a, 2b) et est raccordée pivotante au panneau de paroi de fond de plateau respectif (1a, 1b), ladite paroi intermédiaire étant repliée sur le panneau de fond (1) dans la position de stockage de plateau et, lorsque le plateau est dans la position dressée d'utilisation, est relié au moins dans sa position verticale aux parois de plateau adjacentes avant et arrière (12, 14).

2. Flan pour la fabrication d'une caisse repliable selon la revendication 1, comprenant un panneau de paroi de fond (1a, 1b), qui est raccordé par l'intermédiaire des lignes de pliage (6 à 11) aux panneaux de paroi avant (12), arrière (14) et latéraux (13, 15) tandis que, dans les surfaces de coins, un panneau des panneaux de paroi adjacents est fixé avec une patte de fixation pivotante pratiquement rectangulaire (21) et l'autre panneau de paroi présente une ligne de pliage pratiquement à 45° (22), qui se prolonge depuis le point de coin respectif du fond et qui délimite une surface de fixation triangulaire pratiquement isocèle (23) qui peut être connectée de manière adhésive à la patte de fixation rectangulaire (21) dans la surface délimitant la ligne de pivotement (20) de ladite patte de fixation (21), caractérisé en ce que pour la formation locale d'une paroi intermédiaire (2), le panneau de fond (1a, 1b) est prévu avec trois lignes de pliage parallèles (3, 4, 5) qui délimitent deux panneaux de paroi intermédiaire (2a, 2b) dépliables depuis la surface de fond, les panneaux de paroi avant et arrière (12, 14) comprennent chacun deux parties (12a, b ; 14a, b) séparées par une discontinuité (16, 17) et qui peuvent être interconnectées, raccourcissant de ce fait les panneaux de paroi respectifs (12, 14) à un certain degré correspondant au raccourcissement du panneau de paroi de fond (1a, 1b) se produisant comme résultat du dépliage et du positionnement face à face des panneaux de paroi intermédiaire (2a, 2b), et les bords latéraux des panneaux de paroi intermédiaire (2a, b) et des panneaux de paroi de plateau verticaux contigus avant et arrière (12, 14) sont prévus avec un moyen de couplage agissant dans le même sens.

3. Flan selon la revendication 2, caractérisé en ce que ledit moyen de couplage comprend des talons de blocage (18) et des découpures (19) recevant les talons.

4. Flan selon la revendication 2 ou 3, caractérisé

en ce que les parties de panneau de paroi verticales avant et arrière (12, a, b ; 14a, b) sur chaque côté de la discontinuité (16, 17) près du ou de chaque panneau de paroi intermédiaire (2a, b) peuvent être prévues avec des parties d'extrémité transversales (12a', 12b', 14a', 14b') qui peuvent se raccorder mutuellement en se recouvrant pour former des parois verticales continues (12, 14).

5. Flan selon l'une quelconque des revendications 2 à 4, caractérisé en ce qu'une partie d'extrémité (12a', 12b' ; 14a' 14b') des panneaux de paroi verticaux avant et arrière (12, 14) située sur chaque côté de chaque discontinuité (16, 17) près de l'extrémité du panneau de paroi intermédiaire (2a, b) est pivotée (24) vers la partie de panneau de paroi respective (12a, 14a), tandis que dans ladite partie d'extrémité (12a', 14a'), une surface de fixation (26) est délimitée par une ligne de pliage à 45° (25), ladite surface étant fixable à la paroi intermédiaire (2a, b) tel que similairement près des coins du plateau repliable, par le dressage des parois repliées (12, 14), également la paroi intermédiaire (2a, b) est soulevée de la position aplatie sur le fond du plateau.

6. Flan selon l'une quelconque des revendications 2 à 5, caractérisé en ce que les panneaux de paroi intermédiaire (2a, 2b) sont interconnectés à travers des panneaux de poignée (28a, 28b) qui sont reliés aux panneaux intermédiaires respectifs (2a, 2b) à travers des lignes de pliage (27) et sont interconnectés à travers une ligne de pliage (29).

