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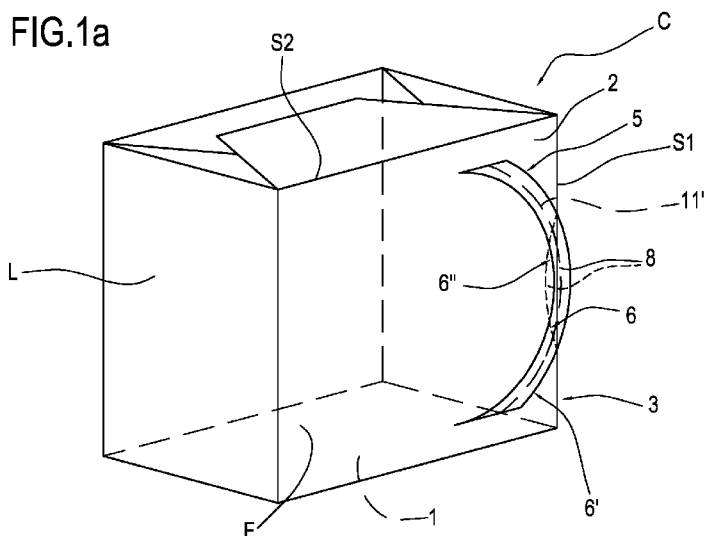
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(54) Title: PACKAGE FOR SMOKERS' ARTICLES, IN PARTICULAR CIGARETTES, AND METHOD FOR MAKING THE PACKAGE



(57) Abstract: Described is a package (C) for smokers' articles, in particular cigarettes, and a method for making the package (C), the package (C) comprising a packet (1) for containing the smokers' articles, and an outer wrapper (3) made by wrapping a sheet (2) of wrapping material around the packet (1), the wrapper (3) being provided with a tear element (5) for at least partly separating the wrapper (3) from the packet (1); the label (6) is a label (6), which is applied to a portion of the sheet (2) of wrapping material and extends for part of the length and width of the sheet (2) of wrapping material.

DESCRIPTION**PACKAGE FOR SMOKERS' ARTICLES, IN PARTICULAR
CIGARETTES, AND METHOD FOR MAKING THE PACKAGE****Technical field**

This invention relates to a package for smokers' articles, in particular cigarettes, and to a method for making the package.

More specifically, this invention relates to a package made by wrapping a wrapper around a packet of cigarettes or around a carton of packets of cigarettes.

Background art

As is known, packets of cigarettes are usually provided with a protective outer wrapper made from a transparent material, possibly a heat-shrink material, commonly called overwrapping material.

Usually, the overwrapping material the wrapper is made of is polypropylene.

Specific packaging machines wrap the overwrapping material around the packets and then, in the case of heat-shrink material, heat it so as to make it adhere better to the outside walls of the packets.

The outer wrapper normally has a narrow tape, known as tear tape, which can be used to quickly and easily tear the outer wrapper in order to open the packet.

To make the outer wrapper, the tear tape is unwound continuously from a roll and applied by heat sealing or gluing to a web of overwrapping material fed continuously or intermittently. A sequence of U-shaped incisions may be made on the overwrapping material, each positioned on the tear tape and helping to form a gripping end (free end) of the tear tape to facilitate opening of the package. After, or at the same time as, the incisions are made, the web of overwrapping material coupled to the tear

tape is cut into lengths which are fed to the packaging machine and define the aforementioned outer wrappers.

In the case of hinged lid cigarette packets, for example, the tear tape is located, when the package is finished, on the inside face of the outer wrapper and at a position along the perimeter of one end of the packet so that when the tear tape is pulled, the outer wrapper is torn along a direction transversal to the longitudinal extension of the packet and of the outer wrapper. In these packets, the tear tape is located at the top end of the packet so as to divide the outer wrapper into two portions: a small portion wrapped around the top end of the packet and a large portion wrapped around the body of the packet.

