(19) Europäisches Patentamt
European Patent Office
Office européen des brevets

(11) **EP 3 909 882 B1**

(12) **EUROPEAN PATENT SPECIFICATION**

(45) Date of publication and mention of the grant of the patent:
08.06.2022 Bulletin 2022/23

(21) Application number: **20174122.0**

(22) Date of filing: **12.05.2020**

(51) International Patent Classification (IPC):
B65D 5/66 *(2006.01)* ***B65D 85/10*** *(2006.01)*

(52) Cooperative Patent Classification (CPC):
B65D 85/1045; B65D 5/662; B65D 5/6679; B65D 5/6691; B65D 85/1081

(54) INNER FRAME FOR A CIGARETTE PACK

INNENRAHMEN FÜR ZIGARETTENSCHACHTEL

CADRE INTÉRIEUR POUR PAQUET DE CIGARETTES

(84) Designated Contracting States:
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

(43) Date of publication of application:
17.11.2021 Bulletin 2021/46

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Description

1. Technical field

[0001] The invention relates to an inner frame for a cigarette pack. The inner frame is arranged within the outer housing of the cigarette pack for providing additional stability and protection of the cigarettes.

2. Prior art

[0002] Fragile goods, like for instance cigarettes, are usually packaged and brought into market in small containers in order to protect the goods during transport. Such containers can be made of renewable raw material like paperboard and often comprise a plurality of components. Usually, a softer, odorless and unflavored inner liner directly stores the consumer goods, while a harder box-like outer housing forms the container and protects the goods against environmental conditions and impacts from the outside. In some cases, the outer housing comprises a hinged three-dimensional lid for closing and opening of the container. The outer housing is additionally is wrapped in a transparent plastic foil for further protection and as integrity seal. The document WO 2018/134593 A1 shows such a cigarette pack of the "hard pack" type.

[0003] At such hard pack containers in-between the outer housing and the inner liner usually an inner frame is arranged that holds the lid in the closed position, together with the lid seals the container in the closed position and provides additional stability to the container. This inner frame is usually also of card board or paper board material.

[0004] Such containers are designed to hold a certain number of cigarettes. Cigarettes are fragile products such that they should be held securely within the package without much play. Thus, the package is designed that during transport the cigarettes cannot move within the container.

[0005] Particularly designed inner frames for cigarette packs are proposes if the number of cigarettes within a cigarette pack changes. For example, the prior art document WO 2017 071 957 A1 shows a collar of a rigid cigarette pack. The collar is folded such that it forms two partition walls which divide the interior of the cigarette pack into three chambers. This provides two empty chambers at the sides of the pack and a central chamber in which cigarettes are contained. A similar lid container for cigarettes is known from the WO 2016 083 608 A1. Another hinged lid cigarette pack with an inner frame for limiting the space within the pack is known from the EP 3 107 831 B1.

[0006] In some cases, the cigarettes, however, have undergone a small dimensional change but the number of cigarettes in the pack are maintained. Such dimensional change may specifically mean a reduction of the cigarette diameter which results in a slight reduction of the total width and depth of the cigarette bundle. Such small change in diameter of the cigarette results in a need for a totally newly dimensioned container, what may result in extremely high costs.

[0007] The main objective of the present invention is to provide a cigarette pack which complies with a small dimensional change of the diameter of the cigarettes. The objective of the invention does not refer to a reduction in cigarette length. The need for a totally new dimensioned cigarette container should be avoided.

[0008] Another objective of the present invention is also to propose an improved packaging construction, in particular for packaging of an overall cuboid shape having round or beveled corners, whereby the resistance of the packaging to compression at the corners and sides is improved.

3. Summary of the invention

[0009] The above-mentioned problem is solved by an inner frame for a cigarette pack according to claim 1.

[0010] The above-mentioned problems are particularly solved by an inner frame for a cigarette pack, comprising a front panel; a first and a second side panel, wherein the side panels are directly attached to front panel side edges via bending lines; and a first compensating panel directly attached to a side edge of the first side panel via a first folding line, wherein the first compensating panel is folded by 180° with respect to the first side panel around the first folding line, and an upper edge of the first compensating panel is lower than an upper edge of the first side panel.

[0011] Since the first compensating panel is folded by 180° with respect to the first side panel around the first folding line the inner surface of the first compensating panel contacts the outer surface of the first side panel. This doubles the thickness of frame in the area of the side panel. Such increase in thickness of the frame reduces the free space within the cigarette pack and compensates for any small reduction of the cigarette's diameters. Thus, also cigarettes with a small diameter reduction are securely held within the inner frame, that is arranged inside the outer housing or box of the conventional cigarette pack. The inner frame, with the compensating panels allows to maintain the dimensions of the outer housing of the cigarette pack, what significantly reduces the costs compared to a totally newly dimensioned cigarette pack. Further, it allows to maintain the packaging setup used previously and reduces the risk of any production failures or cosmetic failures of the cigarette pack arising from the diameter change of the cigarettes. Thus, a general U-shaped cross-section of the inner frame is obtained after folding, which can be handled and introduced into the outer housing by a conventional cigarette packaging line like an inner frame without compensating panels. This reduces the investment for packaging machines and the effort for re-adjustment the same.