7. Récipient de transport ou d'étalage repliable sous la forme d'un plateau pliable fabriqué à partir d'un flan, ledit plateau étant pourvu d'au moins une paroi de fond (1a, 1b) et de parois verticales avant (12), arrière (14) et latérales (13, 15) lequel plateau, à partir d'une position de stockage aplatie repliée, dans laquelle les parois verticales respectives (12 à 15) sont repliées sur les parties de paroi de fond (1a, 1b), peut être transformé en position d'utilisation par le dressage des parois repliées, caractérisé en ce que le plateau est prévu avec une paroi intermédiaire (2) formée par le doublage d'une partie de panneau de paroi de fond intermédiaire (2a, 2b) et raccordée de manière pivotante aux parties de panneau de paroi de fond adjacentes (1a, 1b), ladite paroi intermédiaire (2) étant reliée à ses extrémités à chacune des parties adjacentes (12a, 12b ; 14a, 14b) des parois verticales avant et arrière (12, 14) au moyen de pattes de fixation disposées de manière pivotante (32) et de surfaces de fixation (31) délimitées par les lignes de pivotement à 45° (22), de sorte que les parties de paroi verticales (12 à 15) sont repliables sur les parties de paroi de fond respectives (1a, 1b) tandis que ces parties de paroi de fond sur les deux côtés de la paroi intermédiaire (2) sont pliées simultanément enfermant de ce fait ladite paroi intermédiaire (2).

8. Flan pour la fabrication d'un récipient repliable selon la revendication 7, comprenant un panneau de

paroi de fond (1a, 1b), qui est raccordé à travers des lignes de pliage (6 à 11) aux panneaux avant (12), arrière (14) et latéraux (13, 15) tandis que dans les surfaces de coin un panneau des panneaux de paroi adjacents est fixé avec une patte de fixation pivotante pratiquement rectangulaire (21) et l'autre panneau de paroi présente une ligne de pliage pratiquement à 45° (22), qui s'étend depuis le point de coin respectif du fond et qui délimite une surface de fixation triangulaire pratiquement isocèle (23) qui peut être fixée de manière adhésive à la patte de fixation rectangulaire (21) dans la surface délimitant la ligne de pivotement (20) de ladite patte de fixation (21), caractérisé en ce que, pour former localement une paroi intermédiaire (2), le panneau de fond (1a, 1b) est prévu avec trois lignes de pliage parallèles (3, 4, 5) qui délimitent deux panneaux de paroi intermédiaire (2a, 2b) dépliables depuis la surface de fond, lesdits panneaux de paroi avant et arrière (12, 14) comprennent chacun deux parties (12a, b ; 14a, b) qui se terminent sur chaque côté des panneaux de paroi intermédiaire (2a, 2b) et sont prévues avec des surfaces de fixation triangulaires pratiquement isocèles (31), lesdits panneaux de paroi intermédiaire (2a, 2b) étant prévus à leur extrémité avec des pattes de fixation disposées de manière pivotante (32), qui peuvent être fixées de manière adhésive aux surfaces de fixation adjacentes desdites parties de panneau de paroi avant et arrière (12a, b ; 14a, b).

