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(54) **Box blank for parcels**

Zuschnitt eines Behälters für Postgut

Flan pour boîte pour colis postaux

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Description

[0001] The present invention relates to a blank, which is provided with suitable rib or folding seams and cuts forming longitudinal panels and closing or lid elements on the head ends for folding a packaging into a special body for the benefit of sending mainly posters, calendars, drawings and such, called box for parcels, in which the box for parcels is mostly an elongated prismatic body, in which the dimensions of the cross-section and, thus those of the ground plane and the length/height relation of mentioned box for parcels are dependant on the to be packed and/or mailed posters, calendars, drawings and such.

[0002] Blanks for folding all kinds of containers for fruit and objects are known in many different shapes. For sending by post broadsheets for folding boxes are known for parcel-post, which have a rectangular parallellepiped shape. For mailing calendars, posters and such the familiar cardboard tubes with a cylindral cross-section are known. Especially these last tubes cause problems in handling for the postal service, because the franking and the address codes cannot be read automatically in the machines due to rolling away. For this purpose, the postal service attaches the tube with an elastic band on top of a square block with the address and such faced upward, so that it can be read by the machine. This increases the costs for the postal service, which must be paid in extra postage charges. Besides, storage of tubes is rather voluminous which causes problems for the sales outlets like office supply stores, postal agencies and such. Shortly, during use the known existing way of packing calendars, posters and such have a number of disadvantages.

[0003] Further, from research of the patent literature four somewhat similar patent documents are known, being:

- French Patent FR-A-2781 211. This Patent concerns a foldable package to which in short is referred. This patent is the closest prior art to the subject matter of claim 1.
- Dutch patent nr. NL 7306 638, submitted 11-05-1973 by the Corrugated board factory Z. de Zeeuw N.V., Eerbeek, Holland, which concerns a foldable packing in the form of a tube with a polygonal cross-section, meant for mailing all kinds of documents that can be rolled up, such as drawings, cards, calendars and such, in which the means for closing the ends of the packing for each end are formed by a first lid, which forms a whole with the end of one of the panels or longitudinal panels which can be folded and which is flanked by two flaps at two of its free edges, and a second lid, which forms one whole with the end of the other panel and can also be folded and is provided with a flap at at least one of its free edges. The disadvantage of this embodiment is that the mentioned lids with flaps can touch the contents of the carton tube and can and will damage, for example, the posters and calendars, through which in practice, the usefulness of this solution is less suitable.
- French patent document nr. 2703 335 submitted 01-04-1993 from submitter Société Continentale du Carton ondulé Socar, France by inventor DE-HARBE, Gérard. Here, it concerns a packing of a material that is semi-flexurally stiff for packing fluorescent lighting tubes. Here, it concerns an oblong parcel box with a quadrangular cross-section, in which at the middle panel lids for closing are formed provided with flaps, which by opening can be slid inside in two panels to close the box. The lighting tube is stuck with its two connection pins on the ends in a plastic plate with quadrangular cross-section so that these are centred in the packing box, in which the lighting tube stays relatively far away from the inside of the packing and the sticking inside of the flaps no longer plays a role nor can damage the lighting tube. So, also this packing is not suitable for packing posters and calendars, because these are not centered in a much too large cross-section of the box for parcels.
- German Gebrauchsmuster DE 29815 106 UI, submitted 22-08-1998 by submitter/inventor SCHWAB, 90610 Winkelhaid, Germany. Here it also concerns a box for parcels with a quadrangular cross-section with end lids with flaps which enter through grooves in the parcel box, through which again damage can occur to the packed posters or calendars etc. if they are used for this, therefore this solution is also not suitable for perfectly sending posters and such.

[0004] The aim of the present invention is to provide such an improved prismatic holder or box for parcels, of which the above described disadvantages are eliminated and in which the total cost for production and mailing will be decreased.

