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Description

The present invention relates to a folding box consisting of a single blank having four side wall panels, a joint panel and a bottom and a top closure, said top closure being arranged for forming an overlapping lid having a collar and comprising end flaps integral with the side wall panels, one of said end flaps being of a size such that when the box is assembled said flap is larger than, and completely covers, the thus formed folding box mouth.

A folding box having the above-mentioned features is known from, for example, US-A-4289239. In said American patent specification, access to the contents of the box is gained by breaking lines of weakness extending around a collar on three sides of the container's overlapping lid, which lid is then hinged along a fold line thereof to the rear wall of the box and is pivoted about said fold line.

However, there is a need for a controlled pouring out of the contents of the package, i.e. it is desirable to be able to determine the pouring volume with a certain degree of accuracy and the pouring out of a too large filling volume in one step is not desirable.

An arrangement to help control the outflow of the contents of a package is described in US-A-4583679. In this document, an open-ended paperboard package is produced whose open end is sealed with a thin membrane. To this thus sealed end a centrally hinged, overlapping lid is affixed. Accordingly, on account of the centrally hinged lid, only one half of the lid is lifted when it is desired to gain access to the contents of the package. A disadvantage with such a package is, however, the need to produce two separate blanks, i.e. one for the package itself and the other for the lid.

Previously, other folding boxes have been equipped with special pouring spout structures, such a one comprises a metal spout and another one uses a punched out flap in a folding box corner which when folded out forms a pouring spout.

Both structures, however, mean tampering of the tightness because the folding box wall is broken through.

The present invention provides a more favourable alternative to the above and provides a folding box consisting of a single blank having four side wall panels, a joint panel and a bottom and a top closure, said top closure being arranged for forming an over-lapping lid having a collar and comprising end flaps integral with the side wall panels, one of said end panels being of a size such that when the box is assembled said flap is larger that, and completely covers, the thus formed folding box mouth.

The folding box is characterised in that said end flap is integral with a side wall via two sub panels, the one distal relative the side wall defining the collar height, and in that said end flap is provided with a tearing and folding denotation extending from the region of at least one folding box corner and having a first portion generally parallel to the top closure, at the collar height defining distance from the plane thereof, and a second portion following on from the first one and extending cross-wise the top closure up to a free edge of the end flap for forming a reclosable closure that exposes a folding box cross-section less than the total folding box mouth area.

Further embodiments of the present invention are detailed in the dependent claims.

The invention will now be exemplified by reference to the accompanying drawings, where

Fig. 1 shows the inside of a planar folding box blank,
Fig. 2 shows the blank in Fig. 1 after erection of the folding box part,
Fig. 3 shows the same folding box after closing the folding box mouth by a membrane and after forming an overlapping lid,
Fig. 4 shows the folding box manufactured from the blank in Fig. 5 after the box has been erected, closed and again opened, and
Fig. 5 shows an alternative embodiment of the blank.

The blank is Fig. 1 comprises four side wall 10, 11, 12 and 13 and a joint flap 13a. Integral with said side wall panels there are end flaps 14, 15, 16 and 17 at one end of the blank and end flaps 14′, 15′, 16′ and 17′ at the other end of the blank.

In a manner knows per se, the panels are delimited from each other by creasing lines 18, 19, 20, 21, 22, 23, 24, 25 and 26.

The creasing line 18 forms the border between the side wall panel 11 and the end panel 14 which has dimension larger than the folding box cross-section of the erected folding box as shown in for instance Fig. 2.

The subpanel 27 of the end flap 15 is, as also appears from Fig. 2, designed for being folded down and attached against the outside of the panel 11.

After having folded also the panels 28, 29. 30. 31, 32, 33, 34 and 35 90° relative the proper closure panel 36, the shape according to Fig. 3 is obtained, where a membrane 37 also has been shown sealed onto the flaps 14, 16 and 17 that have been folded out horizontally.

Between the panels 27 and 28, i.e. at the collar height defining level on Figs. 2 and 3 there is a punched out region 37, which at a short distance from the corner region 38 of the folding box is terminated by an initial breaking through region 39. Thus, this region is the one and only region which at the beginning keeps the overlapping cover in place on the folding box after the completed closure has been attached to the folding box.