[0012] Preferably, the inner frame further comprises a second compensating panel directly attached to a side edge of the second side panel via a second folding line, wherein the first compensating panel is folded by 180° with respect to the first side panel around the first folding line and an upper edge of the second compensating panel is lower than an upper edge of the second side panel. The second compensating panel further adjusts the free space for the cigarette bundle and serves for a further improvement of the stability of the cigarette pack. This guarantees that the cigarette bundle is held preferably without play within the inner frame and the outer housing of the cigarette pack.

[0013] Preferably, the upper edge of the first compensating panel is arranged lower than an upper edge of a first side wall of a lower box like portion of an outer housing of the cigarette box and/or the upper edge of the second compensating panel is arranged lower than an upper edge of a second side wall of an outer housing of the cigarette box. Therefore, the first and/or the second compensating panel is not visible to the user of the cigarette pack, which improves the appearance of the cigarette pack.

[0014] Preferably, after folding the second compensating panel the inner surface of the second compensating panel contacts the outer surface of the first side panel. Thus, likewise a general U-shaped cross-section of the inner frame is obtained after folding, which can be handled and introduced by a conventional cigarette packaging line like an inner frame without compensating panels. This reduces the investment for packaging machines and the effort for re-adjustment the same.

[0015] Preferably, the inner surface of the first compensating panel is glued to the outer surface of the first side panel and/or wherein the inner surface of the second compensating panel is glued to the outer surface of the second side panel. This gluing of the compensating panels to the respective side panel ensures a perfect handling of the frame within a conventional cigarette packaging machine and further increases the stability of the overall cigarette pack.

[0016] Preferably, the inner frame is arranged such that the first compensating panel and the second compensating panel is in direct laminar contact with an inner surface of a side panel of an outer housing of the cigarette pack.

[0017] Preferably, the side panels are folded with respect to the front panel by 90° around the respective bending lines.

[0018] Preferably, the bending lines and the first and second folding lines are parallel to each other and extend in vertical direction of the cigarette pack.

[0019] Preferably, a lower edge of the front panel is arranged on the same vertical height than a lower edge of the first compensating panel and/or is arranged on the same vertical height than a lower edge of the second compensating panel. Thus, the compensating panels and the front panel lower edge can touch the inner surface of the bottom of the outer housing. This enables a perfect fit of the inner frame within the outer housing. Preferably, the vertical heights of the lower edges of the front panel, the first compensating panel and/or the second compensating panel are at the bottom level of a cigarette pack. Thus, the compensating panels and the front panel lower edge touch the inner surface of the bottom of the outer housing.

[0020] Preferably, the lower edges of the first and second side panels are arranged on a higher vertical height than a lower edge of the first compensating panel and/or are arranged on a higher vertical height than a lower edge of the second compensating panel. This enables cutting a blank for the inner frame from a cardboard without material loss.

[0021] Preferably, the first folding line and/or the second folding line is/are a perforation line or a creasing line. This allows an exact and easy folding of the compensation panels with respect to the side panels.

[0022] The above mentioned problem is also solved by a cigarette pack comprising an outer housing and an inner frame according to one of the claims 1 to 11.

4. Short description of the drawings

[0023] In the following, preferred embodiments of the invention are disclosed by reference to the accompanying figures, in which shows:

Fig. 1: a three-dimensional view of a preferred embodiment of a cigarette pack with an inserted preferred embodiment of an inner frame;

Fig. 2 a planar view of a preferred embodiment of a non-folded blank of an inner frame; and

Fig. 3: a top view of a preferred embodiment of an inner frame folded from a blank according to Fig. 2.

5. Description of preferred embodiments

[0024] In the following preferred embodiments of the invention are described with respect to the figures.

[0025] Fig. 1 shows a three-dimensional view of an exemplary cigarette pack 100 of the hard pack type, having a cuboid shape. The packaging 100 in Fig. 1 corresponds to a standard crush-proof box of rectangular cross-section with square corners for the ease of representation but it may be likewise with round corners or beveled corners. The cigarette pack 100 comprises an outer housing 110 and an inner frame 1 both out of folded and glued thin cardboard or stiff paper. The inner space 118 holds a bundle of cigarettes (not shown) usually wrapped in an inner liner out of foil material or metallized paper.

[0026] The outer housing 110 comprises a lower box-like portion 120 with a front panel, two side panels 122, a back panel and a bottom panel. An openable three-dimensional lid 114 is attached to the box-like portion 120 via a living hinge 116. Fig. 1 shows the cigarette pack 100 with opened lid 114.