[0005] For this a blank according to the preamble of claim 1 is characterized in that side panels are hingedly connected to both sides of each end panel adjacent the folding line connecting said end panel to the intermediate longitudinal panel, and further lips are hingedly connected to both sides of each side panel adjacent the folding line connecting said side panel to the corresponding end panel, and two further continuous grooves are formed along each longitudinal folding line, so that the end panels can be folded to close the ends of the packaging body and locked by folding the side panels against the packaging body and inserting the further lips into the further grooves, the material of the blank having sufficient bending strength, the blank being able to be repeatedly folded and unfolded along the folding lines, so that the packaging body can be used several times.

[0006] The advantage is that the aforementioned disadvantages are solved and that the improved box for parcels can be stored at the sales outlets, e.g. office supply stores, postal agencies and such, as a pile of flat blanks, through which storage space can be utilized more

economically. Further, the most important advantage is that through folding the closing flaps the contents of the box for parcels cannot be touched. Furthermore, the improved box for parcels can, due to easy unfolding, be folded again in due course to be used again, etcetera.

[0007] Further, the blank according to the invention is developed in such a way that the mentioned ground plane or cross-section of the prismatic holder or box for parcels is preferably square, in which the preferred dimensions for L1 are approximately 325, 525, 725 and 925 mm and for L2 approximately 90 to 100 mm, in which the mentioned lengths L1 and L2 are obviously adjustable to possible other usages.

[0008] The advantage is that almost every rolled up element can be sent by post in a very economical way and can be reused repeatedly, in which the handling at sorting machines does not require extra work, as with round tubes. With this, reading of the so called bar codes can be done without problems.

[0009] Furthermore, the blank according to the invention is further creatively developed in such a way that on the first longitudinal panel of the mentioned blank two lips are connected by means of rib or folding seams and on the other opposite side plane or longitudinal panel two recesses are applied in order not to impede when folding the blank into a prismatic holder when putting the concerned lips in the matching grooves, in which all mentioned formed lips are cut slantwise at the ends and with the blank near the rib or folding seam form a kind of hook element for closing.

[0010] The advantages are a flexible and very professional blank foldable into a box for parcels, which at the postal handling provides much advantages and thus is advantageous to the client as well as the postal service.

[0011] The preferred construction of the invention will be described by way of example, and with reference to the accompanying drawing.

[0012] In which:

Fig. 1 shows a complete professional elaborated top view of a blank to fold into a prismatic holder or box for parcels according to a preferred embodiment of the invention; and

Fig. 2 a side view in oblique projection of the folded box for parcels of figure 1.

[0013] Figure 1 shows the blank 1 in top view to fold the prismatic holder or box for parcels according to a preferred embodiment of the invention. The cut off edges or limitations are indicated with continuous lines and the folding seams are indicated with dotted lines. Due to the folding seams 2, 3, 4, 5 the concerned blank is foldable into a prismatic tube or box for parcels 6 (figure 2) with a rectangular or quadrangular cross-section. The number of elongated side planes or longitudinal panels 7, 8, 9, 10, 11 is one more than which is needed for a quadrangular cross-section. This is done in order to bring the lips 12, 13 into suitable grooves 14, 15. In order to bring about a good anchoring, onto the lips 12, 13 and 16 up to 23 hook-shaped elements 24 have been applied, in which the mentioned lips fall in a folded state into the grooves 33 up to 40, as indicated in figure 2. The head ends of the improved box for parcels 6 are formed by the planes 25 and 26, which again have side planes 27, 28, 29 and 30 for a good quadrangular tube-shape. Further, in order to form a good box for parcels 6, wherein recesses 31 and 32 have been applied so the lips don't touch the contents of the box.

[0014] Figure 2 shows the blank 1 of figure 1 folded in into the improved box for parcels 6 according to a preferred embodiment of the invention, in which the same parts have the same indication numbers, in which the box for parcels 6 is shown in oblique projection. Further, again grooves 33 up to 40 have been applied for lips 16 up to 23.

