

(19)



Europäisches Patentamt
European Patent Office
Office européen des brevets



(11)

EP 0 869 904 B1

(12)

EUROPEAN PATENT SPECIFICATION

(45) Date of publication and mention
of the grant of the patent:
12.03.2003 Bulletin 2003/11

(51) Int Cl.7: **B65D 5/04**, B65D 5/20,
B65D 85/62

(21) Application number: **97928400.7**

(86) International application number:
PCT/IB97/00868

(22) Date of filing: **14.07.1997**

(87) International publication number:
WO 98/012115 (26.03.1998 Gazette 1998/12)

(54) **PACKING UNIT FOR A PLURALITY OF BLOCK SHAPED CARTONS**

EINRICHTUNG ZUM VERPACKEN EINER VIELZAHL BLOCKFÖRMIGER KARTONS

UNITE D'EMBALLAGE DESTINEE A UNE PLURALITE DE CARTONNAGES PLIANTS EN FORME
DE BLOCS

(84) Designated Contracting States:
DE FR GB

(72) Inventor: **VOS, Peter, Gerrit, Johannes**
NL-5656 AA Eindhoven (NL)

(30) Priority: **18.09.1996 EP 96202608**
10.02.1997 EP 97200355

(74) Representative:
Rolfes, Johannes Gerardus Albertus et al
INTERNATIONAAL OCTROOIBUREAU B.V.,
Prof. Holstlaan 6
5656 AA Eindhoven (NL)

(43) Date of publication of application:
14.10.1998 Bulletin 1998/42

(73) Proprietor: **Koninklijke Philips Electronics N.V.**
5621 BA Eindhoven (NL)

(56) References cited:
FR-A- 2 488 568 **GB-A- 1 172 430**
SE-B- 399 227 **US-A- 3 833 116**

Note: Within nine months from the publication of the mention of the grant of the European patent, any person may give notice to the European Patent Office of opposition to the European patent granted. Notice of opposition shall be filed in a written reasoned statement. It shall not be deemed to have been filed until the opposition fee has been paid. (Art. 99(1) European Patent Convention).

EP 0 869 904 B1

Description

[0001] The invention relates to a packing unit comprising:

a plurality of cartons of a rectangular block shape arranged in parallel rows, which rows lie against one another, first and last end cartons of the rows together forming a first and a last end face, respectively;

a wrapper around the rows of cartons, which wrapper is folded about folding lines which extend parallel to the rows of cartons, thus forming a base surface, mutually opposed side surfaces, and a top opposite the base surface, the base surface being a surface in one part connected to the side surfaces on either side, which wrapper keeps the cartons enclosed in the rows,

edge strips having a width are present, which strips are integral with the wrapper and extend along the base surface, the side surfaces, and the top of the wrapper and are connected thereto, which strips lie against the first and the last end face, and which strips are fastened to one another, whereby the wrapper holds on to each and every carton lying in the first or the last end face, as applicable.

[0002] Such a packing unit is known from US-A-3,833,116.

[0003] In the known packing unit, for example, four rows of cartons are placed on a plateau having raised rims, while a second plateau filled with cartons may be present on top of the former. The wrapper surrounds the package at four sides, one of these being the base of the first plateau. The wrapper surrounds the package with clamping fit. It is prevented thereby that a plateau can slide from the closed wrapper.

[0004] The known packing unit has the advantage that, owing to the wrapper, it requires comparatively little packaging material compared with an outer carton, while nevertheless the cartons are securely fixed in the packing unit. The known packing unit has the disadvantage that it cannot be readily opened. Another disadvantage of the known packing unit is that it cannot form a plateau which can be displayed on a stand with the associated cartons without further measures.

[0005] Although the known packing unit compared with conventional packing units saves much packaging material, it nevertheless still uses comparatively much packaging material, and comparatively much material is left over after unpacking.

[0006] US-A-5,555,979 discloses a packing unit having cartons placed on a plateau having raised rims. A wrapper surrounds with clamping fit the package at four sides, one of these being the base of the plateau.

[0007] It is an object of the invention to provide a packing unit of the kind described in the opening paragraph

which leads to a yet further saving in packaging material.

[0008] According to the invention, this object is achieved in that the base surface has perforation lines which lie at a distance from one another, extend alongside the folding lines, and have extensions into the relevant edge strips. In particular, the perforation lines lie at a distance to the accompanying folding lines which corresponds to the width w of the edge strips of the side surfaces. Alternatively the top has at least a perforation line at a distance w from the adjacent folding line, if applicable. If one or several parts of the top already has/have a dimension w , such perforation lines are not possible or indeed necessary in these locations in the top.

[0009] The packing unit has the advantage that it may be readily opened, and that the side walls with the edge strips thereof will each form a plateau which can be displayed on a stand with the associated cartons without further measures. The packing unit has the further advantage that only a portion of the base surface and possibly a portion of the top with the attached portions of the relevant edge strips are left as waste material after opening, which material can be readily flattened for waste disposal. The packing unit according to the invention further has the advantage that no plateau is required because the function of the plateau for retaining the cartons has been integrated into the wrapper. This not only realizes a saving in packaging material, but also simplifies the logistics.

[0010] Since the edge strips can be comparatively narrow in general, for example have the same width as the raised rims of the known plateaus, for example a few cm, for example 2 to 4 cm, the advantage is retained in the packing unit that no printed message on the wrapper for identifying the contents of the packing unit is necessary, because the unit is substantially open at the end faces and displays the packed cartons.

[0011] The other advantage of the edge strips being integral with the wrapper, hence that it is of little importance for the retention of the cartons whether or to what extent the wrapper is clamped with force around the rows of cartons, is retained.

[0012] The packing unit furthermore has the advantage that it has excellent stacking properties with several of its faces being capable of serving as plane support surfaces.