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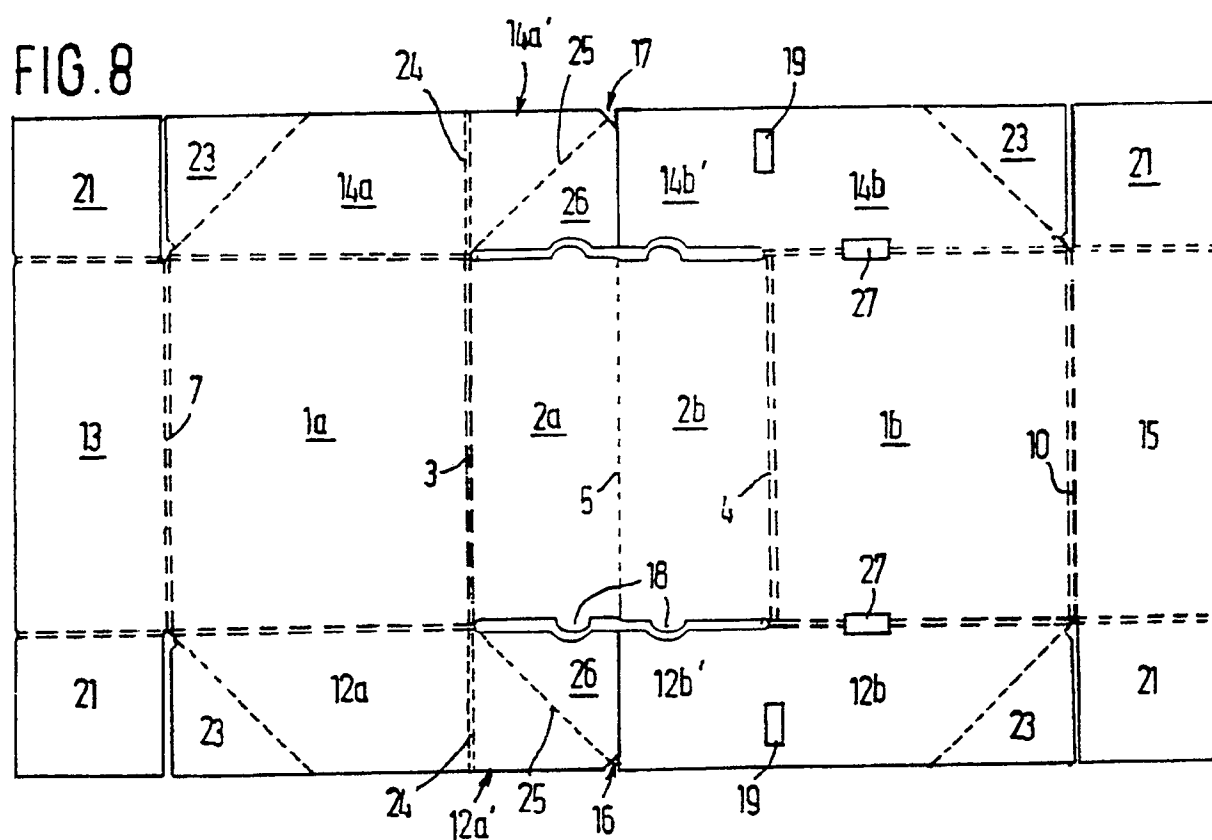