In Fig. 4 the region 39 is shown broken through and the closure partially opened along a perforation line 40 inclined relative the corner 38 and along a folding denotation 41, (Fig. 2) cross-wise the closure. This folding denotation is terminated in a perforation 42 at the opposite folding box side corresponding to the perforation 40. By this inclination of perforations, it becomes possible to open the closure 43 an angle larger than 90° relative the plane of the folding box mouth. It is also intended to maintain the side walls 44 of the closure 43 inside the folding box walls for providing a pouring spout function as mentioned at the introduction.

The punch out region 37 may for instance, be continued by a weakening denotation 45 if the total removal of the closure is desired.

In Fig. 1 the self-latching function of the reclosable closure is obtained by tearing away a subflap 16c whereafter the remaining remote flap latches against the joint flaps 33, 35.

In Fig. 5 the sideflaps 33 and 35a are somewhat modified and latchable against a short flap 16c. The elements of Fig. 5 which correspond to those of the first embodiment are denoted with the suffix "a" for clarity of comparison.

Although specific embodiments of the invention have been described, it is realized that modifications and alternatives are possible within the scope of the accompanying claims.

Claims

1. A folding box consisting of a single blank having four side walls panels (10, 11, 12, 13) a joint panel (13a) and a bottom and a top closure (14′, 15′, 16′, 17′ ; 14, 15, 16, 17), said top closure being arranged for forming an overlapping lid (43) having a collar and comprising end flaps integral with the side wall panels, one (15) of said end flaps being of a size such that when the box is assembled said flap is larger than, and completely covers, the thus formed folding box mouth, characterized in that said end flap (15) is integral with a side wall via two sub panels (27, 28), the one (28) distal relative the side wall defining the collar height, and in that the said end flap (15) is provided with a tearing and folding denotation (39, 37, 40, 41, 42) extending from the region of at least one folding box corner (38) and having a first portion (37) generally parallel to the top closure, at the collar height defining distance from the plane thereof, and a second portion (40, 41, 42) following on from the first one and extending cross-wise the top closure up to a free edge of the end flap (15) for forming a reclosable closure (43) that exposes a folding box cross-section less than the total folding box mouth area.

2. A folding box as in claim 1, characterized in that said first portion (37) of the tearing and folding denotation comprises a punched out section terminated by a short bridge of material (39) acting as an initial breaking through portion in a direction towards the said corner (38).

3. A folding box as in claim 2, characterized in that the second end portion of the cut-out section merges into a tearing denotation (40) in the collar inclined towards said corner.

4. A folding box as in claim 3, characterized in that the opposite side of the collar has a corresponding inclined tearing denotation (42).

5. A folding box as in claim 4, characterized in that said inclined tearing denotation cooperates with a folding denotation acting as a hinge (41) for the closure.

6. A folding box as in claim 5, characterized in that the part of the collar opposite to the hinge is designed for providing a latching function together with an end flap.

7. A folding box as in any one or any of the preceding claims, characterized in that the closure has a portion thereof which can act as a pouring spout defined by said tearing and folding denotations (37, 40, 41, 42).

8. A folding box as in any one or any of the preceding claims, characterized in that the folding box is provided with at least one membrane sealed to a set of end flaps.

9. A folding box as in claim 1, characterized in that the first portion (37) of said tearing and folding denotation has a further portion (45) substantially rectilinear with the first and extending the whole way up to the next folding box corner.

Patentansprüche

1. Faltschachtel, bestehend aus einem einzigen Zuschnitt mit vier Seitenwandfeldern (10, 11, 12, 13), einem Verbindungsfeld (13a) und einem Verschlußboden und einem Verschlußdeckel (14′, 15′, 16′, 17′ ; 14, 15,