[0013] The edge strips fastened to one another, those against the first and those against the last end face, in addition render it unnecessary to close the wrapper itself, for example by fastening of the top to a side surface, in locations where the latter come together when the wrapper is formed from its blank.

[0014] In a favorable embodiment of the packing unit, the top is divided into a first and a second part, each part being connected to a respective side surface along a folding line. The seam between the parts may lie, for example, centrally in the top, in the center between the side surfaces. The parts of the top may abut against one another on the seam. In general, the packing unit having

such a seam has a rigidity such that the seam hardly opens any further during normal manipulation of the packing unit. If a row of cartons is present at the area of the seam, which cartons each extend to below the first and the second part of the top, the packing unit is in addition comparatively rigid against torsion, i.e. the first and the second part of the top can hardly be shifted alongside one another on the seam.

[0015] In this embodiment, too, the top, when placed vertically with a side surface serving as the bottom surface, is perfectly capable of absorbing forces exerted by a second unit placed on the former packing unit. If so desired, mutually engaging teeth may be present at the first and at the second part of the top, for example, projecting into the interior of the wrapper. Such teeth are capable of preventing shifting of the parts along one another on the seam, thus increasing the torsional stiffness of the packing unit.

[0016] In a special embodiment, the top is divided into a first and a second part which are each connected to a respective side surface, and the first part has a dimension which corresponds to the width w of the edge strips of the side surfaces. In a favorable modification, the second part has a tag which projects into the wrapper. This tag is capable of preventing the second part from sliding over the first part under pressure. The tag thus ensures that the first and second parts abut against one another. In a further modification, the second part has tongues at its edge strips which project to below the edge strips of the relevant side surface. The tongues give the packing unit an increased torsional stiffness. Adhesive means on the tag and the tongues are usually not necessary.

[0017] In a further embodiment, too, the top surface is divided, but the first and the second part thereof lie at a distance from one another, more in particular they each have a dimension corresponding to the width of the edge strips of the side surfaces. This embodiment renders it possible to leave a major portion of the top surface of the package of cartons uncovered, which offers a further saving in packaging material.

[0018] The rows of cartons may be present in one layer or in several layers arranged parallel to the base surface. The layers may comprise two or more rows. However, the fact that the wrapper retains each canon lying in an end face by means of the edge strips implies that the layers can only have more than two rows if there are no more than two layers. If a third layer were present, not all cartons in the central layer would be retained by the edge strips. Cartons could then have been removed from the unopened package without this being necessarily visible from the outside of the packing unit. Similarly, there can only be more than two layers in the packing unit if there are no more than two rows in each layer for the same reason.

[0019] There may also be many layers with a maximum of two rows per layer or two layers with several rows per layer in a packing unit having a two-pan top in

which the parts of the top lie at a distance from one another, as long as each canon lying in an end face is retained by an edge strip.

[0020] It is attractive, however, if there are layers of only two rows each in the unit. This unit has the advantage that after the removal of the material from between the perforation lines two plateaus with cartons are obtained which occupy a stable position. The cartons are all held together then by the plateaus thus obtained.

[0021] The number of canons in a row and the number of rows and layers in a packing unit are determined in dependence on the volume and mass of a carton and also on the nature of the goods packed, whereby indeed the conditions for presenting the cartons are determined. Said factors also determine the quality of the material used for the wrapper. It is simple, however, for those skilled in the art of packaging to choose suitable parameters in any given case.

[0022] The packing unit according to the invention is highly suitable for use in the packaging of one or two electric lamps, for example incandescent lamps, per canon. Lamps generally have a very small mass compared with their volume. Their volume is nevertheless comparatively small, so that a comparatively large number of lamps, for example 40, may be packed in the same number or half the number of cartons in a convenient manner in one packing unit.

[0023] It is favorable when the material of the wrapper is cardboard, such as duplex, mini-corrugated, semi-corrugated, or corrugated cardboard. The corrugations of corrugated or semi-corrugated cardboard preferably extend transversely to the folding lines.

[0024] Embodiments of the packing unit according to the invention are shown in the drawing, in which

Fig. 1 shows a packing unit in front elevation;
Fig. 2 shows the packing unit of Fig. 1 in front elevation during its manufacture;
Fig. 3 is a plan view taken on the line III in Fig. 2;
Fig. 4 shows the blank of the packing unit of Fig. 1;
Fig. 5 shows a second embodiment in front elevation;
Fig. 6 shows the blank of the wrapper of the packing unit of Fig. 5;
Fig. 7 is a front elevation of a third embodiment; and
Fig. 8 shows the blank of the wrapper of the packing unit of Fig. 7.

[0025] In Fig. 1, cf. also Fig. 3, the packing unit comprises a plurality of cartons 2 of a rectangular block shape arranged in parallel rows 1. The rows 1 lie against one another. First 21 and last cartons 22 of the rows 1 together form a first 11 and a last end face 12, respectively. The packing unit in addition comprises a wrapper 3 around the rows 1 of cartons 2. The wrapper 3 is folded about folding lines 30 which extend parallel to the rows 1 of cartons, see Figs. 2 and 4, and accordingly has a base surface 31, mutually opposed side surfaces 32,

and a top 33 opposite the base surface 31. The base surface 31 is a surface in one part to which on either side the side surfaces 32 are connected. The wrapper 3 keeps the cartons 2 enclosed in the rows 1.

[0026] The packing unit has edge strips 311, 321, 331 having a width w which are integral with the wrapper 3 and extend along the base surface 31, the side surfaces 32 and the top 33 of the wrapper 3 and which are connected thereto. These edge strips lie against the first 11 and the last end face 12 and are fastened to one another, for example with glue, for example with a hot-melt glue. The fastening points are indicated with dots in Fig. 1. The wrapper 3 holds on to each carton 21, 22 situated in an end face 11, 12 by means of its edge strips 311, 321, 331.