[0015] Finally it has to be emphasized, that the above description constitutes a preferred embodiment, but that further variations and modifications are still possible without departing the scope of the appended claims.

Claims

1. Blank provided with suitable folding lines and cuts for forming longitudinal panels and closing elements so as to fold into a packaging body for sending posters, calendars, drawings and such, the packaging body having an elongated prismatic shape and its cross-section and length/height ratio depending on the article to be packed and/or mailed, the packaging body having a length L1 and a polygonal, at least triangular, cross-section with sides of a length L2 and being defined by a series of longitudinal panels (7-11) hingedly connected along longitudinal folding lines (2-5), wherein grooves (14, 15) of a limited length are formed along the line (5) connecting an endmost longitudinal panel (11) to its neighbouring longitudinal panel (10) and lips (12, 13) are formed along the free long edge of the other endmost longitudinal panel (7) and connected thereto through folding lines, so as to form the packaging body by folding along the longitudinal folding lines (2-5) and inserting the lips (12, 13) into the grooves (14, 15), the closing elements consisting of end panels (25, 26) hingedly connected to both ends of an intermediate longitudinal panel (9), **characterized in that**, side panels (27-30) are hingedly connected to both sides of each end panel (25, 26) adjacent the folding line connecting said end panel to the intermediate longitudinal panel, and further lips (16-23) are hingedly connected to both sides of each side panel (27-30) adjacent the folding line connecting said side panel to the corresponding end panel, and two further continuous grooves (33-40) are formed along each longitudinal folding line (2-5), so that the end panels (25, 26) can be folded to close the ends of

the packaging body and locked by folding the side panels (27-30) against the packaging body and inserting the further lips (16-23) into the further grooves (33-40), the material of the blank having sufficient bending strength, the blank being able to be repeatedly folded and unfolded along the folding lines, so that the packaging body can be used several times.

2. Blank as claimed in claim 1, **characterized in that**, the mentioned ground plane or cross-section of the prismatic holder or box for parcels (6) is preferably square, in which the preferred dimensions for L1 are approximately 325, 525, 725 and 925 mm and for L2 approximately 90 to 100 mm, in which the mentioned lengths L1 and L2 are obviously adjustable to possible other usages.

3. Blank as claimed in claims 1 and 2, **characterized in that**, on the first longitudinal panel (7) of the mentioned blank (1) two lips (12, 13) are connected by means of rib or folding lines and on the other opposite side plane or longitudinal panel (11) two recesses (31, 32) are applied in order not to impede when folding of the blank (1) into a prismatic holder (6) when putting the concerned lips in the matching grooves.

4. Blank as claimed in aforementioned claims, **characterized in that**, all mentioned formed lips (12, 13 and 16 up to 23) are cut slantwise at the ends and with the blank near the rib or folding line form a kind of hook element (24) for closing.

5. Blank as claimed in claims 1 - 4, **characterized in that**, the material of the mentioned blank (1) is single- or double-walled corrugated board or a plastic sheet, in which the plastic can be a double-walled polypropylene sheet.

6. Blank as claimed in aforementioned claims **characterized in that**, on the outside of the blank (1) or the box for parcels (6) texts for usage and instructions, colours or company logo's can be applied.