16, 17), wobei der Verschlußdeckel zur Bildung eines überlappenden Dekkels (43) vorgesehen ist, der einen Rand besitzt und einstückig mit den Seitenwandfeldern gebildete Endklappen aufweist, wobei eine (15) der Endklappen eine solche Größe besitzt, daß nach Zusammenbau der Schachtel diese Klappe größer ist als die so gebildete Faltschachtelöffnung und diese vollständig abdeckt, dadurch gekennzeichnet, daß die Endklappe (15) einstückig mit einer Seitenwand über zwei Nebenwände (27, 28) gebildet ist, von denen eine, die fern bezüglich der Seitenwand liegt, die Randhöhe bildet, und daß die Endklappe (15) mit einer Reiß- und Faltangabe (39, 37, 40, 41, 42) versehen ist, welche sich von dem Bereich von wenigstens einer Faltschachtelecke (38) erstreckt und einen ersten Abschnitt (37), der in etwa parallel zu dem Verschlußdeckel in der die Randhöhe definierenden Entfernung von deren Fläche verläuft, und einen zweiten Abschnitt (40, 41, 42) aufweist, der sich an den ersten anschließt und sich quer über den Verschlußdeckel bis zu einem freien Rand der Endklappe (15) zur Bildung eines wiederverschließbaren Verschlusses (43) erstreckt, der einen Faltschachtelquerschnitt freigibt, der geringer ist als der gesamte Faltschachtelöffnungsbereich.

2. Faltschachtel nach Anspruch 1, dadurch gekennzeichnet, daß der erste Abschnitt (37) der Reiß- und Faltangabe einen ausgestanzten Abschnitt besitzt, der in einer kurzen Materialbrücke (39) mündet, welche als Anfangsdurchbrechabschnitt in einer Richtung auf die Ecke (38) fungiert.

3. Faltschachtel nach Anspruch 2, dadurch gekennzeichnet, daß der zweite Endabschnitt des ausgeschnittenen Abschnitts in eine Reißangabe (40) in dem Rand eindringt, die in Richtung auf die Ecke geneigt ist.

4. Faltschachtel nach Anspruch 3, dadurch gekennzeichnet, daß die gegenüberliegende Seite des Randes eine entsprechende geneigte Reißangabe (42) besitzt.

5. Faltschachtel nach Anspruch 4, dadurch gekennzeichnet, daß die geneigte Reißangabe mit einer Faltangabe zusammenwirkt, welche als ein Schwenkgelenk (41) für den Verschluß fungiert.

6. Faltschachtel nach Anspruch 5, dadurch gekennzeichnet, daß der dem Schwenkgelenk gegenüberliegende Abschnitt des Randes für eine Verriegelungsfunktion zusammen mit einer Endklappe ausgebildet ist.

7. Faltschachtel nach einem der vorangehenden Ansprüche, dadurch gekennzeichnet, daß ein Abschnitt des Verschlusses, der als Gießtülle fungieren kann, durch die Reiß- und Faltangaben (37, 40, 41, 42) gebildet ist.

8. Faltschachtel nach einem der vorangehenden Ansprüche, dadurch gekennzeichnet, daß die Faltschachtel mit wenigstens einer an einer Gruppe von Endklappen gesiegelten Membran versehen ist.

9. Faltschachtel nach Anspruch 1, dadurch gekennzeichnet, daß der erste Abschnitt (37) der Reiß- und Faltangabe einen weiteren Abschnitt (45) besitzt, der im wesentlichen rechtwinklig zu dem ersten verläuft und sich über die ganze Entfernung bis zur nächsten Faltschachtelecke erstreckt.

Revendications

1. Boîte pliante consistant en une seule ébauche comportant quatre panneaux de parois latérales (10, 11, 12, 13), un panneau de jonction (13a) et des fermetures inférieure et supérieure (14′, 15′, 16′, 17′ ; 14, 15, 16, 17), ladite fermeture supérieure étant agencée pour former un couvercle chevauchant (43) ayant un col et comprenant des rabats extrêmes solidaires des panneaux de parois latérales, l'un (15) desdits rabats extrêmes étant d'une taille telle que, lorsque la boîte est assemblée, ledit rabat est plus grand que l'ouverture de boite pliante ainsi formée et recouvre complètement celle-ci, caractérisée en ce que ledit rabat extrême (15) est solidaire d'une paroi latérale par l'intermédiaire de deux sous panneaux (27, 28), le panneau (28) distal par rapport à la paroi latérale définissant la hauteur du col, et en ce que ledit rabat extrême (15) est muni d'une marque de déchirure et de pliage (39, 37, 40, 41, 42) qui s'étend depuis la région d'au moins un coin (38) de la boîte pliante et qui comporte une première partie (37) généralement parallèle à la fermeture supérieure, à une distance du plan de celle-ci qui définit la hauteur du col, et une seconde partie (40, 41, 42) qui suit la première et qui s'étend transversalement à la fermeture supérieure jusqu'à un bord libre du rabat extrême (15) pour former une fermeture (43) refermable qui expose une section transversale de la boite pliante plus petite que l'aire totale de l'ouverture de la boite pliante.