[0027] The inner frame 1 is inserted into the box-like portion 120 of the outer housing 110 for stiffening the box-like portion 120 and for holding the lid 114 of the cigarette pack 100 in a closed position by material friction between the lid inner surfaces and inner frame tabs 44, 45. The inner frame 1 tightly fits into the box-like portion 120 such that the outer surfaces of the inner frame 1 are in direct laminar contact. Further, the inner frame 1 is preferably glued to the box-like portion 120, at least to an inner surface of a front panel thereof.

[0028] The inner frame 1 comprises a front panel 10, a first 20 and a second side panel 30. The inner frame also comprises a first 50 and a second compensating panel 60 which are invisible from the outside of the cigarette pack 1. Invisible edges of the inner frame 1 are shown in Fig. 1 by dashed lines.

[0029] Fig. 2 shows a non -folded blank for an inner frame 1 according to an embodiment of the invention for use with a round corners packaging.

[0030] The front panel 1 has a lower edge 13 that is arranged in the final cigarette pack at the vertical height V of the inner bottom level (see also Fig. 1) of the housing 110. The front panel 1 further has a cutout 11 at the top edge that allows the user to better grasp the cigarettes within the cigarette pack 100.

[0031] The first side panel 20 - in Fig. 1 the left side panel - is directly attached to the side edge 12 of the front panel 10 via a zone with bending lines 40, configured to match corresponding bending lines at corners of both the housing 110 and lid 114 of the packaging. The zone with bending lines 40 enables that the front panel 10 passes into the first side panel 20 via a rounded corner shown in Fig. 3. The first side panel 20 is bent with respect to the front panel 10 by, in total, 90° around the bending lines 40. The bending around the bending lines 40 is done clockwise in the top view of Fig. 2. The zone of bending lines 40 could also be replaced by one bending or folding line to provide a corner as shown in Fig. 1. Further, the lower edge 23 of the first side panel 20 is arranged on a higher vertical height than the lower edge 13 of the front panel 10. The upper edge 21 of the first side panel 20 is arranged on the same vertical height than the upper edge 15 of the front panel 10.

[0032] The second side panel 30 - in Fig. 1 the right side panel - is directly attached to the opposite side edge 14 of the front panel 10 via a zone with bending lines 42. The zone with bending lines 42 enables that the front panel 10 passes into the second side panel 30 via a rounded corner shown in Fig. 3. The second side panel 30 is bent with respect to the front panel by, in total, 90° around the bending lines 42. This bending around the bending lines 42 is done counter-clockwise in the top view of Fig. 3. The zone of bending lines 42 are configured to match corresponding bending lines at corners of both the housing 110 and lid 114 of the packaging but could also be replaced by one bending or folding line to provide a corner as shown in Fig. 1. Further, the lower edge 33 of the second side panel 30 is arranged on a higher vertical height V than the lower edge 13 of the front panel 10. The upper edge 31 of the second side panel 30 is arranged on the same vertical height V than the upper edge 15 of the front panel 10.

[0033] The first compensating panel 50 - in Fig. 1 the left side compensating panel - is directly attached to a side edge 22 of the first side panel 20 via a first folding line 52. The first compensating panel 50 is folded by 180° with respect to the first side panel 20 around the first folding line 52, as shown in Fig. 3. This folding around the first folding line 52 is preferably done counter-clockwise in the top view of Fig. 3. Thus, the inner surface 54 of the first compensating panel 50 contacts the outer surface 24 of the first side panel 20. In a preferred embodiment, the inner surface 54 of the first compensating panel 50 is glued to the outer surface 24 of the first side panel 20. This gluing increases the stability of the inner frame 1 in use and during manufacturing.

[0034] The second compensating panel 60 - in Fig. 1 the right side panel - is directly attached to a side edge 32 of the second side panel 30 via a first folding line 52. The second compensating panel 60 is folded by 180° with respect to the second side panel 20 around the second folding line 62, as shown in Fig. 3. This folding around the second folding line 62 is preferably done clockwise in the top view of Fig. 3. Thus, the inner surface 64 of the second compensating panel 60 contacts the outer surface 34 of the second side panel 30. In a preferred embodiment the inner surface 64 of the second compensating panel 60 is glued to the outer surface 34 of the second side panel 30. Like for the first compensating panel 50 this gluing also increases the stability of the inner frame 1 in use and during manufacturing.

[0035] The compensating panels 50, 60, due to their material thickness, allow an adjustment of the space 118 within the cigarette box 100 used for the bundle of cigarettes (not shown). Depending on the diameter of the cigarettes used either one of the first and second compensating panels 50, 60 will be used, or both, the first and second compensating panels 50, 60.