[0027] In Fig. 1, the top 33 is subdivided into a first 33' and a second part 33". The parts 33', 33" are each connected to a respective side surface 32 along a folding line 30, cf. Fig. 4, and lie at a distance from one another, cf. Fig. 1.

[0028] The parts 33', 33" of the top 33 have a dimension w which corresponds to the width of the edge strips 321 of the side surfaces 32, see also Fig. 4.

[0029] The base surface 31 of the wrapper, see Figs. 3 and 4, has perforation lines 312 which extend at a distance w along the folding lines 30, and each have an extension 314 into the relevant edge strips 311.

[0030] During manufacture of the packing unit, see Fig. 4, the parts 33' and 33" of the top may be folded about the relevant folding lines 30 and preshaped. The edge strips 321 of the side surfaces 320 are similarly preshaped. The edge strips 331 may then be folded and attached to the relevant edge strips 321. If so desired, the edge strips 311 of the base surface 31 may also have been folded during this procedure. The wrapper 3 being manufactured then has the shape shown in Figs. 2 and 3. The wrapper 3 being manufactured at that moment resembles two interconnected plateaus each lacking one raised rim. Ten cartons 2 are placed on each side surface 32 in Fig. 2, in the embodiment shown each containing two 230 V 60 W incandescent lamps. In the Fig. the cartons 2 are always present in two rows 1 of five cartons 2 each. As shown in Fig. 2, the cartons 2 together with the accompanying side surface 32 can be pivoted through 90° about the relevant folding line 30. The packing unit is complete when the fastenings between the edge strips 321 and 311 have been made. The unit then has rows 1 in two layers, with two rows 1 next to one another in each layer. If so desired, or in the case of cartons 1 having different dimensions, the unit could comprise, for example, more than two layers of rows.

[0031] It is apparent from Fig. 4 that the parts 33' and 33" of the top have a width w which corresponds to the width w of the edge strips 311, 321 and 331. It is furthermore apparent that the distance from each perforation line 312 to the adjacent folding line 30 also corresponds to this width w . When the portion of the base surface 31 with its edge strips 311 has been torn from between the

perforation lines 312 and the extensions 314 thereof in the packing unit of Fig. 1, two plateaus with raised rims and filled with ten cartons 2 each will have been created. Corrugated cardboard with a weight 455 g/m² and a compression value of 1850 N was used for the wrapper 3 in the Figures.

[0032] In the unit shown, 103 g corrugated cardboard was used for packing the twenty cartons 2, whereas 207 g would be necessary for forming the known packing unit mentioned in the opening paragraph with the same cartons.

[0033] In Figs. 5 to 8, corresponding parts have the same reference numerals as in the preceding Figures.

[0034] In Fig. 5, see also Fig. 6, the top 33 has two equal parts 33' and 33" which abut against one another centrally between the side surfaces 32. Each part has a perforation line 332 with an extension 334 into the relevant edge strips 331, see Fig. 6. If the two parts 33' and 33" are shortened through tearing-off of the material laterally of the perforation lines 332, 334, and if the portion between the perforation lines 312 is torn away in the base surface 31, two plateaus will have been created with raised rims of equal height, filled with cartons.

[0035] The packing unit of Figs. 7 and 8 has a top 33 with a first part 33' having a dimension w and a second part 33" having a tag 335 which projects loosely into the wrapper 3 in Fig. 7, whereby it is prevented that the second part 33" can slide over the first part 33' under pressure. The second part 33" abuts against the first part 33' laterally of the tag 335. The edge strips 331 of the second part 33" have tongues 336 which lie on the inside of the edge strips 331 of the first part 33', loosely underneath them in Fig. 7. They give the unit an increased torsional stiffness.

[0036] The first part 33' has a dimension equal to the width w of the edge strips 321. The second part 33" has a perforation line 332 at a distance w to the folding line 30. The second part 33" may be torn off along the perforation line 332, and the base surface 31 can be removed between the perforation lines 312. Two plateaus containing cartons are created thereby.

Claims

1. A packing unit comprising:

- a plurality of cartons (2) of a rectangular block shape arranged in parallel rows (1), which rows (1) lie against one another, first (21) and last end cartons (22) of the rows (1) together forming a first (11) and a last end face (12), respectively;
- a wrapper (3) around the rows (1) of cartons (2), which wrapper (3) is folded about folding lines (30) which extend parallel to the rows (1) of cartons (2), thus forming a base surface (31), mutually opposed side surfaces (32), and a top

(33) opposite the base surface (31), the base surface being a surface in one part connected to the side surfaces on either side

which wrapper (3) keeps the cartons (2) enclosed in the rows (1), edge strips (311, 321, 331) having a width are present, which strips are integral with the wrapper (3) and extend along the base surface (31), the side surfaces (32), and the top (33) of the wrapper (3) and are connected thereto, which strips lie against the first (11) and the last end face (12), and which strips are fastened to one another, whereby the wrapper (3) holds on to each and every carton (21, 22) lying in the first or the last end face (11, 12), as applicable,

characterized in that the base surface (31) has perforation lines (312) which lie at a distance from one another, extend alongside the folding lines (30), and have extensions (314) into the edge strips (311), of the base surface (31).

2. A packing unit comprising:

a plurality of cartons (2) of a rectangular block shape arranged in parallel rows (1), which rows (1) lie against one another, first (21) and last end cartons (22) of the rows (1) together forming a first (11) and a last end face (12), respectively;

a wrapper (3) around the rows (1) of cartons (2), which wrapper (3) is folded about folding lines (30) which extend parallel to the rows (1) of cartons (2), thus forming a base surface (31), mutually opposed side surfaces (32), and a top (33) opposite the base surface (31), the base surface being a surface in one part connected to the side surfaces on either side which wrapper (3) keeps the cartons (2) enclosed in the rows (1), edge strips (311, 321, 331) having a width are present, which strips are integral with the wrapper (3) and extend along the base surface (31), the side surfaces (32), and the top (33) of the wrapper (3) and are connected thereto, which strips lie against the first (11) and the last end face (12), and which strips are fastened to one another, whereby the wrapper (3) holds on to each and every carton (21, 22) lying in the first or the last end face (11, 12), as applicable,

characterized in that the top (33) has at least a perforation line (332) at a distance w from the adjacent folding line (30), said at least a perforation line (332) extends into the edge strips (331) of the top (33).