2. Boîte pliante selon la revendication 1, caractérisée en ce que ladite première partie (37) de la marque de déchirure et de pliage comprend une section découpée terminée par un court pont de matière (39) faisant office de partie d'ouverture initiale en direction dudit coin (38).

3. Boîte pliante selon la revendication 2, caractérisée en ce que la seconde partie extrême de la section découpée débouche dans une marque de déchirure (40) du col inclinée vers ledit coin.

4. Boîte pliante selon la revendication 3, caractérisée en ce que le côté opposé du col comporte une marque de déchirure (42) inclinée correspondante.

5. Boîte pliante selon la revendication 4, caractérisée en ce que ladite marque de déchirure inclinée coopère avec une marque de pliage agissant comme une charnière (41) pour la fermeture.

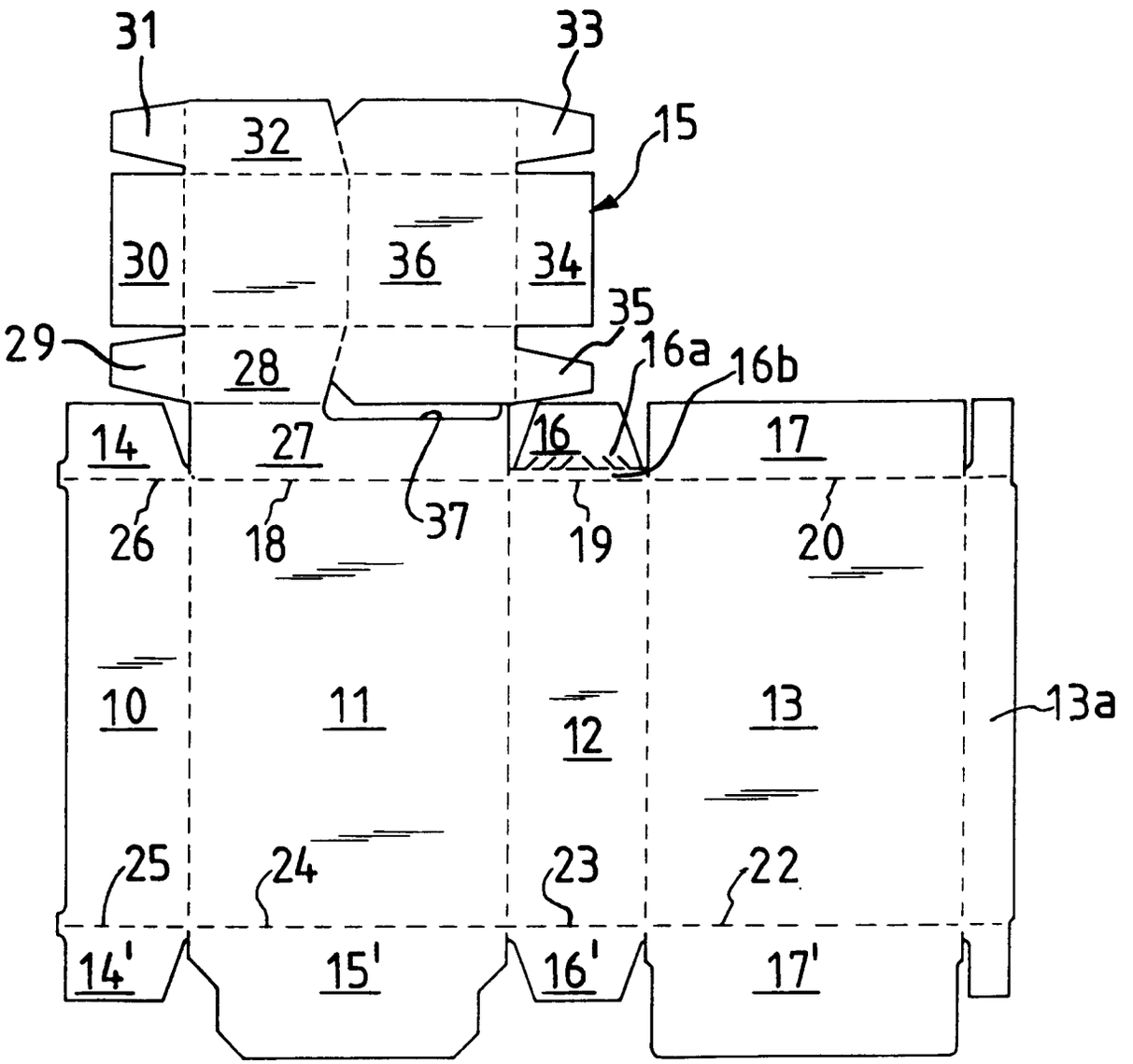
6. Boîte pliante selon la revendication 5, caractérisée en ce que la partie du col opposée à la charnière est conçue pour remplir une fonction de verrouillage en même temps qu'un rabat extrême.