[0036] As shown in Fig. 1 and 2 the top edges 51, 61 of the first and second compensating panels 50, 60 are at a vertical height V that is lower than the upper edges 124 of the side walls 122 of the box-like portion 120. Thus. the first and second compensating panels 50, 60 are not visible to the user.

[0037] Further, the top edges 21, 31 of the first and second side panels 20, 30 are at a vertical height V higher than top edges 51, 61 of the first and second compensating panels 50, 60. Thus the side panels 20, 30 are visible to the user, when the lid 114 is opened but the first and second compensating panels 50, 60 are not. The side panels 20, 30 and the front panel 10 tighten the cigarette pack 100, when the lid 114 is closed in a similar fashion as with a standard inner frame, without affecting any of the visual appearance nor the technical functionality thereof as the compensating panels 50, 60 do not overlie the side panels 20, 30 at the top end and thus do

not add any additional thickness thereto.

[0038] For enabling the user to better retrieve the cigarettes from the cigarette pack 100, the front panel 10 of the inner frame comprises a recess 11.

[0039] Further, the lower edges 53, 63 of the first and second compensating panels 50, 60 are arranged at the vertical height V of the lower edge 13 of the front panel 10 and the inner bottom level BL of the outer housing 110. This allows a perfect alignment of the inner frame 1 within the interior of the box-like portion 120 and a good improvement of the stiffness of the cigarette pack 100 at the lower edges.

List of reference signs:

[0040]

1	inner frame
10	front panel
12, 14	side edges of front panel
13	lower edge of front panel
20	first side panel
21	upper edge of first side panel
22	side edge of first side panel
23	lower edge of first side panel
24	outer surface
30	second side panel
31	upper edge of second side panel
32	side edge of second side panel
33	lower edge of second side panel
34	outer surface
40, 42	bending lines
44, 45	tabs
50	first compensating panel
51	upper edge of first compensating panel
52	first folding line
53	lower edge of first compensating panel
54	inner surface
60	second compensating panel
61	upper edge of second compensating panel
62	second folding line
63	lower edge of second compensating panel
64	inner surface
100	cigarette pack
110	outer housing
120	box-like portion
122	first side wall of box-like portion
124	upper edge of first side wall
V	vertical direction/vertical height
BL	bottom level of cigarette pack

Claims

1. Inner frame (1 for a cigarette pack (100), comprising:

a. a front panel (10);
b. a first (20) and a second side panel (30), wherein the side panels (20, 30) are directly attached to front panel side edges (12, 14) via bending lines (40, 42); and
c. a first compensating panel (50) directly attached to a side edge (22) of the first side panel (20) via a first folding line (52), wherein the first compensating panel (50) is folded by 180° with respect to the first side panel (20) around the first folding line (52), and **characterised by**
d. an upper edge (51) of the first compensating panel (50) is lower than an upper edge (21) of the first side panel (20).

2. Inner frame according to claim 1, further comprising a second compensating panel (60) attached to a side edge (32) of the second side panel (30) via a second folding line (62),wherein the second compensating panel (60) is folded by 180° with respect to the second side panel (30) around the second folding line (62) and an upper edge (61) of the second compensating panel (60) is lower than an upper edge (31) of the second side panel.

3. Inner frame according to one of the claims 1 or 2, wherein the upper edge (51) of the first compensating panel (50) is arranged lower than an upper edge (124) of a first side wall (122) of a lower box like portion (120) of an outer housing (110) of the cigarette box (100) and/or the upper edge (61) of the second compensating panel (60) is arranged lower than an upper edge of a second side wall (122) of an outer housing (110) of the cigarette box (100).

4. Inner frame according to one of the claims 1 to 3, wherein the inner surface (54) of the first compensating panel (50) is glued to the outer surface (24) of the first side panel (20) and/or wherein the inner surface (64) of the second compensating panel (60) is glued to the outer surface (34) of the second side panel (30).

5. Inner frame according to one of the claims 1 to 4, wherein the inner frame (1 is arranged such that the first compensating panel (50) and the second compensating panel (60) is in direct laminar contact with an inner surface of a side panel (122) of an outer housing (110) of the cigarette pack (100).

6. Inner frame according to one of the claims 1 to 5, wherein the side panels (20, 30) are bent with respect to the front panel (10) by 90° around the respective bending lines (40, 42).

7. Inner frame according to claim 6, wherein the bending lines (40, 42) and the first (52) and second folding lines (62) are parallel to each other and extend in vertical direction (V) of the cigarette pack.

8. Inner frame according to one of the claims 1 to 7, wherein a lower edge (13) of the front panel (10) is arranged on the same vertical height than a lower edge (53) of the first compensating panel (50) and/or is arranged on the same vertical height than a lower edge (63) of the second compensating panel (60).