3. A packing unit as claimed in Claim 1, **characterized**

in that the top (33) has at least a perforation line (332) at a distance w from the adjacent folding line (30).

4. A packing unit as claimed in Claim 1, 2 or 3, **characterized in that** the top (33) is divided into a first (33) and a second part (33''), each part being connected to a respective side surface (32) along a folding line (30).

5. A packing unit as claimed in Claim 4, **characterized in that** the first part (33') has a dimension which corresponds to the width w of the edge strips (321) of the side surfaces (32).

6. A packing unit as claimed in Claim 5, **characterized in that** the second part (33'') has a tag (335) which projects into the wrapper (3).

7. A packing unit as claimed in Claim 5, **characterized in that** the two parts (33', 33'') of the top (33) have a dimension equal to w .

25 Patentansprüche

1. Verpackungseinheit mit:

einer Vielzahl von in parallelen Reihen (1) angeordneten Kartons (2) in Form rechteckiger Blöcke, wobei die Reihen (1) gegeneinander anliegen und erste (21) und letzte Kartons (22) der Reihen (1) zusammen eine erste (11) bzw. eine letzte Stirnfläche (12) bilden;
einem Wickel (3) um die Reihen (1) Kartons (2) herum, welcher Wickel (3) um parallel zu den Reihen (1) Kartons verlaufende Falllinien (30) gefaltet ist und dadurch eine Grundfläche (31), einander gegenüber stehende Seitenflächen (32) und eine Oberseite (33) gegenüber der Grundfläche (31) bildet, wobei die Grundfläche eine Fläche ist, die in einem Teil zu beiden Seiten mit den Seitenflächen verbunden ist, welcher Wickel (3) die Kartons (2) in den Reihen (1) umschlossen hält, wobei Randstreifen (311, 321, 331) mit einer Breite vorhanden sind, welche Streifen mit dem Wickel aus einem Stück sind und entlang der Grundfläche (31), den Seitenflächen (32) und der Oberseite (33) des Wickels (3) verlaufen und damit verbunden sind, wobei die Streifen gegen die erste (11) und die letzte Stirnfläche (12) anliegen und aneinander befestigt sind, wodurch der Wickel (3) gegebenenfalls jeden einzelnen in der ersten oder der letzten Stirnfläche (11, 12) gelegenen Karton (21, 22) festhält,

dadurch gekennzeichnet, daß die Grundfläche (31) auf Abstand voneinander liegende, entlang den Faltlinien (30) verlaufende Perforationslinien (312) hat, die Verlängerungen (314) in den Randstreifen (311) der Grundfläche (31) haben.

2. Verpackungseinheit mit:

einer Vielzahl von in parallelen Reihen (1) angeordneten Kartons (2) in Form rechteckiger Blöcke, wobei die Reihen (1) gegeneinander anliegen und erste (21) und letzte Kartons (22) der Reihen (1) zusammen eine erste (11) bzw. eine letzte Stirnfläche (12) bilden;
einem Wickel (3) um die Reihen (1) Kartons (2) herum, welcher Wickel (3) um parallel zu den Reihen (1) Kartons verlaufende Faltlinien (30) gefaltet ist und dadurch eine Grundfläche (31), einander gegenüber stehende Seitenflächen (32) und eine Oberseite (33) gegenüber der Grundfläche (31) bildet, wobei die Grundfläche eine Fläche ist, die in einem Teil zu beiden Seiten mit den Seitenflächen verbunden ist, welcher Wickel (3) die Kartons (2) in den Reihen (1) umschlossen hält,
wobei Randstreifen (311, 321, 331) mit einer Breite vorhanden sind, welche Streifen mit dem Wickel aus einem Stück sind und entlang der Grundfläche (31), den Seitenflächen (32) und der Oberseite (33) des Wickels (3) verlaufen und damit verbunden sind, wobei die Streifen gegen die erste (11) und die letzte Stirnfläche (12) anliegen und aneinander befestigt sind, wodurch der Wickel (3) gegebenenfalls jeden einzelnen in der ersten oder der letzten Stirnfläche (11, 12) gelegenen Karton (21, 22) festhält,

dadurch gekennzeichnet, daß die Oberseite (33) in einem Abstand w von der benachbarten Faltlinie (30) zumindest eine Perforationslinie (332) hat, wobei diese zumindest eine Perforationslinie (332) sich bis in die Randstreifen (331) der Oberseite (33) erstreckt.

3. Verpackungseinheit nach Anspruch 1, **dadurch gekennzeichnet, daß** die Oberseite (33) im Abstand w von der benachbarten Faltlinie (30) zumindest eine Perforationslinie (332) hat.

4. Verpackungseinheit nach Anspruch 1, 2 oder 3, **dadurch gekennzeichnet, daß** die Oberseite (33) in einen ersten (33') und einen zweiten Teil (33'') geteilt ist, wobei jeder Teil entlang einer Faltlinie (30) mit einer jeweiligen Seitenfläche (32) verbunden ist.

5. Verpackungseinheit nach Anspruch 4, **dadurch gekennzeichnet, daß** der erste Teil (33') eine Abmes-

sung hat, die der Breite w der Randstreifen (321) der Seitenflächen (32) entspricht.