Also in the case of cartons of cigarette packets, especially those having the same shape as a cigarette packet, the tear tape is often located at one end of the carton so as to divide the outer wrapper into a small portion and a large portion.

Once the outer wrapper has been torn with the tear tape, the two portions of the outer wrapper must in many case be further torn in order to allow complete removal. Complete removal is not always easy because the overwrapping material which, as mentioned above, has been made to adhere to the outside walls of the package by heat shrinking, adheres so closely to the package that removing it can be a problem.

This problem is particularly evident when the portion of the wrapper to be removed is the large portion.

In order to overcome, or at least minimize, this problem, patent EP1839845B1 teaches making slits in the overwrapping material, constituting the outer wrappers, near the tear tape. These slits constitute starting points for tearing the outer wrappers. When the tear tape is used to open an outer wrapper, it applies stress to the slits, thereby causing the part of the overwrapping material adjacent thereto to be torn. The slits produce in the wrapping material tear guide lines extending away from the tear tape.

These slits, however, are in some cases not very effective and in all cases have a negative effect on the seal and appearance of the package.

In patents JP08164926A and JP11321882A the tear tape is placed in contact with the wrapping material constituting the outer wrapper and arranged in such a way as to give it a substantially spiral shape around the wrapped packet. As a result of this arrangement, use of the tear tape allows the overwrapping material to be surely torn so that the torn outer wrapper can be easily removed from the package it is associated with.

This solution, although quite effective, is decidedly unattractive in terms of aesthetic appearance.

Disclosure of the invention

The aim of this invention is to provide a package for smokers' articles, in particular cigarettes, which is free of the disadvantages described above with reference to the prior art.

Another aim of the invention is to provide a method for making packages for smokers' articles free of the disadvantages described above with reference to the prior art and which is easy and relatively inexpensive to implement.

This invention accordingly provides a package for smokers' articles, in particular cigarettes, and a method for making the package, as set out in the accompanying claims.

Brief description of the drawings

The invention is described below with reference to the accompanying drawings, which illustrate non-limiting embodiments of it, and in which:

- Figures 1a, 1b and 1c schematically illustrate, in perspective, three variant embodiments of a package for smokers' articles in accordance with this invention;

- Figures 2 and 3 show two respective variant embodiments of a sheet of wrapping material from which an outer wrapper according to this invention

can be obtained;

- Figures 4-6 show respective supporting webs to which different tear elements made according to this invention adhere;
- Figure 7 schematically represents as a block diagram a system for making packages according to the invention.

Detailed description of preferred embodiments of the invention

With reference to Figures 1a, 1b and 1c, the numeral 1 denotes in its entirety a packet or a carton of cigarettes, forming part of a package C made according to this invention.

Hereinafter, for convenience of description, reference will be made to a packet 1 of cigarettes, unless otherwise specified.

The packet 1 is schematically represented as an element having the shape of a parallelepiped but it might be differently shaped since its shape is of no relevance to this invention. Details of the packet 1, such as the lid or the box-shaped body containing the smokers' articles (cigarettes) are also not shown because such details, too, and in particular, their presence, shape and reciprocal dimensions are of no relevance to the description of the invention.

The packet 1 contains smokers' articles not illustrated, consisting of cigarettes for example, and is preferably made of a paper-based material, such as paperboard. On the outside of it, the packet 1 is completely covered by a sheet 2, made preferably from a transparent heat-sealable material, for example polypropylene, constituting the outer wrapper 3 of the packet 1. The sheets 2 are preferably obtained in sequence by cutting them from a web 4 which is fed continuously or intermittently.

The sheet 2, like the packet 1, also forms part of the package C.

A portion of the surface of the sheet 2, either on the inside or on the outside of the wrapper 3, has attached to it a tear element 5 which can be used manually to tear a substantial portion of the wrapper 3 itself. Tearing makes it possible for a user to easily remove the wrapper 3 before starting

to use the packet 1.