9. Inner frame according to claim 8, wherein the vertical heights of the lower edges (13, 53, 63) of the front panel (10), the first compensating panel (50) and/or the second compensating panel (60) are at the bottom level (BL) of a cigarette pack (100).

10. Inner frame according to one of the claims 1 to 9, wherein the lower edges (23, 33) of the first (20) and second side panels (30) are arranged on a higher vertical height than a lower edge (53) of the first compensating panel (50) and/or are arranged on a higher vertical height than a lower edge (63) of the second compensating panel (60).

11. Inner frame according to one of the claims 1 to 10, wherein the first folding line (52) and/or the second folding line (62) is/are a perforation line or a creasing line.

12. Cigarette pack (100) comprising an outer housing (110) and an inner frame (1) according to one of the claims 1 to 11.

Patentansprüche

1. Innenrahmen (1) für eine Zigarettenpackung (100), umfassend:

a. eine Frontplatte (10);
b. eine erste (20) und eine zweite Seitenplatte (30), wobei die Seitenplatten (20, 30) über Biegelinien (40, 42) direkt an Frontplattenseitenkanten (12, 14) befestigt sind; und
c. eine erste Ausgleichsplatte (50), die über eine erste Faltlinie (52) direkt an einer Seitenkante (22) der ersten Seitenplatte (20) befestigt ist, wobei die erste Ausgleichsplatte (50) um 180° in Bezug auf die erste Seitenplatte (20) um die erste Faltlinie (52) gefaltet ist, und **gekennzeichnet durch**
d. eine obere Kante (51) der ersten Ausgleichsplatte (50) niedriger als eine obere Kante (21) der ersten Seitenplatte (20) ist.

2. Innenrahmen nach Anspruch 1, ferner umfassend eine zweite Ausgleichsplatte (60), die über eine zweite Faltlinie (62) an einer Seitenkante (32) der zweiten Seitenplatte (30) befestigt ist, wobei die zweite Ausgleichsplatte (60) um 180° in Bezug auf die zweite Seitenplatte (30) um die zweite Faltlinie (62) gefaltet ist und eine obere Kante (61) der zweiten Ausgleichsplatte (60) niedriger als eine obere Kante (31) der zweiten Seitenplatte ist.

3. Innenrahmen nach einem der Ansprüche 1 oder 2, wobei die obere Kante (51) der ersten Ausgleichsplatte (50) niedriger als eine obere Kante (124) einer ersten Seitenwand (122) eines unteren schachtelartigen Abschnitts (120) eines Außengehäuses (110) der Zigarettenschachtel (100) angeordnet ist und/oder die obere Kante (61) der zweiten Ausgleichsplatte (60) niedriger als eine obere Kante einer zweiten Seitenwand (122) eines Außengehäuses (110) der Zigarettenschachtel (100) angeordnet ist.

4. Innenrahmen nach einem der Ansprüche 1 bis 3, wobei die Innenfläche (54) der ersten Ausgleichsplatte (50) an die Außenfläche (24) der ersten Seitenplatte (20) geklebt ist und/oder wobei die Innenfläche (64) der zweiten Ausgleichsplatte (60) an die Außenfläche (34) der zweiten Seitenplatte (30) geklebt ist.

5. Innenrahmen nach einem der Ansprüche 1 bis 4, wobei der Innenrahmen (1) so angeordnet ist, dass die erste Ausgleichsplatte (50) und die zweite Ausgleichsplatte (60) in direktem laminaren Kontakt mit einer Innenfläche einer Seitenplatte (122) eines Außengehäuses (110) der Zigarettenpackung (100) stehen.

6. Innenrahmen nach einem der Ansprüche 1 bis 5, wobei die Seitenplatten (20, 30) in Bezug auf die Frontplatte (10) um 90° um die jeweiligen Biegelinien (40, 42) gebogen sind.

7. Innenrahmen nach Anspruch 6, wobei die Biegelinien (40, 42) und die ersten (52) und zweiten Faltlinien (62) parallel zueinander sind und sich in vertikaler Richtung (V) der Zigarettenpackung (100) erstrecken.

8. Innenrahmen nach einem der Ansprüche 1 bis 7, wobei eine untere Kante (13) der Frontplatte (10) auf der gleichen vertikalen Höhe wie eine untere Kante (53) der ersten Ausgleichsplatte (50) angeordnet ist und/oder auf der gleichen vertikalen Höhe wie eine untere Kante (63) der zweiten Ausgleichsplatte (60) angeordnet ist.

9. Innenrahmen nach Anspruch 8, wobei die vertikalen Höhen der unteren Kanten (13, 53, 63) der Frontplatte (10), der ersten Ausgleichsplatte (50) und/oder der zweiten Ausgleichsplatte (60) auf dem unteren Niveau (BL) einer Zigarettenpackung (100) liegen.