6. Verpackungseinheit nach Anspruch 5, **dadurch gekennzeichnet, daß** der zweite Teil (33'') eine Lippe (335) hat, die in den Wickel (3) hinein ragt.

7. Verpackungseinheit nach Anspruch 5, **dadurch gekennzeichnet, daß** beide Teile (33', 33'') der Oberseite (33) eine Abmessung gleich w haben.

Revendications

1. Unité d'emballage comprenant:

une pluralité de cartonnages pliants (2) ayant une forme de bloc rectangulaire qui sont agencés dans des rangées parallèles (1), lesquelles rangées (1) se situent les unes contre les autres, des premiers (21) et des derniers cartonnages pliants (22) des rangées (1) formant ensemble respectivement une première (11) et une dernière face d'extrémité (12);

une enveloppe (3) étant fixée autour des rangées (1) de cartonnages pliants (2), laquelle enveloppe (3) est pliée autour de lignes de pliage (30) qui s'étendent en parallèle aux rangées (1) de cartonnages pliants (2), formant ainsi une surface de base (31), des surfaces latérales mutuellement opposées (32) et un sommet (33) à l'opposé de la surface de base (31), la surface de base étant une surface dans une partie qui est reliée aux surfaces latérales des deux côtés,

laquelle enveloppe (3) maintient les cartonnages pliants (2) enfermés dans les rangées (1), des bandes de bord (311, 321, 331) ayant une largeur sont présentes, lesquelles bandes forment corps avec l'enveloppe (3) et s'étendent le long de la surface de base (31), des surfaces latérales (32) et du sommet (33) de l'enveloppe (3) et y sont reliées, lesquelles bandes se situent contre la première (11) et la dernière face d'extrémité (12), et lesquelles bandes sont fixées les unes aux autres, l'enveloppe (3) s'accrochant à chaque et à tout cartonnage pliant (21, 22) qui se situe, le cas échéant, dans la première ou la deuxième face d'extrémité (11, 12),

caractérisée en ce que la surface de base (31) présente des lignes de perforation (312) qui se situent les unes à une certaine distance espacée des autres, qui s'étendent le long des lignes de pliage (30) et qui présentent des extensions (314) dans les bandes de bord (311) de la surface de base (31).

2. Unité d'emballage comprenant:

une pluralité de cartonnages pliants (2) ayant une forme de bloc rectangulaire qui sont agencés dans des rangées parallèles (1), lesquelles rangées (1) se situent les unes contre les autres, des premiers (21) et des derniers cartonnages pliants (22) des rangées (1) formant ensemble respectivement une première (11) et une dernière face d'extrémité (12);

une enveloppe (3) étant fixée autour des rangées (1) de cartonnages pliants (2), laquelle enveloppe (3) est pliée autour de lignes de pliage (30) qui s'étendent en parallèle aux rangées (1) de cartonnages pliants (2), formant ainsi une surface de base (31), des surfaces latérales mutuellement opposées (32) et un sommet (33) à l'opposé de la surface de base (31), la surface de base étant une surface dans une partie qui est reliée aux surfaces latérales des deux côtés,

laquelle enveloppe (3) maintient les cartonnages pliants (2) enfermés dans les rangées (1), des bandes de bord (311, 321, 331) ayant une largeur sont présentes, lesquelles bandes forment corps avec l'enveloppe (3) et s'étendent le long de la surface de base (31), des surfaces latérales (32) et du sommet (33) de l'enveloppe (3) et y sont reliées, lesquelles bandes se situent contre la première (11) et la dernière face d'extrémité (12), et lesquelles bandes sont fixées les unes aux autres, l'enveloppe (3) s'accrochant à chaque et à tout cartonnage pliant (21, 22) qui se situe, le cas échéant, dans la première ou la deuxième face d'extrémité (11, 12),

caractérisée en ce que le sommet (33) présente au moins une ligne de perforation (332) à une distance w espacée de la ligne de pliage (30), ladite au moins une ligne de perforation (332) s'étendant dans les bandes (331) du sommet (33).

3. Unité d'emballage selon la revendication 1, **caractérisée en ce que** le sommet (33) présente au moins une ligne de perforation (332) à une distance w espacée de la ligne de pliage adjacente (30).4. Unité d'emballage selon la revendication 1, 2 ou 3, **caractérisée en ce que** le sommet (33) est divisé en une première (33') et en une deuxième partie (33''), chaque partie étant reliée à une surface latérale respective (32) le long d'une ligne de pliage (30).5. Unité d'emballage selon la revendication 4, **caractérisée en ce que** la première partie (33') présente une dimension qui correspond à la largeur w des

bandes de bord (321) des surfaces latérales (32).

6. Unité d'emballage selon la revendication 5, **caractérisée en ce que** la deuxième partie (33'') présente une patte (335) qui s'étend dans l'enveloppe (3).7. Unité d'emballage selon la revendication 5, **caractérisée en ce que** les deux parties (33', 33'') du sommet (33) présentent une dimension qui est égale à w.