As shown in the accompanying drawings, the tear element 5 is made in the form of a label 6 coupled to the sheet 2. Coupling is accomplished preferably using an adhesive such as resealable glue applied hot, for example non-drying glue. Alternatively, cold glue, such as vinyl glue, for example, might be used.

In another embodiment, the label 6 and the sheet 2 may be coupled to one another by heat sealing.

In the case of connection by means of an adhesive, the labels 6 are preferably in the form of self-adhesive labels, that is to say, they are coated with adhesive on one face.

They are applied in sequence on predetermined zones of the web 4 in such a way as to be present on each sheet 2 after the sheet 2 is cut off the web 4.

Before being applied to the web 4, the labels 6 are preferably connected to a supporting web 7, shown in Figures 4-6, by which they are conveyed in known manner, not illustrated, to the zone where they are applied to the web 4.

Alternatively, the labels 6 may be obtained from a roll of adhesive or partly adhesive tape. This tape must be cut, preferably into lengths, to obtain the labels 6 defining the tear elements 5.

Each label 6 has an edge or flank 6' where a pull tab 8, able to be gripped manually, can be identified, preferably at a substantially median zone thereof. Preferably, the pull tab 8 is not connected to the sheet 2 the label 6 adheres to and can be moved away from the sheet 2 and easily gripped by a user in order to start opening the wrapper 3, as described below.

In the embodiment of Figure 2, corresponding to a package C not illustrated but easily inferable from the context, the label 6 is applied to the portion of the web 4 which defines a sheet 2, in contact with either of the two faces of the sheet 2 itself. The pull tab 8 is positioned in such a way as to follow for a short stretch a cutting line 10' along which the sheet 2

can be separated from the web 4. When the package C is finished, the cutting line 10' lies on a side wall L of the packet 1.

At two portions of the sheet 2, adjacent to the respective flanks of the pull tab 8, elements for starting to tear the sheet 2 itself are preferably formed.

5 The tear starting elements are preferably defined by two incisions 11. The incisions 11 run transversely to the cutting line 10'. Preferably, the incisions 11 are defined by respective through slits.

The purpose of the incisions 11 is that of starting to tear the sheet 2 next to the pull tab 8 when the pull tab 8 is gripped and pulled in order to tear
10 the sheet 2 and remove it from the package C.

More specifically, the sheet 2 of wrapping material has at least one incision 11 converging in the proximity of the pull tab 8. In this configuration, the incision 11 allows tearing the sheet 2 to be started from the pull tab 8 to remove a portion of the sheet 2 at least equal in size to
15 the surface area of the label 6.

In the embodiment of Figure 3, corresponding to the package C of Figure 1a, the label 6 is applied to the portion of the web 4 which defines the sheet 2, in contact with the face of the sheet 2 on the outside of the packet 1. The pull tab 8 is positioned in such a way that one edge of it is
20 situated on a fold line 10. When the package C is finished, the fold line 10 substantially corresponds to an edge of the packet 1.

On the sheet 2, there is an incision 11' located under the label 6 and covered by the latter. The incision 11' preferably follows the profile, that is, the periphery, of the label 6. More specifically, the incision 11' runs along
25 the aforementioned edge 6' of the label 6 defining the pull tab 8.

Preferably, the incision 11' runs along a line substantially parallel to the aforementioned edge 6' of the label 6 defining the pull tab 8.

Preferably, the incision 11' is defined by a continuous slit.

Preferably, the incision 11' is defined by a through slit.

30 Advantageously, the incision 11' is totally covered by the label 6 so as to guarantee the seal of the package C. In other words, the label 6 covers

and seals the line along which the wrapper 3 can be opened and which is defined by the incision 11'.

In practice, for each label 6 to be applied to the web 4, an incision 11' is made on the web 4 of wrapping material. The step of making the incision 11' precedes the step of applying the label 6 and the step of applying the label 6 entails totally covering the incision 11'.