Patentansprüche

1. Zuschnitt, der mit geeigneten Falzlinien und Einschnitten versehen ist, um Längswände und Verschlusselemente zu bilden, um den Zuschnitt zu einem Verpakkungskörper zum Versenden von Postern, Kalendern, Zeichnungen und dergleichen zu falten, wobei der Verpackungskörper eine längliche prismatische Gestalt aufweist und sein Querschnitt und sein Längen-Höhen-Verhältnis von dem zu verpackenden und/oder zu versendenden Gegenstand abhängen, wobei der Verpackungskörper eine Länge L1 und einen polygonalen, mindestens dreieckigen Querschnitt mit Seiten von einer Länge L2 aufweist und durch eine Reihe von Längswänden (7-11) definiert wird, die entlang von Längsfalzlinien (2-5) aneinander angelenkt sind, wobei Nuten (14, 15) von einer begrenzten Länge entlang der Linie (5) ausgebildet sind, die eine am weitesten außen befindliche Längswand (11) mit ihrer benachbarten Längswand (10) verbindet, und Lippen (12, 13) entlang der freien langen Kante der anderen am weitesten außen befindlichen Längswand (7) ausgebildet und mit ihr durch Falzlinien verbunden sind, um den Verpakkungskörper zu bilden, indem eine Faltung entlang der Längsfalzlinien (2-5) vorgenommen wird und die Lippen (12, 13) in die Nuten (14, 15) eingesetzt werden, wobei die Verschlusselemente aus Endwänden (25, 26) bestehen, die an beiden Enden einer Zwischenlängswand (9) angelenkt sind, **dadurch gekennzeichnet, dass** Seitenwände (27-30) an beiden Seiten jeder Endwand (25, 26) neben der Falzlinie angelenkt sind, welche die Endwand mit der Zwischenlängswand verbindet, und des Weiteren Lippen (16-23) an beiden Seiten jeder Seitenwand (27-30) neben der Falzlinie angelenkt sind, welche die Seitenwand mit der entsprechenden Endwand verbindet, und zwei weitere durchgängige Nuten (33-40) entlang jeder Längsfalzlinie (2-5) ausgebildet sind, so dass die Endwände (25, 26) gefaltet werden können, um die Enden des Verpakkungskörpers zu schließen, und arretiert werden können, indem die Seitenwände (27-30) gegen den Verpakkungskörper gefaltet werden und die weiteren Lippen (16-23) in die weiteren Nuten (33-40) eingesetzt werden, wobei das Material des Zuschnitts eine ausreichende Biegefestigkeit aufweist, wobei der Zuschnitt wiederholt entlang den Falzlinien zusammengefaltet und auseinandergefaltet werden kann, so dass der Verpackungskörper mehrere Male verwendet werden kann.

2. Zuschnitt nach Anspruch 1, **dadurch gekennzeichnet, dass** die Grundfläche oder der Querschnitt des prismatischen Paketbehälters oder Paketkartons (6) vorzugsweise quadratisch ist, wobei die bevorzugten Abmessungen für L1 ungefähr 325, 525, 725 und 925 mm und für L2 ungefähr 90 bis 100 mm betragen, wobei die Längen L1 und L2 selbstverständlich auch an andere mögliche Verwendungszwecke angepasst werden können.

3. Zuschnitt nach den Ansprüchen 1 und 2, **dadurch gekennzeichnet, dass** an der ersten Längswand (7) des Zuschnitts (1) zwei Lippen (12, 13) mittels Rippen- oder Falzlinien verbunden sind und an der anderen, gegenüberliegenden Seitenfläche oder Längswand (11) zwei Aussparungen (31, 32) eingearbeitet sind, um eine Behinderung zu vermeiden, wenn der Zuschnitt (1) zu einem prismatischen Be-

hältnis (6) gefaltet wird und die betreffenden Lippen in die passenden Nuten gesteckt werden.

4. Zuschnitt nach einem der vorangehenden Ansprüche, **dadurch gekennzeichnet, dass** alle gebildeten Lippen (12, 13 und 16 bis 23) an den Enden schräg geschnitten sind und mit dem Zuschnitt nahe der Rippen- oder Falzlinie eine Art Hakenelement (24) zum Schließen bilden.

5. Zuschnitt nach den Ansprüchen 1 - 4, **dadurch gekennzeichnet, dass** das Material des Zuschnitts (1) ein- oder doppelwandige Wellpappe oder ein Flachmaterial aus Kunststoff ist, wobei es sich bei dem Kunststoff um eine doppelwandige PolypropylenFolie handeln kann.