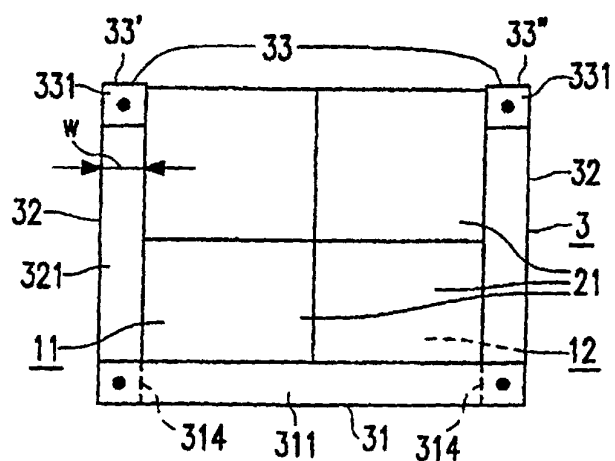


FIG. 1

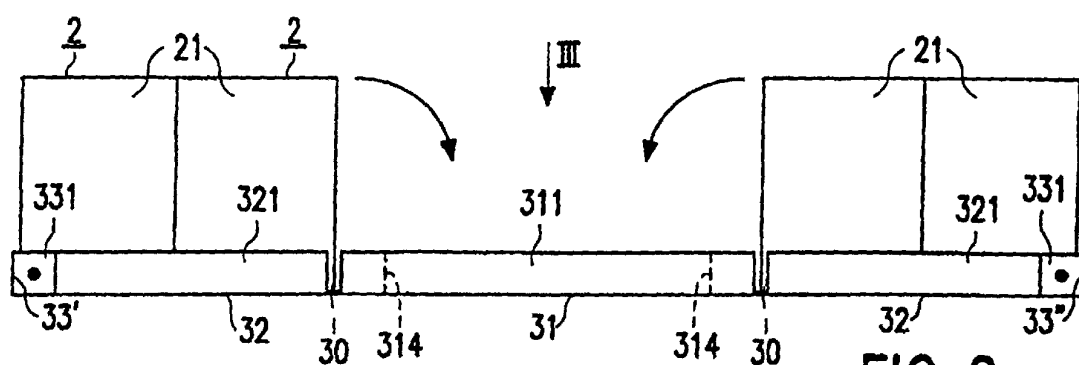


FIG. 2

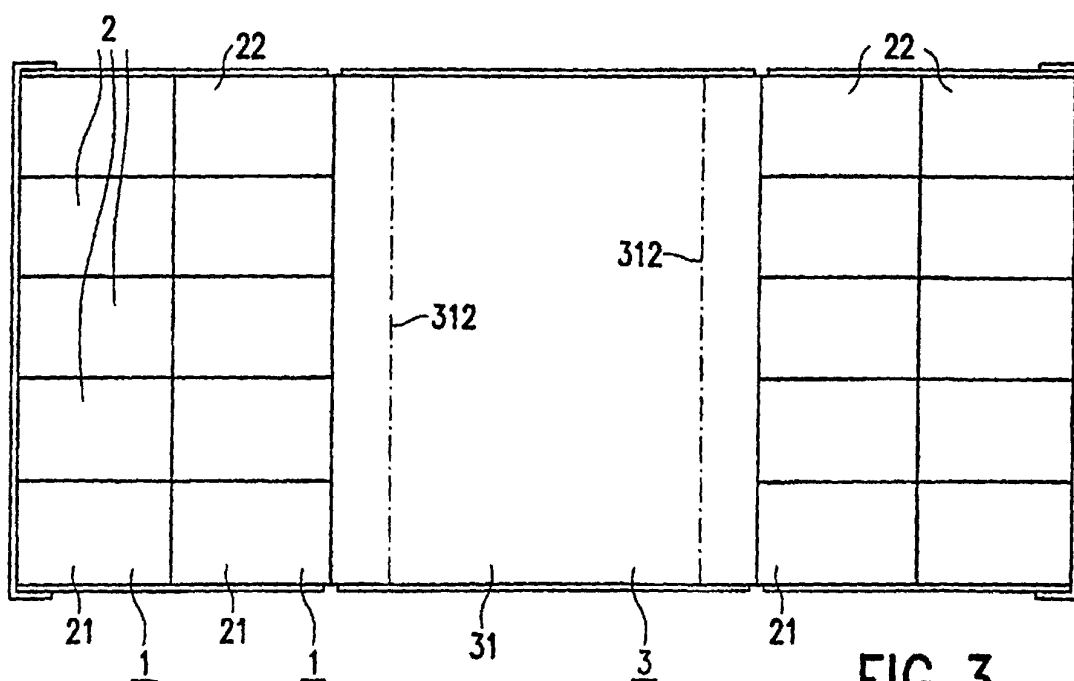