In the example embodiments shown in Figures 1a, 1c, 2, 3 and 4, the flank 6', or edge, of the label 6 with the pull tab 8 and the edge or flank 6" opposite the flank 6' have the same arcuate shape and their respective end portions are joined in pairs by straight sides of the label 6. Similarly, the end portions may be joined in a different manner, without limiting the scope of the invention.

Figure 4 shows a supporting web 7 with a plurality of labels 6 of the type shown in Figures 1a, 1c, 2 and 3 superposed thereon. The labels 6 all have the same shape, allowing them to be coupled to each other without being spaced from each other, that is to say, without blank spaces or excess material between two consecutive labels 6.

In an embodiment not illustrated, the web 7 itself constitutes the plurality of labels 6. More specifically, the continuous, adhesive or partly adhesive web, may be cut to define the individual labels 6.

With reference to Figure 7, packaging the packets 1 comprises feeding from a first roll 13 a web 7 defining a plurality of successive labels 6 to a labelling device 15; feeding from a second roll 14 a web 4 of wrapping material; separating the labels 6 from the web 7 which defines them, each label 6 defining a tear element 5; applying the labels 6 sequentially and equidistantly to the web 4 of wrapping material by means of the labelling device 15 in a portion of the web 4 which extends for part of the length and width of the sheet 2 of wrapping material; cutting the web 4 of wrapping material which is provided with the labels 6 by means of a cutting device 16 to obtain a succession of sheets 2 of wrapping material provided with respective tear elements 5 and which are designed to be

wrapped around respective packets 1 of smokers' articles; feeding the sheets 2 of wrapping material to a packaging device 18; feeding to the packaging device 18 the packets 1 of smokers' articles to be wrapped by a packaging unit 17; and wrapping a sheet 2 of wrapping material around each packet 1 of smokers' articles by means of the packaging device 18.

With reference to a web "defining" a plurality of labels, the term "defining" is used to mean, in this invention, the possibility that the web acts as a support for the labels which are detachable therefrom, or that the labels are made from the web itself by cutting it into adhesive or partly adhesive lengths.

If the labels 6 are obtained from a web 7 which supports them, they are preferably fed by means of a labelling machine capable of detaching or peeling each label 6 from the support while the web 7 is being unwound. If the labels are placed side by side without spacing, or if the labels are of the zero waste type, a further device may be provided at the labelling device 15 in order to move the detached or partly detached labels before they are applied to the sheet 2. More specifically, an intermediate unit may be provided to turn the labels in the desired direction or to set them apart by a spacing such as to allow each label 6 to be applied to the web 4 of wrapping material. This intermediate unit may be an integral part of the labelling device or it may be provided upstream of a labelling machine.

The labels 6 may be obtained from a roll of adhesive or partly adhesive tape. The tape is then cut into lengths of predetermined size. Each cut length of adhesive or partly adhesive tape defines a label 6 corresponding to the tear element 5 of each package C. In this case, too, an intermediate unit as described above may be provided.

The incisions 11, illustrated and described with reference to Figure 2, may be made after or before the label 6 is applied. Preferably, to minimize process times, the incisions 11 may be made at the cutting device 16, that is to say, at the same time as the sheets 2 are separated from the web 4 along the cutting lines 10'.

If the label 6 is applied to the outside face of the sheet 2 of wrapping material (Figure 3), the incisions 11' are made before the label 6 is applied.

5 In an embodiment not illustrated, the label 6 may be applied after the package C has been completed, that is to say, when the packet 1 has been completely wrapped in the respective sheet 2 of wrapping material. In this case, the incisions or slits may be made during the packaging steps or at the labelling step.

10 In the embodiment of the package C illustrated in Figure 1a, the sheet 2 is folded in such a way that the label 6 connected thereto is superposed on a large front wall F of the packet 1. The label 6 is positioned in such a way that its central portion is situated in the proximity of the intermediate portion of a longitudinal edge S1 of the packet 1 and its ends are respectively in the proximity of the top and bottom edges of the front wall F itself. The pull tab 8 of the label 6 projects laterally for a short stretch from the longitudinal edge S1 of the packet 1 at the central portion of the label 6 itself.