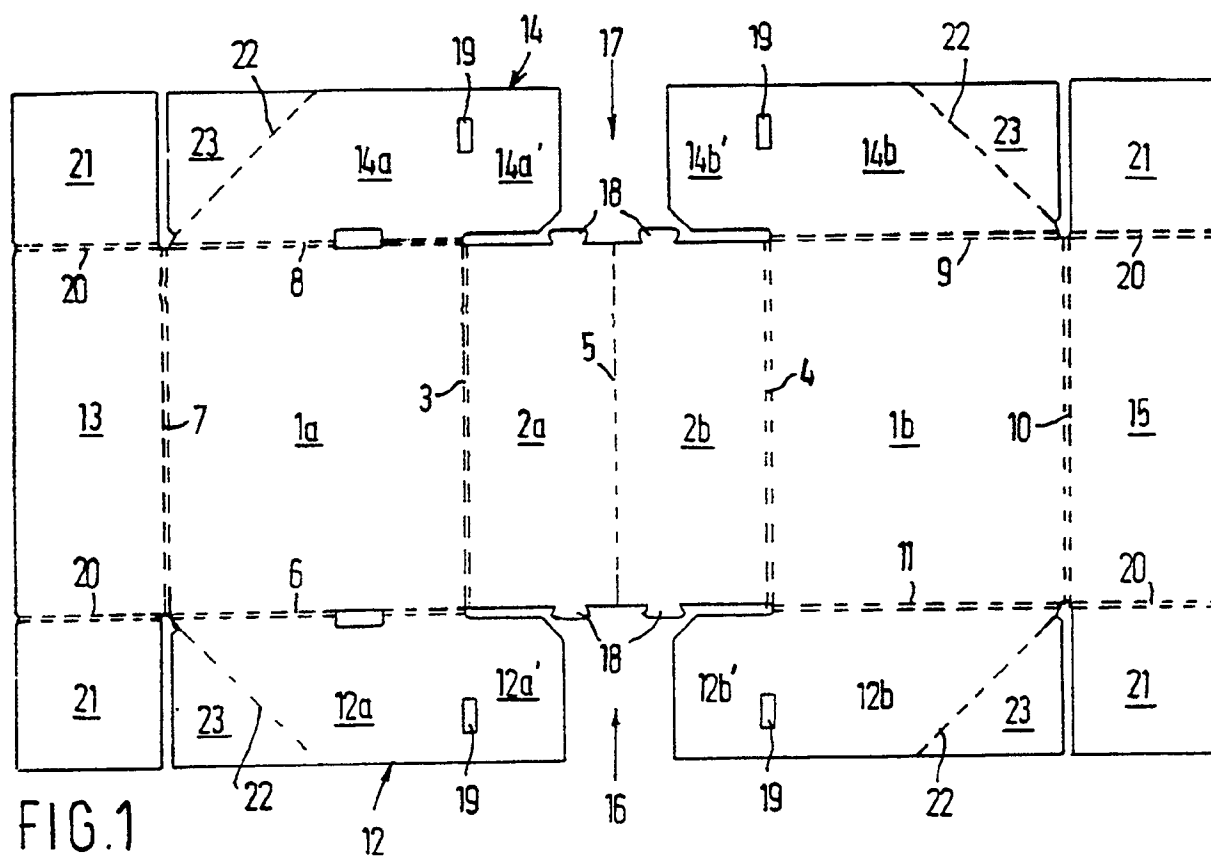
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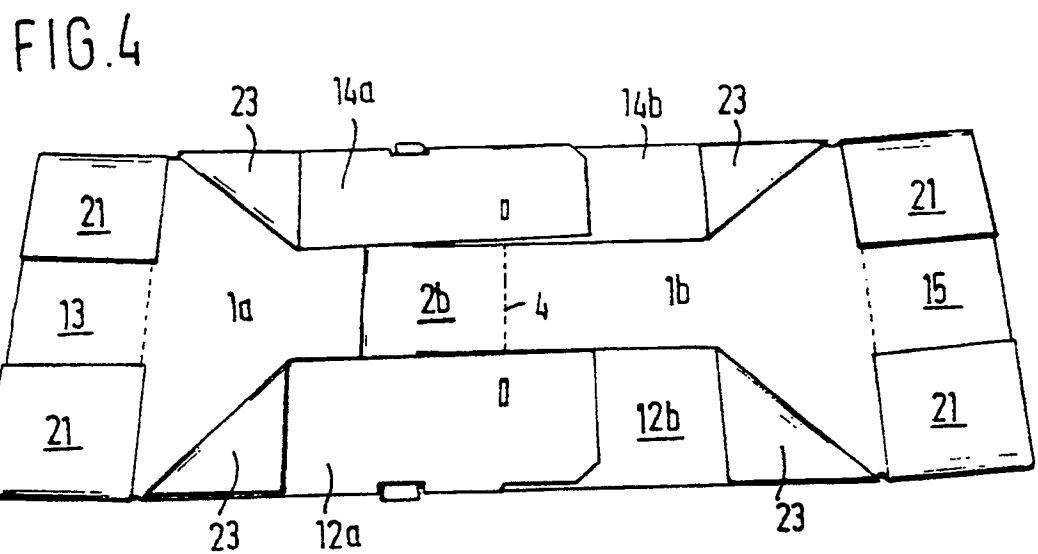