FIG. 3

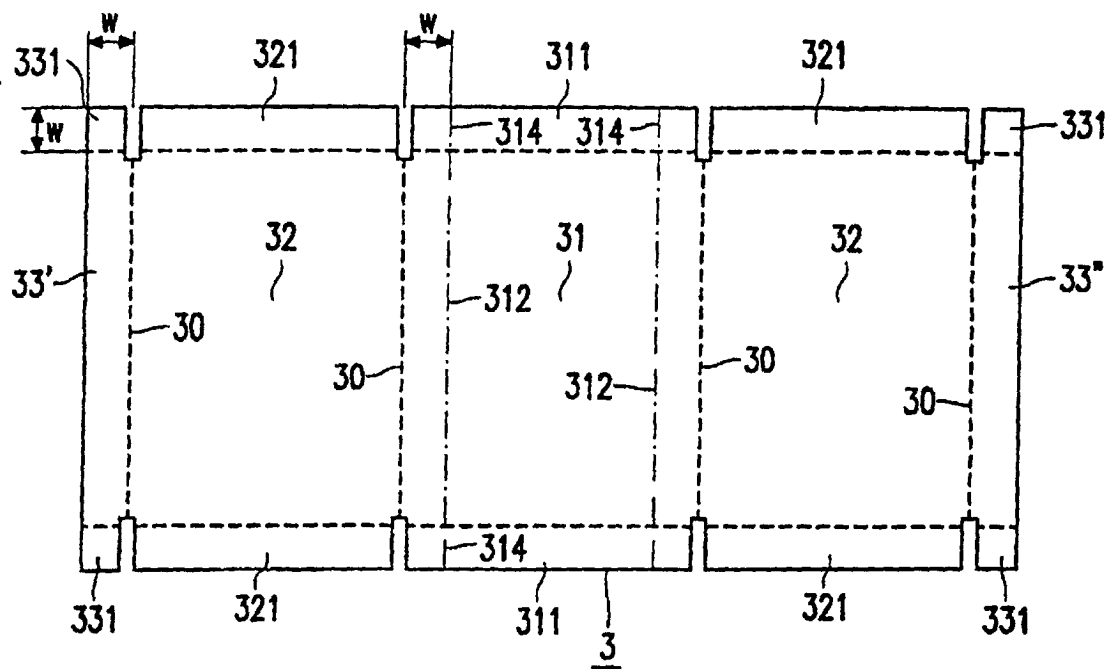


FIG. 4

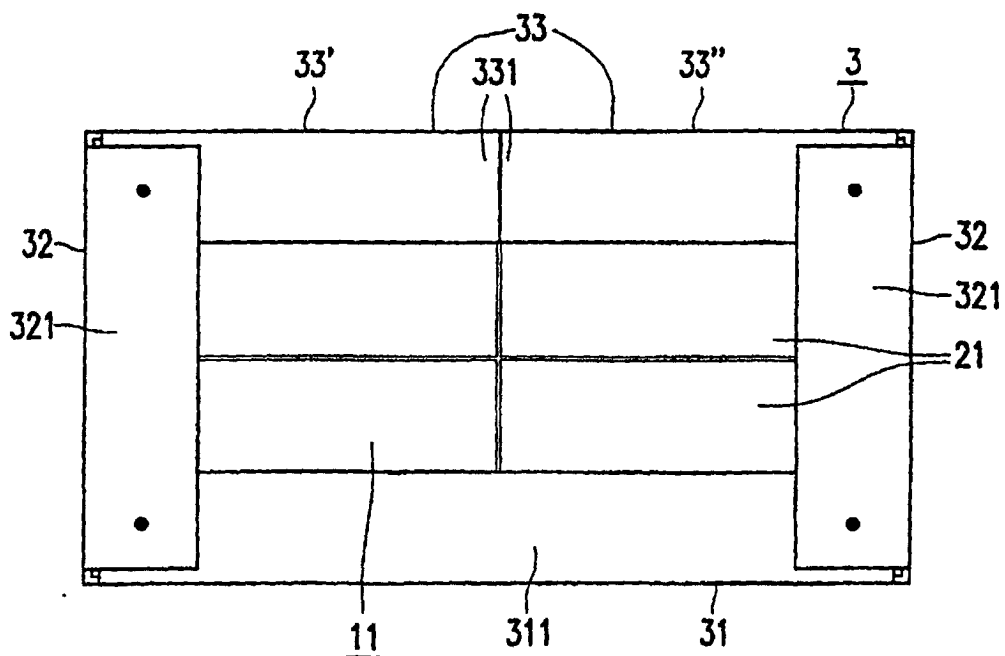


FIG. 5