15 In the embodiment of the package C illustrated in Figure 1c, the sheet 2 is folded in such a way that the label 6 connected thereto is superposed on a large front wall F of the packet 1. The label 6 is positioned in such a way that its central portion is situated in the proximity of the intermediate portion of a top transversal edge S2 of the packet 1 and its end portions extend downwardly at the respective longitudinal edges S1 of the packet 1 and are folded onto the side walls L of the packet 1 itself. The pull tab 8 of the label 6 projects upwards for a short stretch from the top transversal edge S2 of the packet 1 at the central portion of the label 6 itself.

20 In the embodiment of the package C shown in Figure 1b, the label 6 is substantially in the shape of an isosceles triangle, with a first vertex positioned at the top, at the top transversal edge S2 of the packet 1. The sheet 2 is folded in such a way that the label 6 connected thereto is superposed on a large front wall F of the packet 1. The pull tab 8 of the

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label 6, consisting of the above mentioned first vertex, projects upwards for a short stretch from the top transversal edge S2 of the packet 1 at the central portion of the label 6 itself.

In the embodiments described with reference to Figures 1a and 1b, the label 6 is almost as wide as the wall F of the package C the label 6 is applied to and adheres to only one wall F of the wrapper 3.

In these cases, the label 6 extends substantially from edge to edge on a larger face of the wrapper 3 along the direction transversal to the direction of tearing the label 6.

In the embodiment of Figure 1c, on the other hand, the label 6 adheres to only three walls F, L of the wrapper 3 which are contiguous in pairs. In further embodiments of this invention, not illustrated, the label 6 might adhere to only two contiguous walls of the wrapper 3.

Whatever the case, generally speaking, each label 6 applied to a portion of the sheet 2 of wrapping material extends for part of the length and width of the selfsame sheet 2 of wrapping material. In other words, the label 6 is of such size as not to cover the full height or the full width of the sheet 2 of wrapping material.

In Figures 5 and 6, the labels 6 have a substantially polygonal shape. More specifically, the labels 6 are in the shape of an isosceles triangle, as in Figure 1b, and the pull tab 8 coincides with a corner zone consisting of one of the vertices of the triangle.

In a further embodiment, not illustrated, the labels may be embodied according to a geometrical figure in the plane relative to the sheet 2 of wrapping material. The side of each label opposite the pull tab, or the projection of its maximum width at a position opposite to the pull tab, defines at least one tear side of the sheet 2 of wrapping material.

The shape of the labels 6 is preferably such that their edges, with the exception of the aforementioned corner or joining zones, do not have abrupt changes or sudden variations of direction.

It should be noted that, if required, the labels described above may have

informative or advertising messages on them. This is, for example, illustrated in Figure 1b, where the label 6 bears graphic symbols 12. Labels may also be coloured or printed in any desired manner with images or text, even graphically reproducing the part of the packet 1 they cover.

5 Alternatively, labels may be transparent, so as not to hide text or images printed on the surface of the packet 1.

To open and totally remove the wrapper 3 of a package C, it is sufficient to grip between two fingers the pull tab 8 of the label 6 connected to the wrapper 3 and pull the tab 8 along the tearing direction. This corresponds

10 to the direction of extension of the label 6 starting from the pull tab 8.

The foregoing also applies to cartons of cigarette packets to remove the protective overwrapping material which frequently covers them.

In the finished packages C, the pull tabs, shown projecting towards the outside of the respective wrappers 3 in the accompanying drawings, are

15 folded and made to adhere to one wall of the packets 1 so that there are no loose pull tabs 8 causing problems when groups of packages C are packed in cartons or packs.