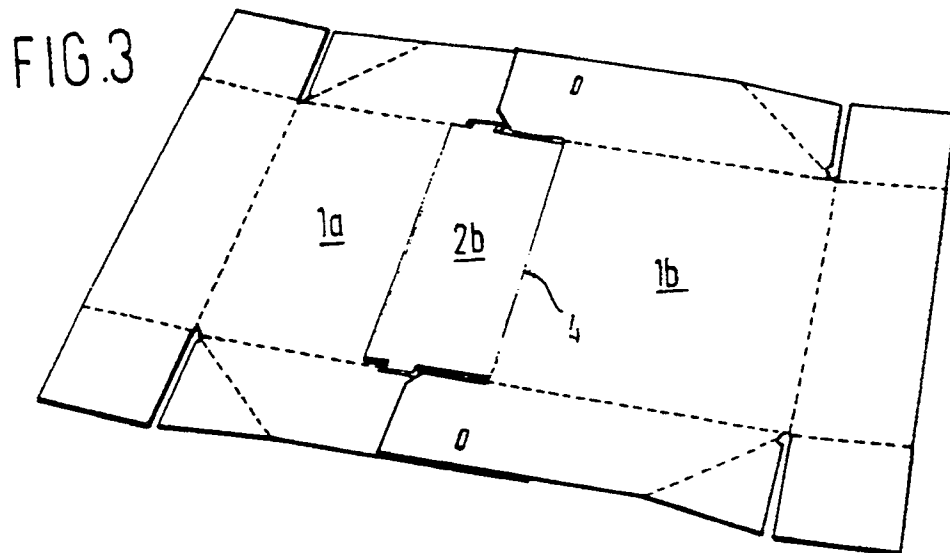
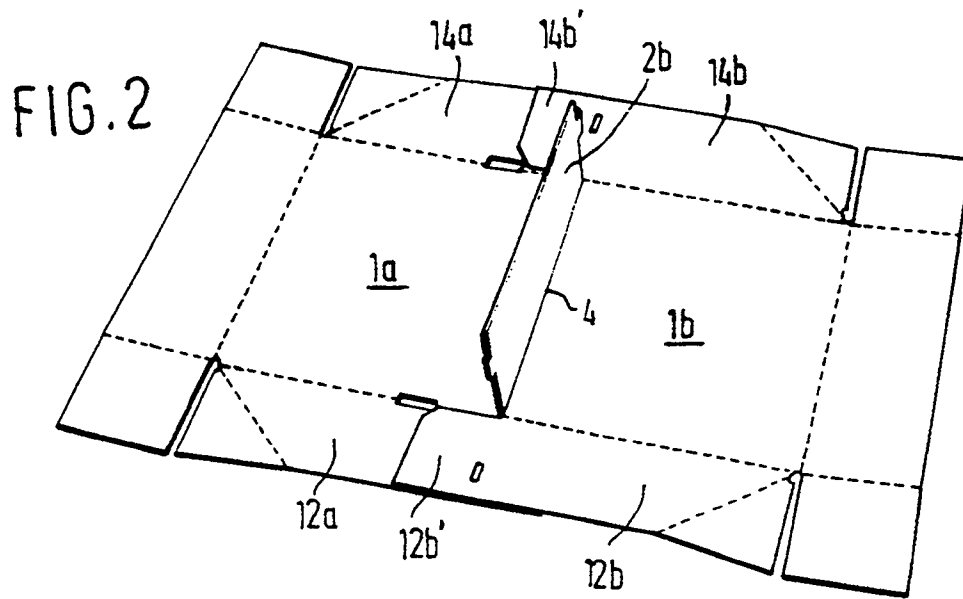