10. Innenrahmen nach einem der Ansprüche 1 bis 9, wobei die unteren Kanten (23, 33) der ersten (20) und zweiten Seitenplatten (30) auf einer höheren vertikalen Höhe als eine untere Kante (53) der ersten Ausgleichsplatte (50) angeordnet sind und/oder auf einer höheren vertikalen Höhe als eine untere Kante (63) der zweiten Ausgleichsplatte (60) angeordnet sind.

11. Innenrahmen nach einem der Ansprüche 1 bis 10, wobei die erste Faltlinie (52) und/oder die zweite Faltlinie (62) eine Perforationslinie oder eine Rilllinie ist/sind.

12. Zigarettenpackung (100), umfassend ein Außengehäuse (110) und einen Innenrahmen (1) nach einem der Ansprüche 1 bis 11.

Revendications

1. Emboîtage interne (1) pour paquet de cigarettes (100), comprenant :

a. un pan avant (10) ;
b. un premier (20) et un second (30) pan latéral, les pans latéraux (20, 30) étant directement solidarisés à des bords latéraux de pan avant (12, 14) par l'intermédiaire de lignes de cintrage (40, 42) ; et
c. un premier pan compensateur (50) directement solidarisé à un bord latéral (22) du premier pan latéral (20) par l'intermédiaire d'une première ligne de pliage (52), le premier pan compensateur (50) étant plié de 180° par rapport au premier pan latéral (20) autour de la première ligne de pliage (52), et **caractérisé par**
d. un bord supérieur (51) du premier pan compensateur (50) qui est plus bas qu'un bord supérieur (21) du premier pan latéral (20).

2. Emboîtage interne selon la revendication 1, comprenant en outre un second pan compensateur (60) solidarisé à un bord latéral (32) du second pan latéral (30) via une seconde ligne de pliage (62), le second pan compensateur (60) étant plié de 180° par rapport au second pan latéral (30) autour de la seconde ligne de pliage (62) et un bord supérieur (61) du second pan compensateur (60) étant plus bas qu'un bord supérieur (31) du second pan latéral.

3. Emboîtage interne selon l'une des revendications 1 ou 2, dans lequel le bord supérieur (51) du premier pan compensateur (50) est disposé plus bas qu'un bord supérieur (124) d'une première paroi latérale (122) d'une partie inférieure semblable à un paquet (120) d'un étui extérieur (110) du paquet de cigarettes (100) et/ou le bord supérieur (61) du second pan compensateur (60) est situé plus bas qu'un bord supérieur d'une seconde paroi latérale (122) d'un étui extérieur (110) du paquet de cigarettes (100).

4. Emboîtage interne selon l'une des revendications 1 à 3, dans lequel la surface interne (54) du premier pan compensateur (50) est collée à la surface externe (24) du premier pan latéral (20), et/ou dans lequel la surface interne (64) du second pan compensateur (60) est collée à la surface externe (34) du second pan latéral (30).

5. Emboîtage interne selon l'une des revendications 1 à 4, dans lequel l'emboîtage interne (1) est agencé de telle sorte que le premier pan compensateur (50) et le second pan compensateur (60) soient en contact laminaire direct avec une surface interne d'un pan latéral (122) d'un étui extérieur (110) du paquet de cigarettes (100).

6. Emboîtage interne selon l'une des revendications 1 à 5, dans lequel les pans latéraux (20, 30) sont cintrés par rapport au pan avant (10) de 90° autour des lignes de cintrage respectives (40, 42).

7. Emboîtage interne selon la revendication 6, dans lequel les lignes de cintrage (40, 42) et les première (52) et seconde (62) lignes de pliage sont parallèles entre elles et s'étendent en direction verticale (V) du paquet de cigarettes.

8. Emboîtage interne selon l'une des revendications 1 à 7, dans lequel un bord inférieur (13) du pan avant (10) est situé à la même hauteur verticale qu'un bord inférieur (53) du premier pan compensateur (50) et/ou est situé à la même hauteur verticale qu'un bord inférieur (63) du second pan compensateur (60).

9. Emboîtage interne selon la revendication 8, dans lequel les hauteurs verticales des bords inférieurs (15, 53, 63) du pan avant, du premier pan compensateur (50) et/ou du second pan compensateur (60) sont au niveau de fond (BL) d'un paquet de cigarettes (100).

10. Emboîtage interne selon l'une des revendications 1 à 9, dans lequel les bords inférieurs (23, 33) du premier (20) et du second (30) pan latéral sont situés à une hauteur verticale supérieure à celle d'un bord inférieur (53) du premier pan compensateur (50) et/ou sont situés à une hauteur verticale supérieure à celle d'un bord inférieur (63) du second pan compensateur (60).

11. Emboîtage interne selon l'une des revendications 1 à 10, dans lequel la première ligne de pliage (52) et/ou la seconde ligne de pliage (62) sont une ligne

de perforations ou une ligne rainée.