7. Boîte pliante selon l'une quelconque des revendications précédentes, caractérisée en ce que la fermeture comporte une partie qui peut agir comme un bec verseur défini par lesdites marques de déchirure et de pliage (37, 40, 41, 42).

8. Boîte pliante selon l'une quelconque des revendications précédentes, caractérisée en ce que la boîte pliante est munie d'au moins une membrane scellée à une série de rabats extrêmes.

9. Boîte pliante selon la revendication 1, caractérisée en ce que la première partie (37) de ladite marque de déchirure et de pliage comporte une autre partie (45) sensiblement rectiligne avec la première et s'étendant jusqu'au coin suivant de la boîte pliante.

FIG. 1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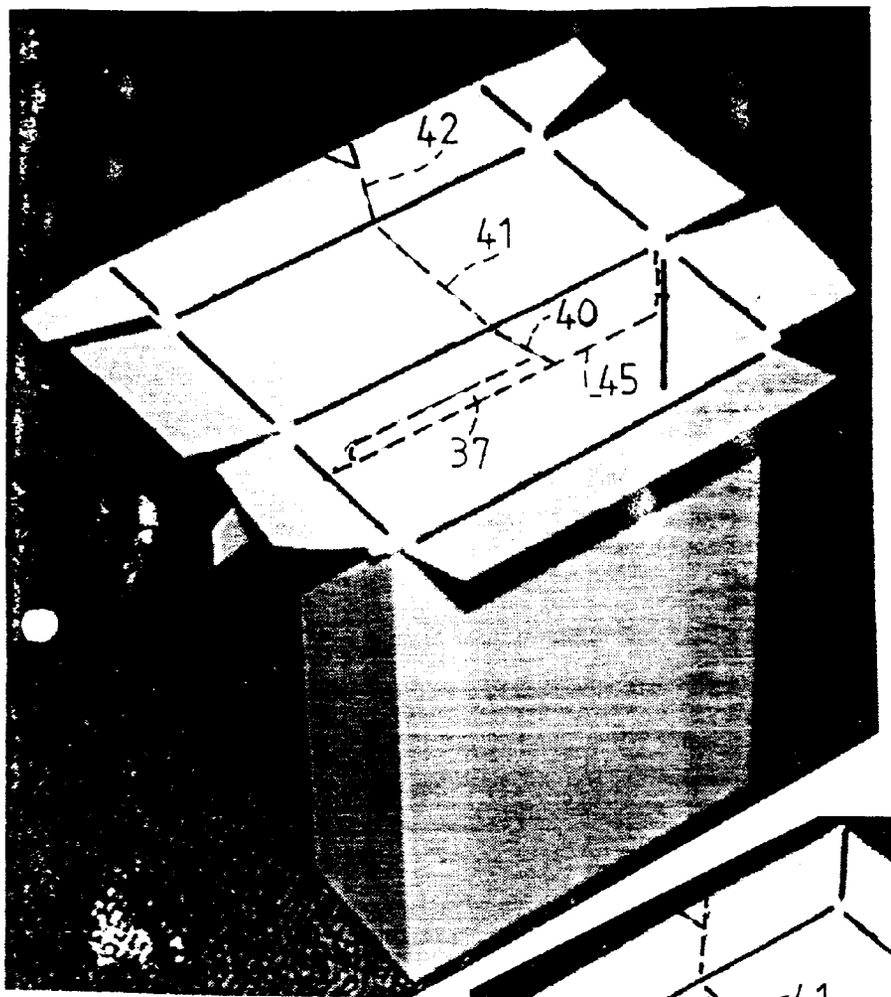