FIG. 5

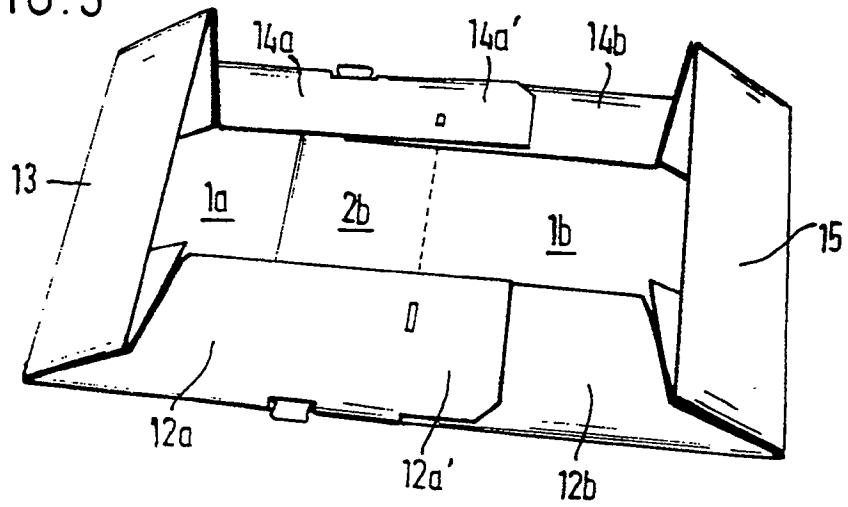


FIG. 6

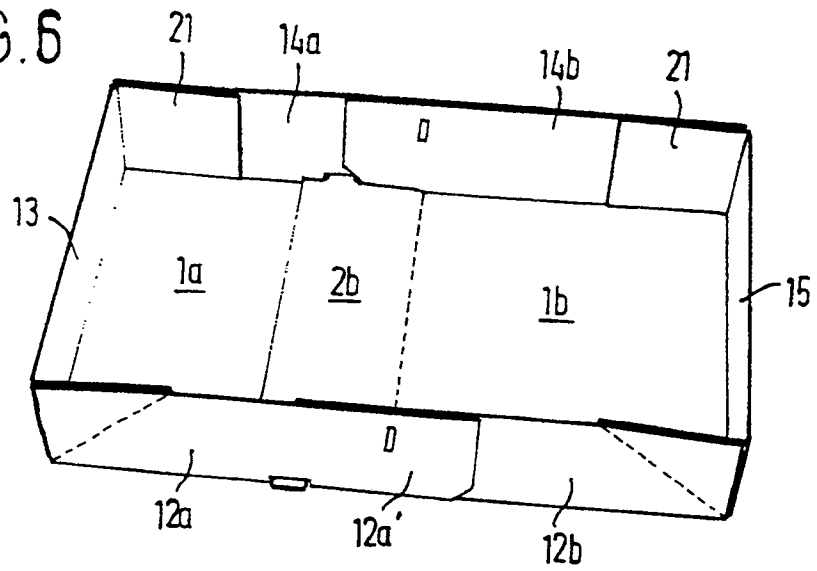