CLAIMS

1. A package for smokers' articles, in particular cigarettes, comprising a packet (1) or carton for containing the smokers' articles, a sheet (2) of wrapping material wrapped around the packet (1) or carton and defining the outer wrapper (3), and a tear element (5) provided with a pull tab (8) which can be gripped by a user and which is designed to at least partly separate the wrapper (3) from the packet (1), characterized in that the tear element (5) is a label (6), which is coupled to the outer wrapper (3) except for the pull tab (8), the label (6) is applied to a portion of the sheet (2) of wrapping material and extends for part of the length and width of the sheet (2) of wrapping material;
- the sheet (2) of wrapping material is provided with at least one incision (11) converging in the proximity of the pull tab (8) and designed to define at least one break starting point for tearing the wrapper (3) when the label (6) is gripped and pulled by a user.
2. The package according to claim 1, characterized in that the incision is covered by the label (6).
3. The package according to claim 1 or 2, where the wrapper (3) is defined by a plurality of walls, characterized in that the label (6) adheres to only one wall (F) of the wrapper (3).
4. The package according to claim 1 or 2, where the wrapper (3) is defined by a plurality of walls, characterized in that the label (6) adheres to only two walls of the wrapper (3) which are contiguous.
5. The package according to claim 1 or 2, where the wrapper (3) is defined by a plurality of walls, characterized in that the label (6) adheres to only three walls (F, L) of the wrapper (3) which are contiguous in pairs.
6. The package according to any one of claims 1 to 5, characterized in that the label (6) is coupled to the wrapper (3) by glue, the label (6) being a self-adhesive label.
7. The package according to any one of claims 1 to 5, characterized in that the label (6) is coupled to the wrapper (3) by heat-sealing.

8. The package according to any one of claims 1 to 7, characterized in that the label (6) is coupled to the inside surface of the wrapper (3), in contact with the package of smokers' articles.

9. The package according to any one of claims 1 to 7, characterized in that the label (6) is coupled to the outside surface of the wrapper (3).

10. The package according to any one of claims 1 to 9, characterized in that the incision (11') is defined by a through slit.

11. The package according to any one of claims 1 to 10, characterized in that the label (6) is delimited by two substantially arcuate opposite edges (6', 6'') joined to each other at two pairs of ends; the pull tab (8) being defined by a substantially central portion of at least one of the edges (6', 6'').

12. The package according to any one of claims 1 to 10, characterized in that the label (6) is in the shape of a polygon.

13. The package according to claim 12, characterized in that the label (6) is substantially in the shape of a triangle, the pull tab (8) extending from a vertex of the triangle.

14. The package according to any one of claims 1 to 13, characterized in that the label (6) extends substantially from edge to edge on a larger wall of the wrapper (3) along the direction transversal to the direction of tearing the label (6).

15. A method for making a package for smokers' articles, in particular cigarettes, according to one or more of claims 1 to 14, characterized in that it comprises at least the following steps:

- feeding from a first roll (13) a web (7) bearing a plurality of successive labels (6) to a labelling device (15);
- feeding from a second roll (14) a web (4) of wrapping material from which to obtain a plurality of sheets (2) of wrapping material;
- separating the labels (6) from the web (7), each label (6) defining a tear element (5);