FIG. 2

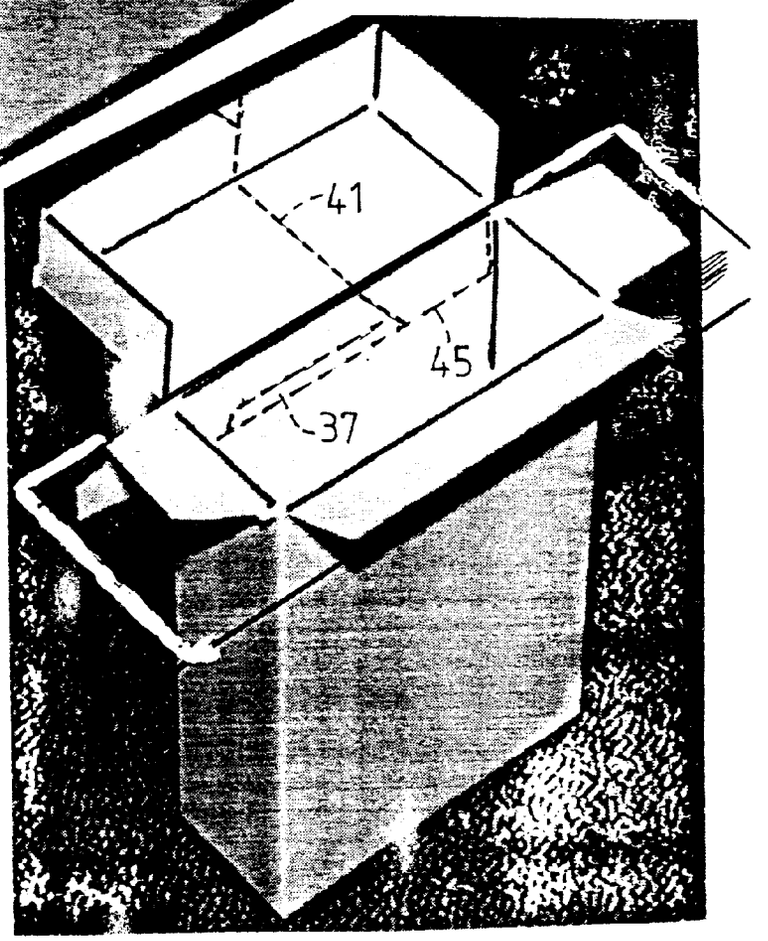


FIG. 3

FIG. 4

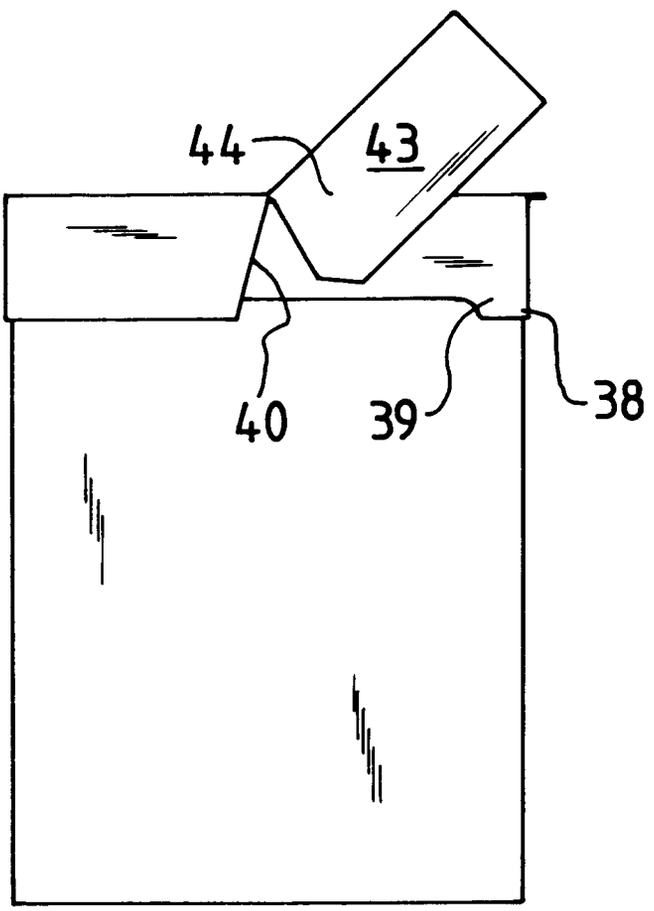