12. Paquet de cigarettes (100) comprenant un étui extérieur (110) et un emboîtage interne (1) selon l'une des revendications 1 à 11.

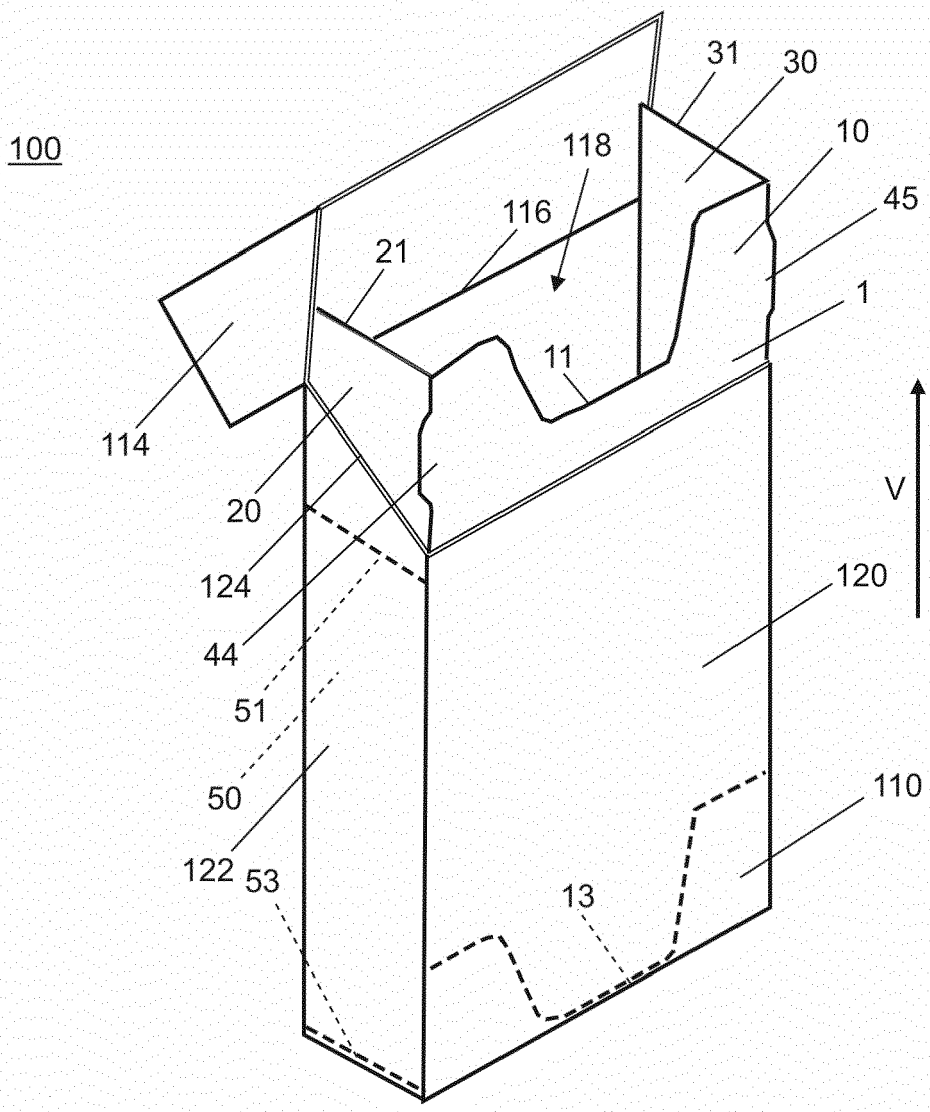
100
31
30
10
118
116
45
21
1
11
114
V
20
124
120
44
51
50
110
122
53
13