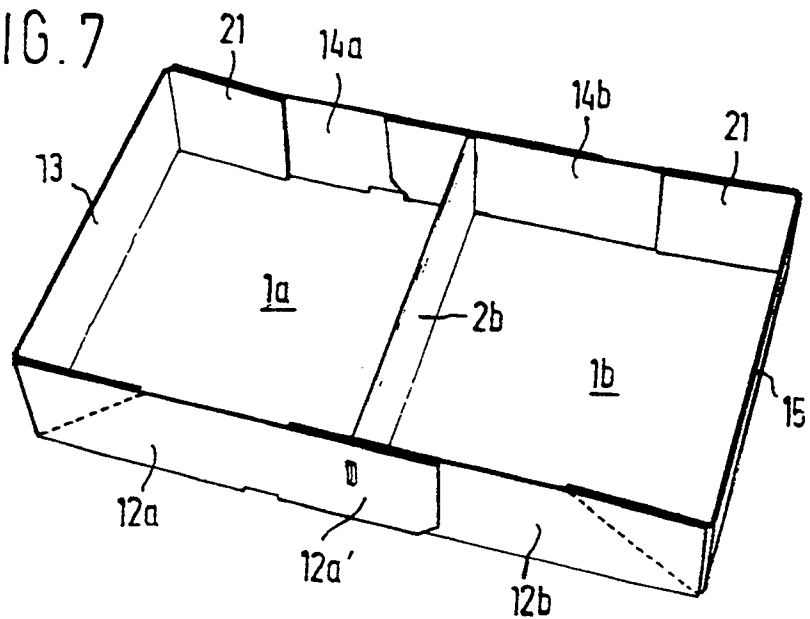
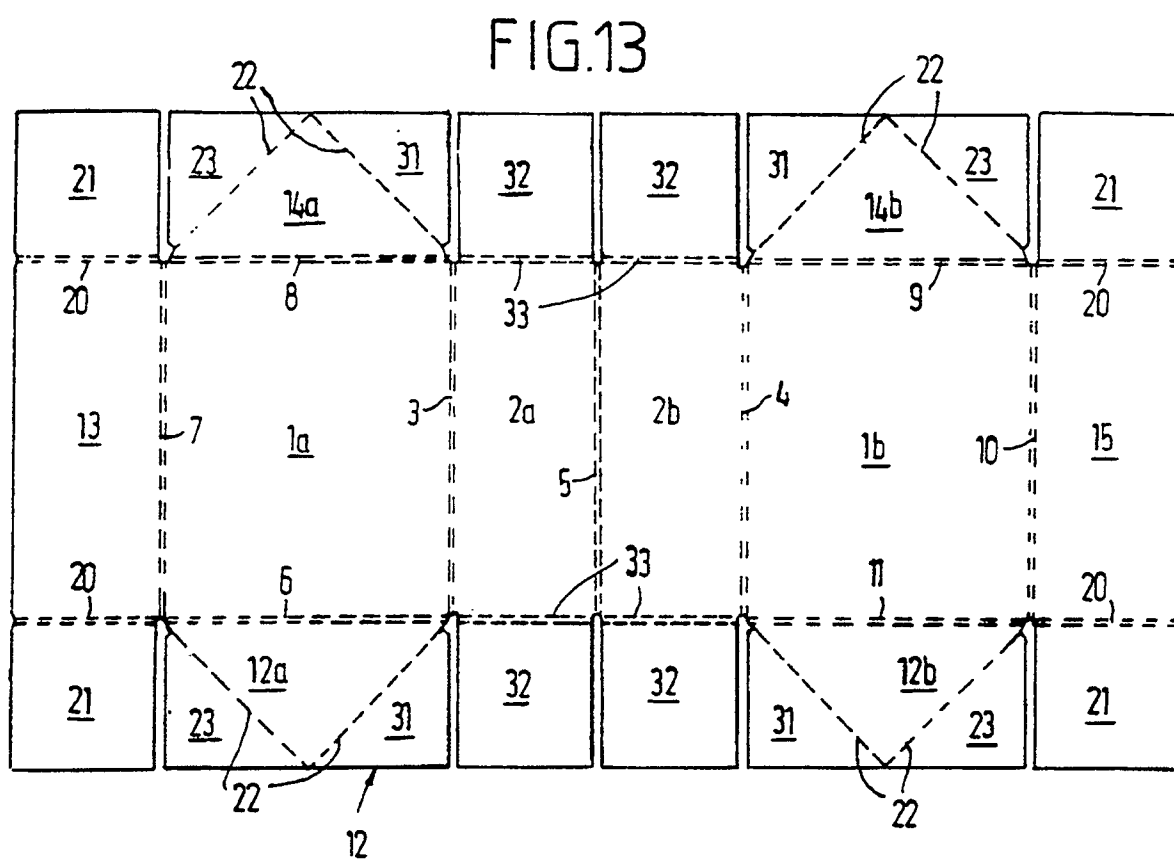
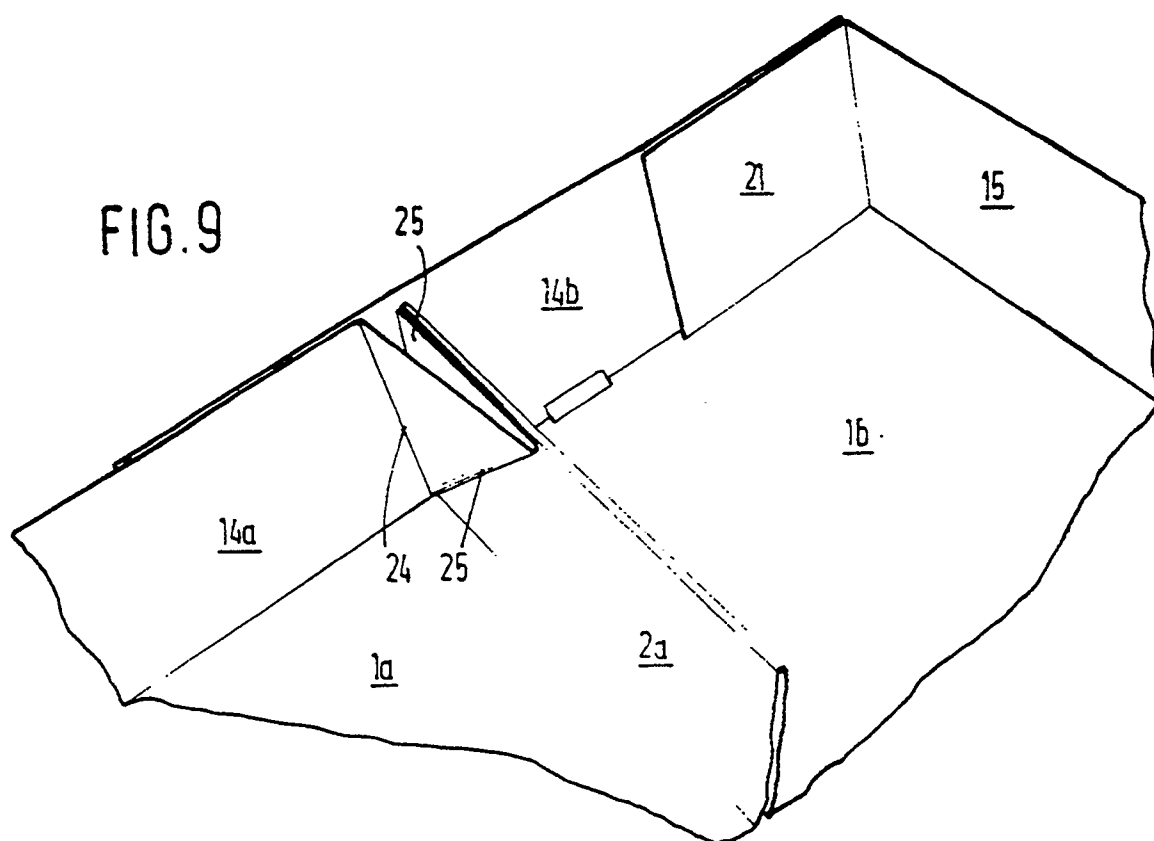