6. Zuschnitt nach einem der vorangehenden Ansprüche, **dadurch gekennzeichnet, dass** auf der Außenseite des Zuschnitts (1) oder des Paketkartons (6) Texte für den Gebrauch und Anweisungen, Farben oder Firmenlogos angebracht werden können.

Revendications

1. Boîte pliante pourvue de lignes de pliage et de découpes appropriées pour former des panneaux longitudinaux et des éléments de fermeture de façon à être pliée en un corps d'emballage pour expédier des affiches, des calendriers, des dessins et analogue, le corps d'emballage ayant une forme prismatique allongée et sa section transversale et son rapport longueur/ hauteur dépendant de l'article à emballer et/ou à expédier, le corps d'emballage ayant une longueur L1 et une section transversale polygonale, au moins triangulaire, ses côtés ayant une longueur L2 et étant définis par une série de panneaux longitudinaux (7-11) raccordés de manière articulée le long de lignes longitudinales de pliage (2-5), des rainures (14, 15) ayant une longueur limitée sont formées le long de la ligne (5) reliant un panneau longitudinal (11) situé à une extrémité de son panneau longitudinal (10) voisin et des lèvres (12, 13) sont formées le long du bord longitudinal libre du panneau longitudinal (7) situé à l'autre extrémité et raccordé à ce dernier par les lignes de pliage, afin de former le corps d'emballage par pliage le long des lignes longitudinales de pliage (2-5) et par insertion des lèvres (12, 13) dans les rainures (14, 15), les éléments de fermeture se composant de panneaux d'extrémité (25, 26) raccordés de manière articulée aux deux extrémités d'un panneau longitudinal intermédiaire (9), **caractérisée en ce que** des panneaux latéraux (27-30) sont raccordés de manière articulée aux deux côtés de chaque panneau d'extrémité (25, 26) dans une position adjacente à la ligne de pliage reliant ledit panneau d'extrémité au panneau longitudinal intermédiaire, et d'autres lèvres (16-23) sont raccordées de manière articulée aux deux côtés de chaque panneau latéral (27-30) dans une position adjacente à la ligne de pliage reliant ledit panneau latéral au panneau d'extrémité correspondant, et deux rainures continues (33-40) supplémentaires sont formées le long de chaque ligne longitudinale de pliage (2-5), de sorte que les panneaux d'extrémité (25, 26) puissent être pliés pour fermer les extrémités du corps d'emballage et bloqués en pliant les panneaux latéraux (27-30) contre le corps d'emballage et en insérant les autres lèvres (16-23) dans les rainures (33-40) supplémentaires, le matériau constituant la découpe ayant une résistance suffisante à la flexion, la découpe pouvant être pliée et dépliée plusieurs fois le long des lignes de pliage afin que le corps d'emballage puisse être utilisé plusieurs fois.

2. Découpe selon la revendication 1, **caractérisée en ce que** la projection horizontale ou la section transversale susmentionnée du support ou de la boîte prismatique pour colis (6) est de préférence carrée, les dimensions préférées de L1 étant approximativement 325, 525, 725 et 925 mm et celle de L2 étant approximativement comprise entre 90 et 100 mm, les longueurs L1 et L2 mentionnées étant évidemment ajustables en vue d'autres utilisations possibles.

3. Boîte pliante selon les revendications 1 et 2, **caractérisée en ce que**, sur le premier panneau longitudinal (7) de la découpe susmentionnée (1), deux lèvres (12, 13) sont raccordées au moyen d'une nervure ou de lignes de pliage et sur l'autre plan latéral opposé ou sur le panneau longitudinal (11), deux évidements (31, 32) sont prévus afin de ne pas gêner lors du pliage de la découpe (1) en un support prismatique (6) lorsque les lèvres concernées sont placées dans les rainures correspondantes.