Fig. 1

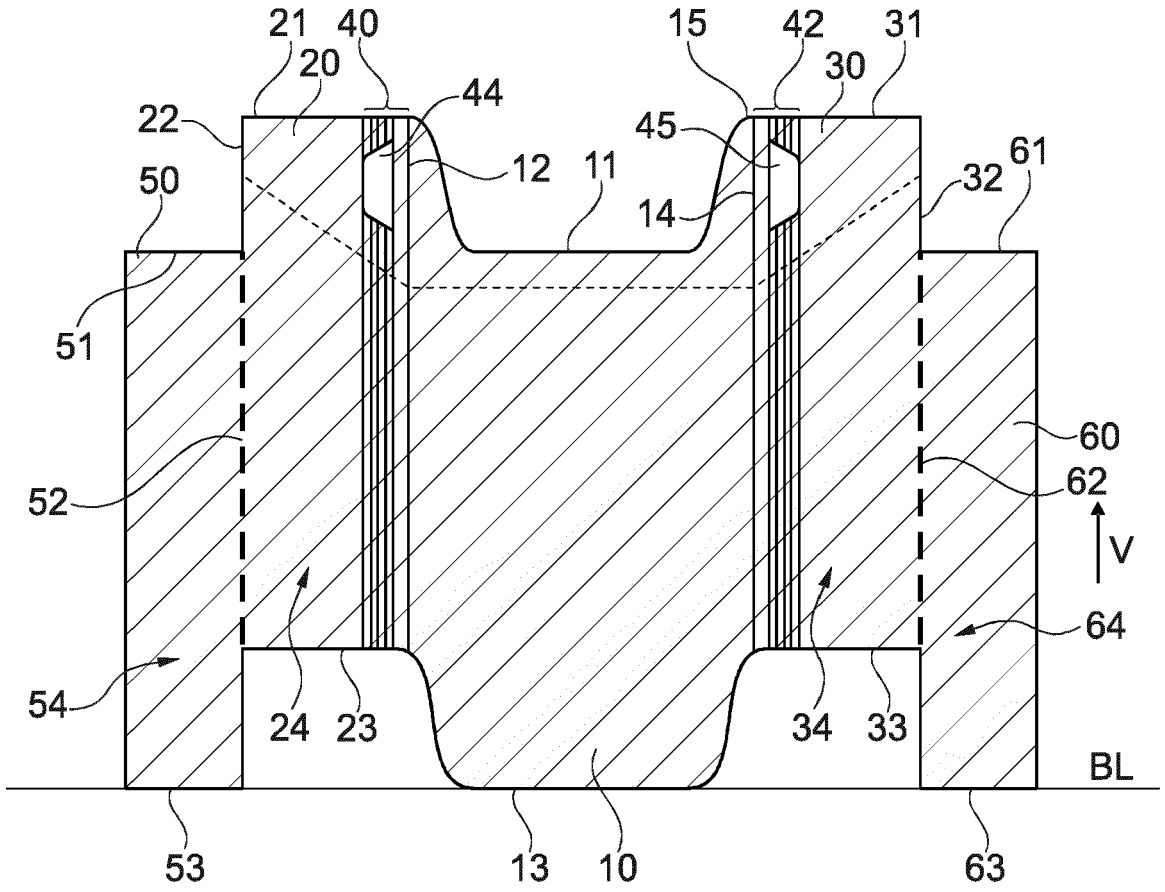
1
21
40
20
44
22
50
12
11
15
42
31
30
45
14
32
61
51
52
60
62
V
64
54
24
23
34
33
BL
53
13
10
63

Fig. 2

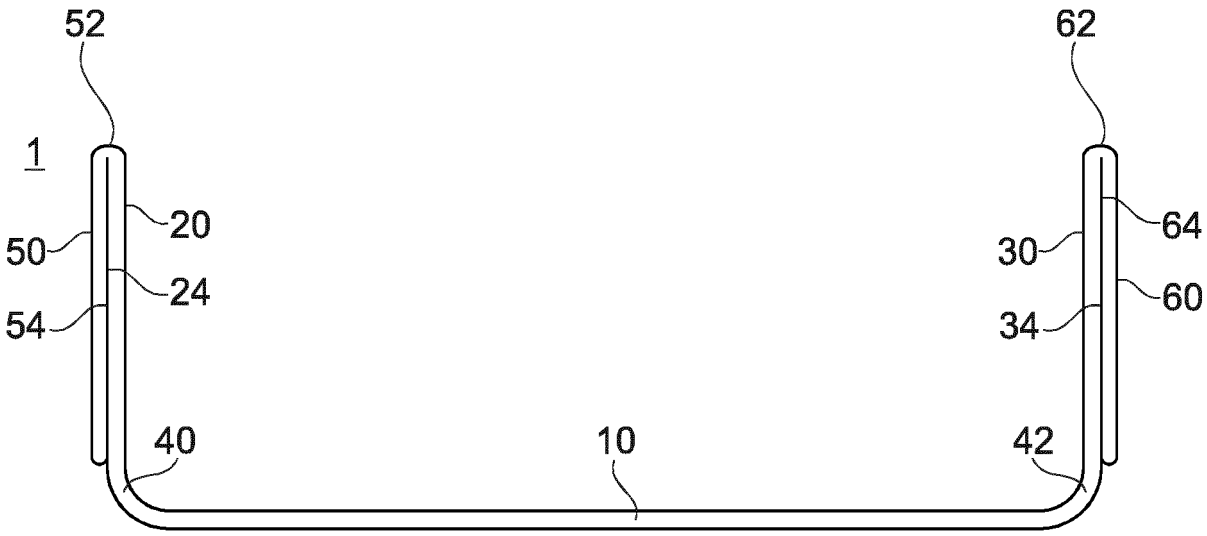

Fig. 3

REFERENCES CITED IN THE DESCRIPTION

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Patent documents cited in the description

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