FIG. 7





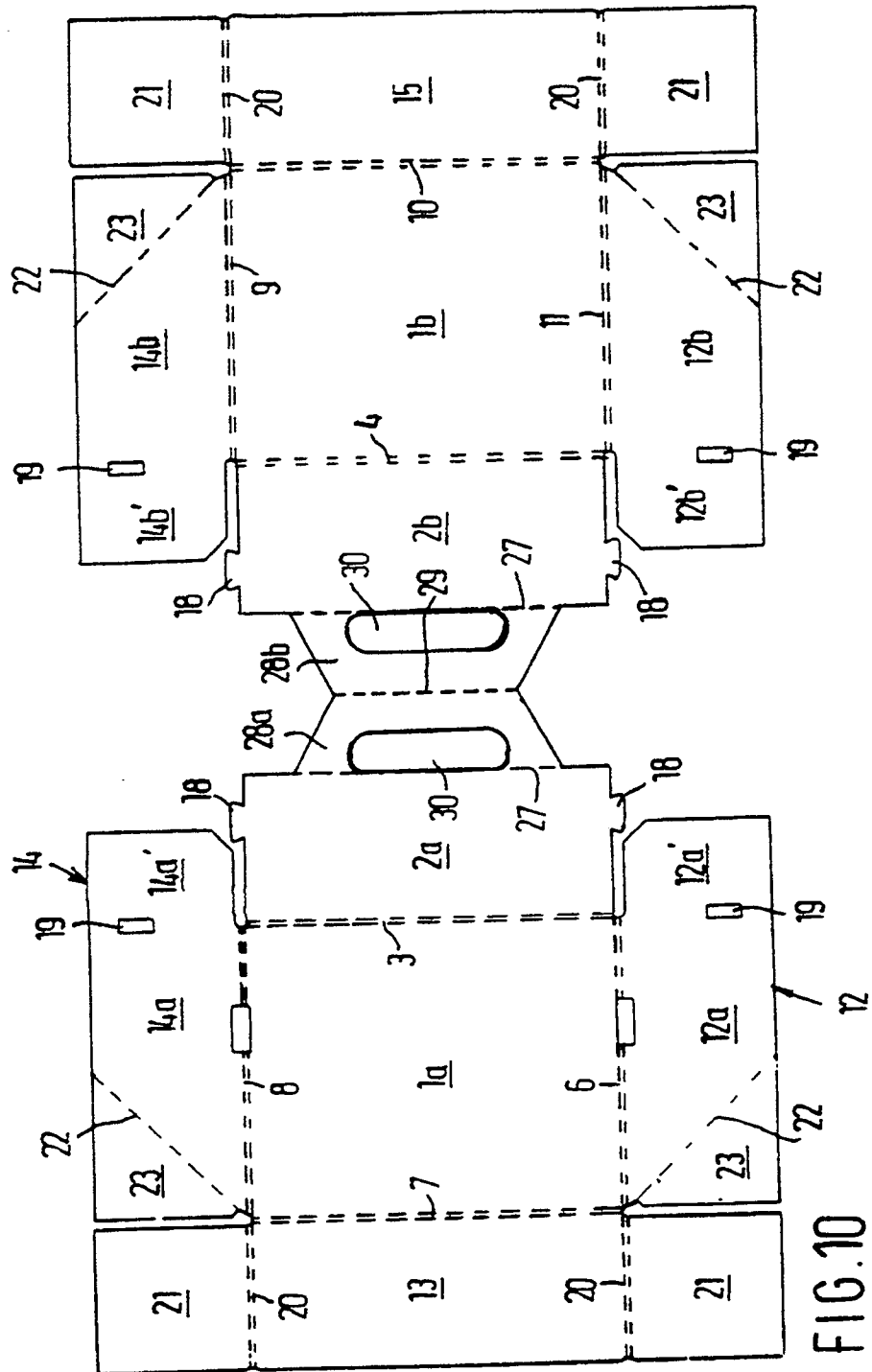


FIG.11

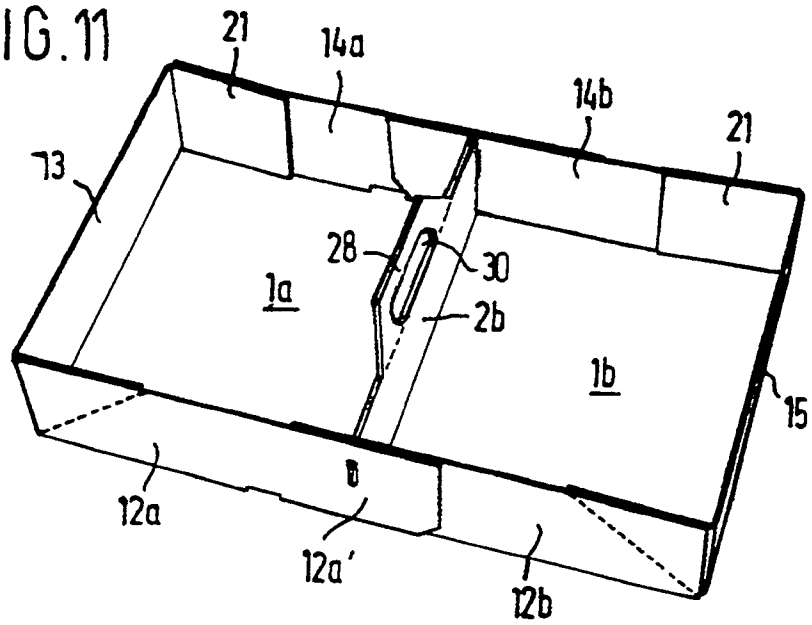


FIG.12