4. Boîte pliante selon les revendications susmentionnées, **caractérisée en ce que** toutes les lèvres formées mentionnées (12, 13 et 16 à 23) sont découpées en biais aux extrémités et la découpe proche de la nervure ou de la ligne de pliage forme une sorte d'élément en forme de crochet (24) pour assurer la fermeture.

5. Boîte pliante selon les revendications 1 à 4, **caractérisée en ce que** le matériau constituant la découpe mentionnée (1) est un carton ondulé à simple ou double paroi ou une feuille en plastique, dans laquelle le plastique peut être une feuille de polypropylène à double paroi.

6. Boîte pliante selon les revendications susmentionnées, **caractérisée en ce que**, à l'extérieur de la

découpe (1) ou de la boîte pour colis (6), des textes concernant l'utilisation et des instructions, des couleurs ou le logo d'une société peuvent être appliqués.

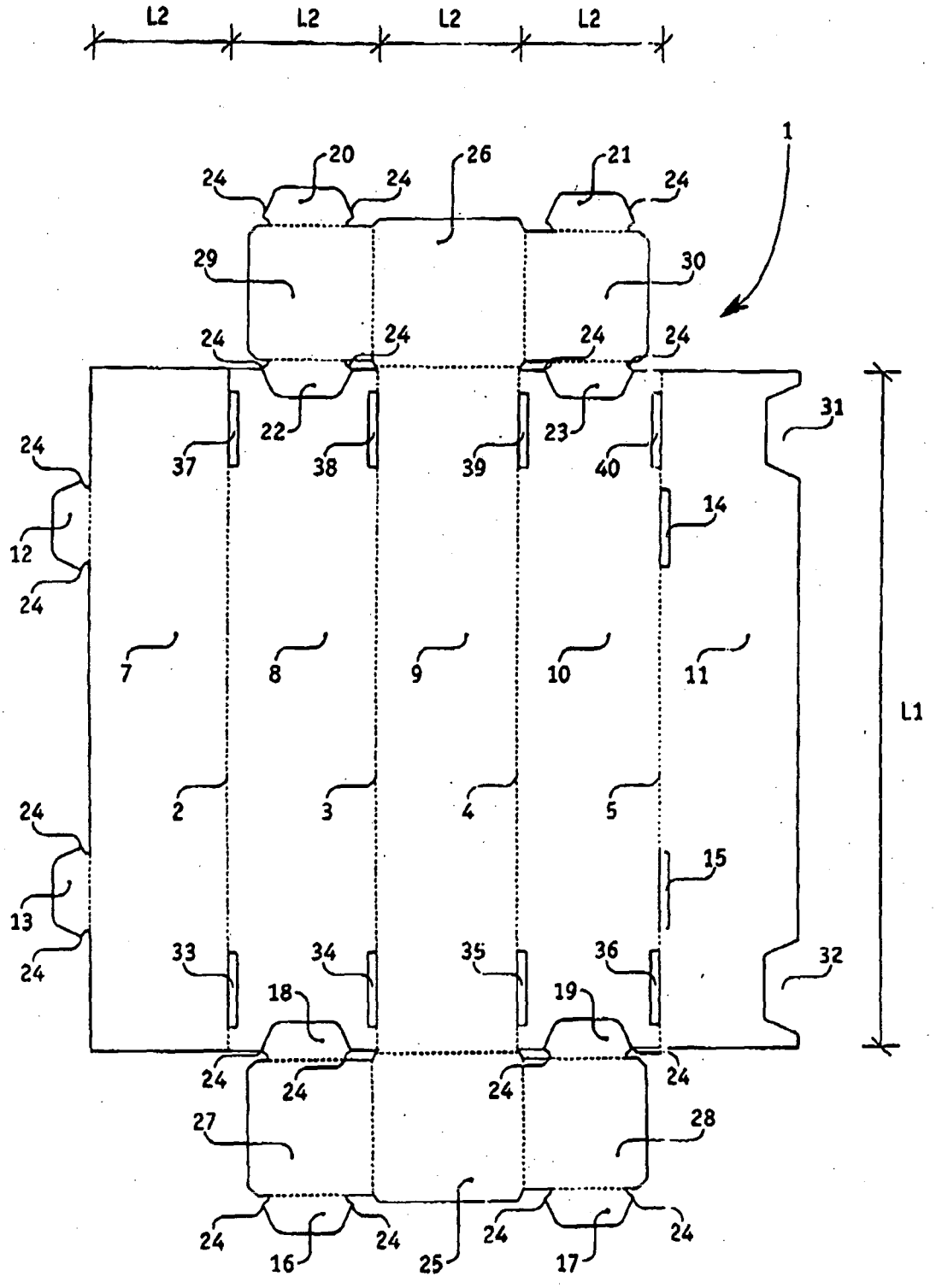
L2
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Fig. 1