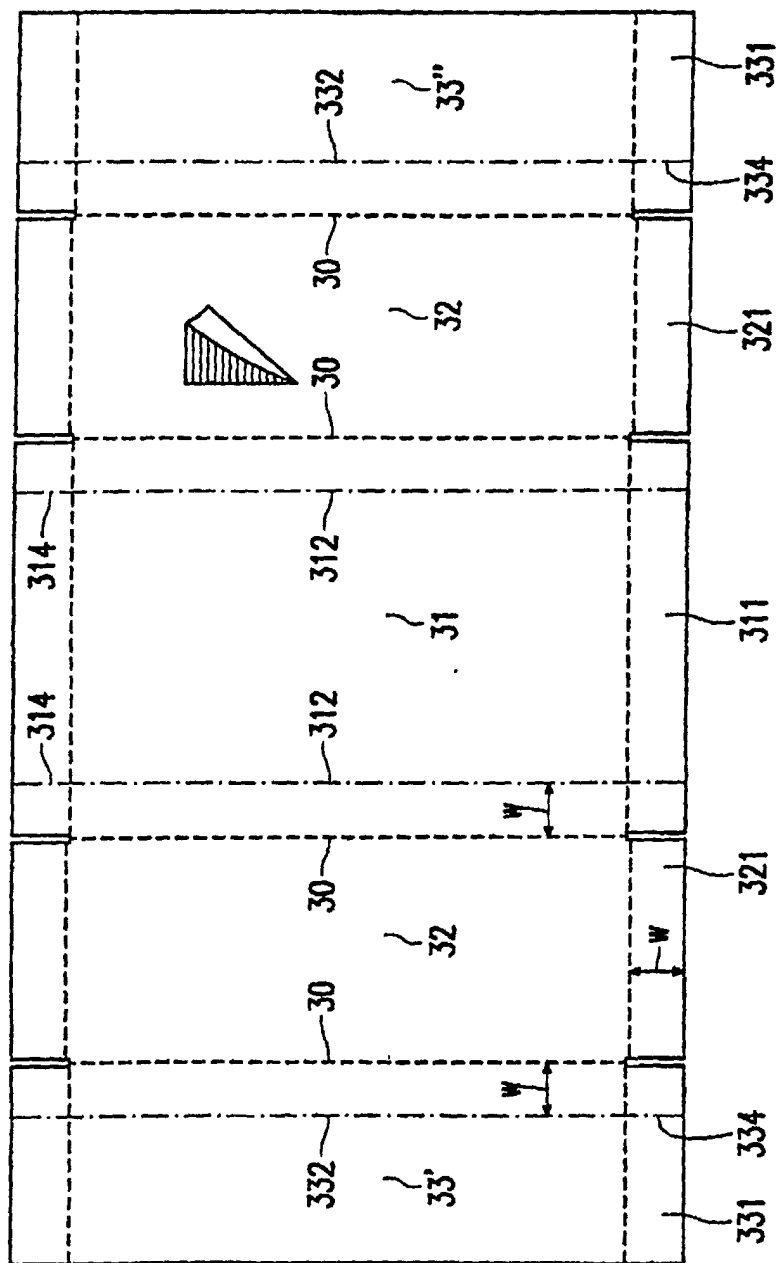


FIG. 6

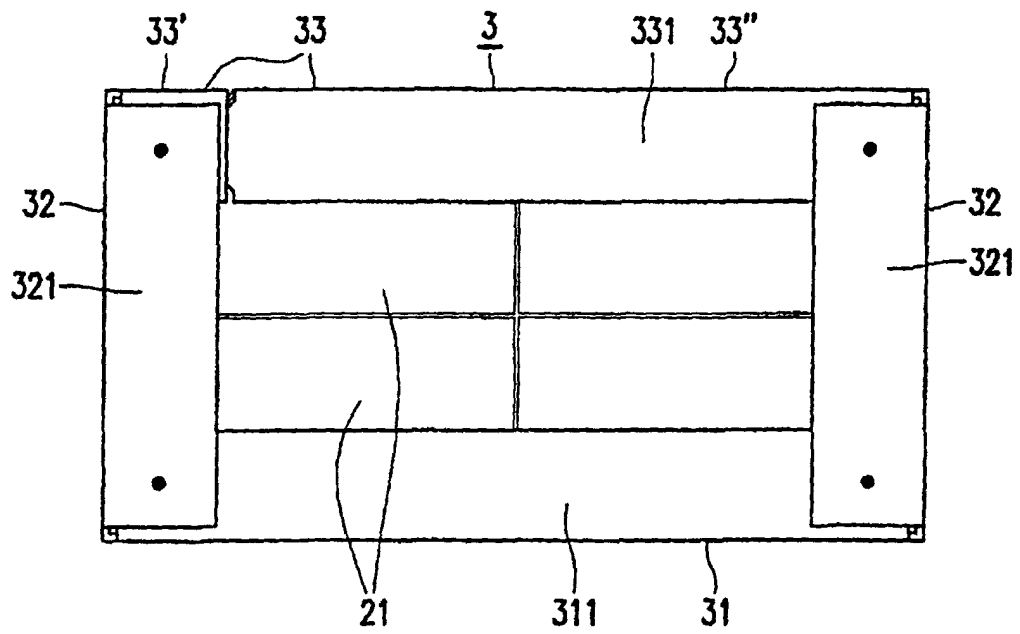


FIG. 7

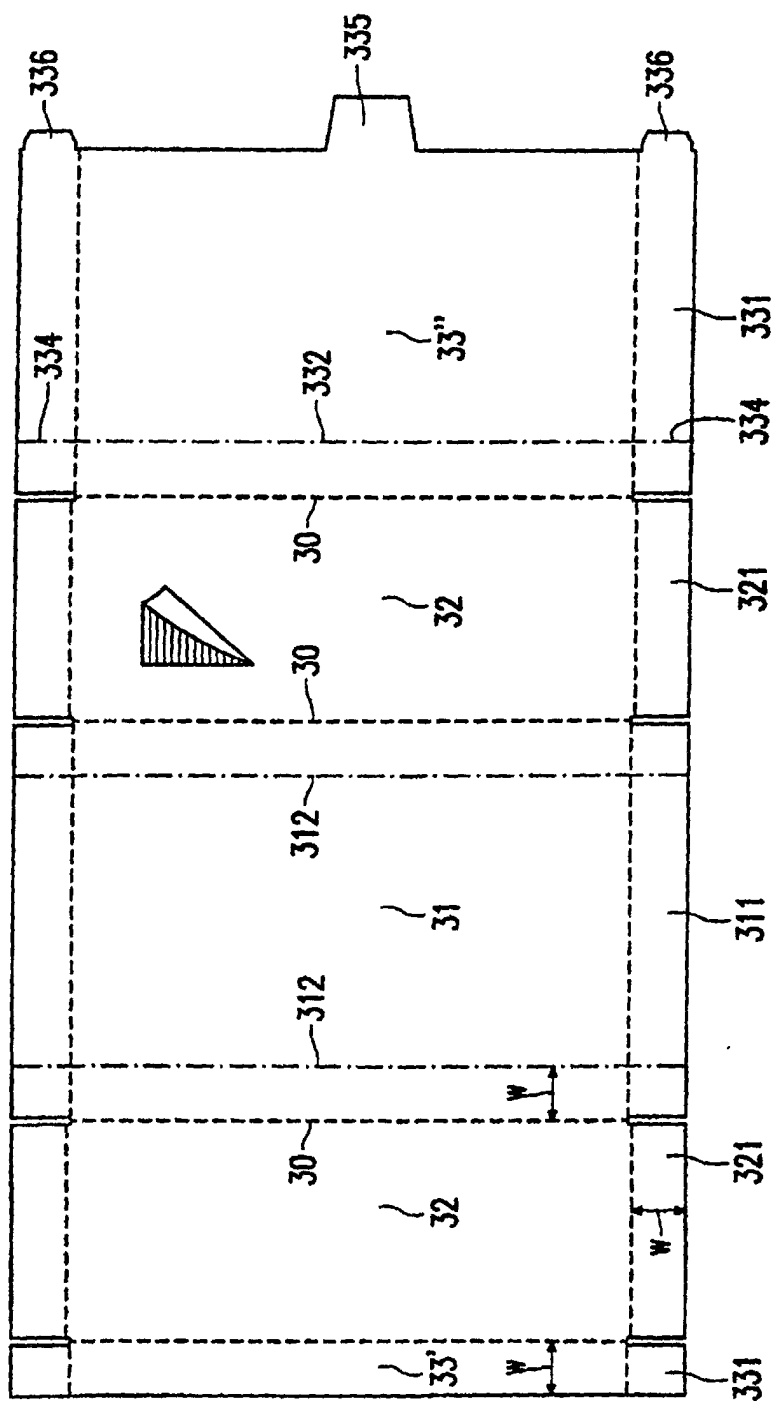


FIG. 8