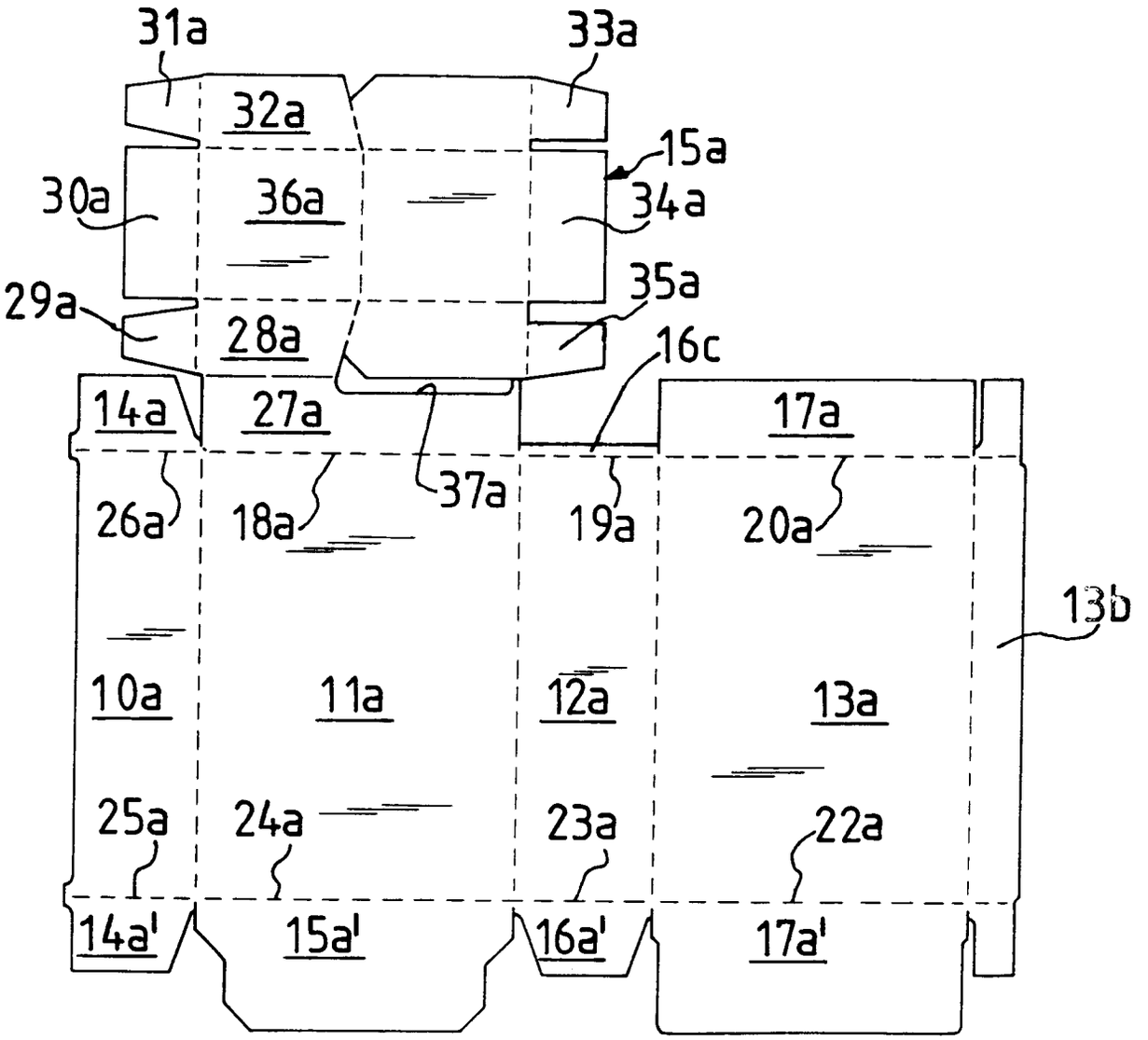


FIG. 5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