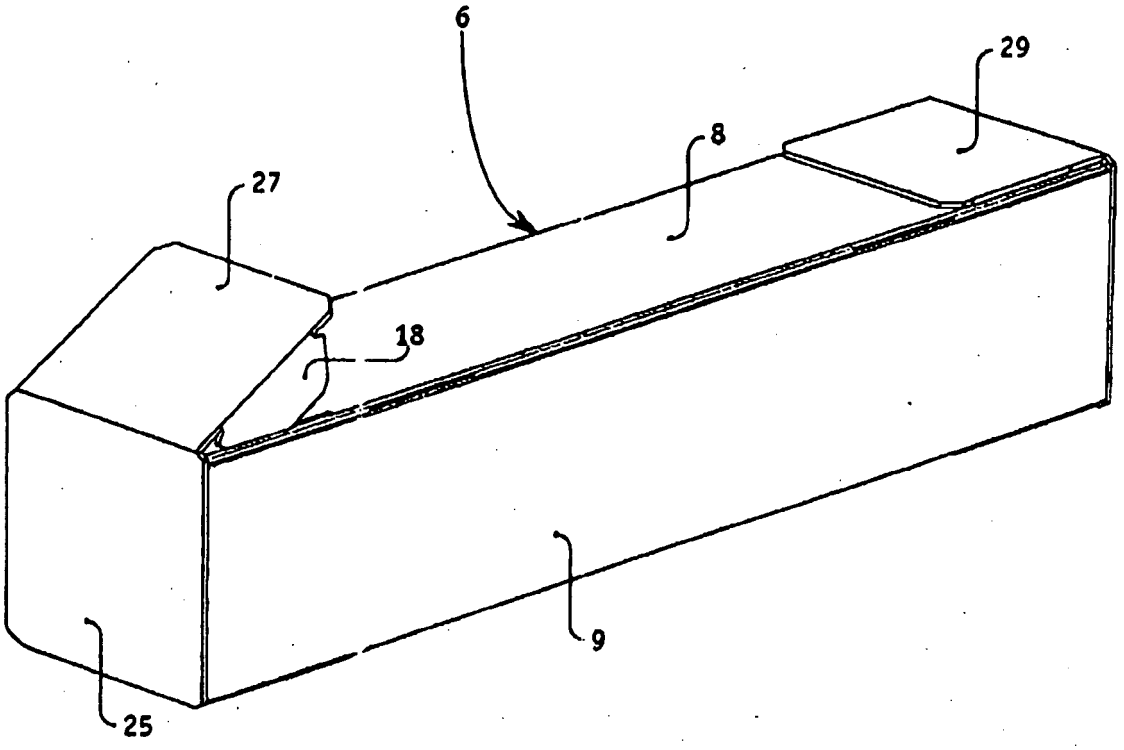

Fig. 2

REFERENCES CITED IN THE DESCRIPTION

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- NL 7306638 **[0003]**
- FR 2703335 **[0003]**
- DE 29815106 U1 **[0003]**