- applying the labels (6) sequentially and equidistantly to the web (4) of wrapping material by means of the labelling device (15) in an area of the web (4) which extends for part of the length and for part of the width of the sheet (2) of wrapping material;
 - 5 - cutting the web (4) of wrapping material which is provided with the labels (6) to obtain a succession of sheets (2) of wrapping material provided with respective tear elements (5) and which is designed to be wrapped around respective packets (1) or cartons of smokers' articles;
 - feeding the sheets (2) of wrapping material to a packaging device (18);
 - 10 - feeding to the packaging device (18) the non-wrapped packets (1) or cartons of smokers' articles;
 - wrapping a sheet (2) of wrapping material around each packet (1) or carton of smokers' articles by means of the packaging device (18).
16. A method for making a package for smokers' articles, in particular cigarettes, according to one or more of claims 1 to 14, characterized in
- 15 that it comprises at least the following steps:
- feeding from a first roll an adhesive or partly adhesive web from which to obtain a plurality of labels (6);
 - feeding from a second roll (14) a web (4) of wrapping material from
 - 20 which to obtain a plurality of sheets (2) of wrapping material;
 - cutting the adhesive or partly adhesive web to obtain the labels (6), each label (6) defining a tear element (5);
 - applying the labels (6) sequentially and equidistantly to the web (4) of wrapping material in an area of the web (4) which extends for part of the
 - 25 length and part of the width of the sheet (2) of wrapping material;
 - cutting the web (4) of wrapping material which is provided with the labels (6) to obtain a succession of sheets (2) of wrapping material provided with respective tear elements (5) and which is designed to be wrapped around respective packets (1) or cartons of smokers' articles;
 - 30 - feeding the sheets (2) of wrapping material to a packaging device (18);

- feeding to the packaging device (18) the non-wrapped packets (1) or cartons of smokers' articles;
- wrapping a sheet (2) of wrapping material around each packet (1) or carton of smokers' articles by means of the packaging device (18).

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FIG.1a

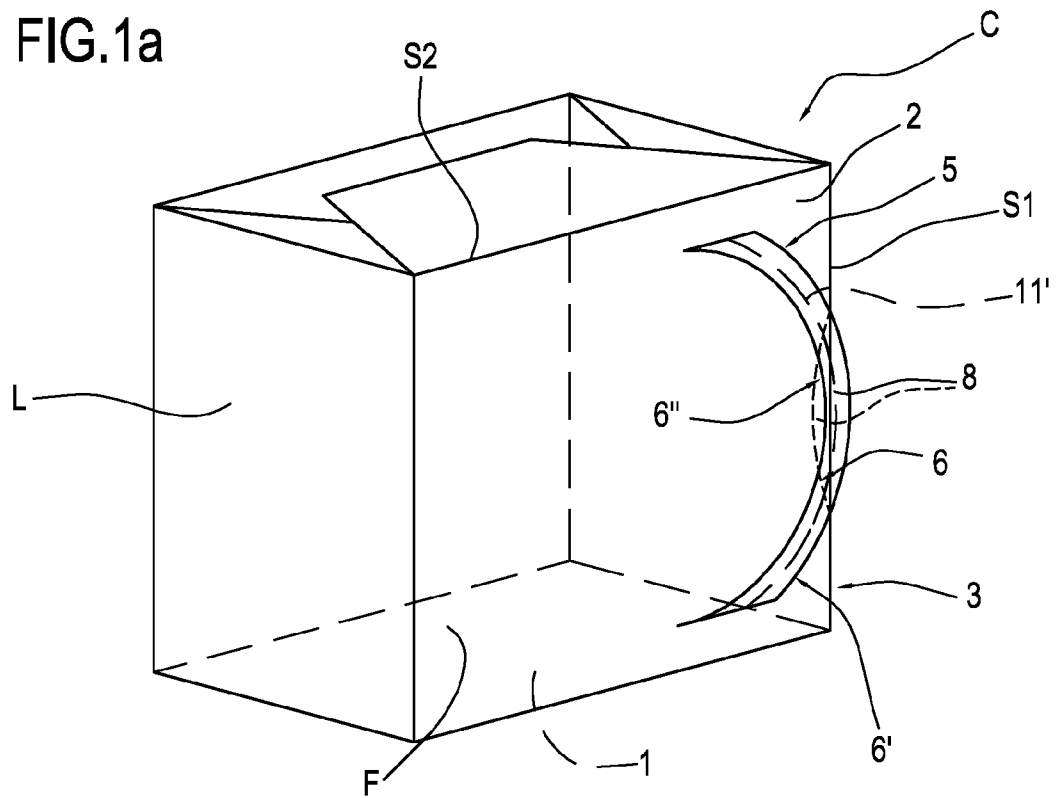
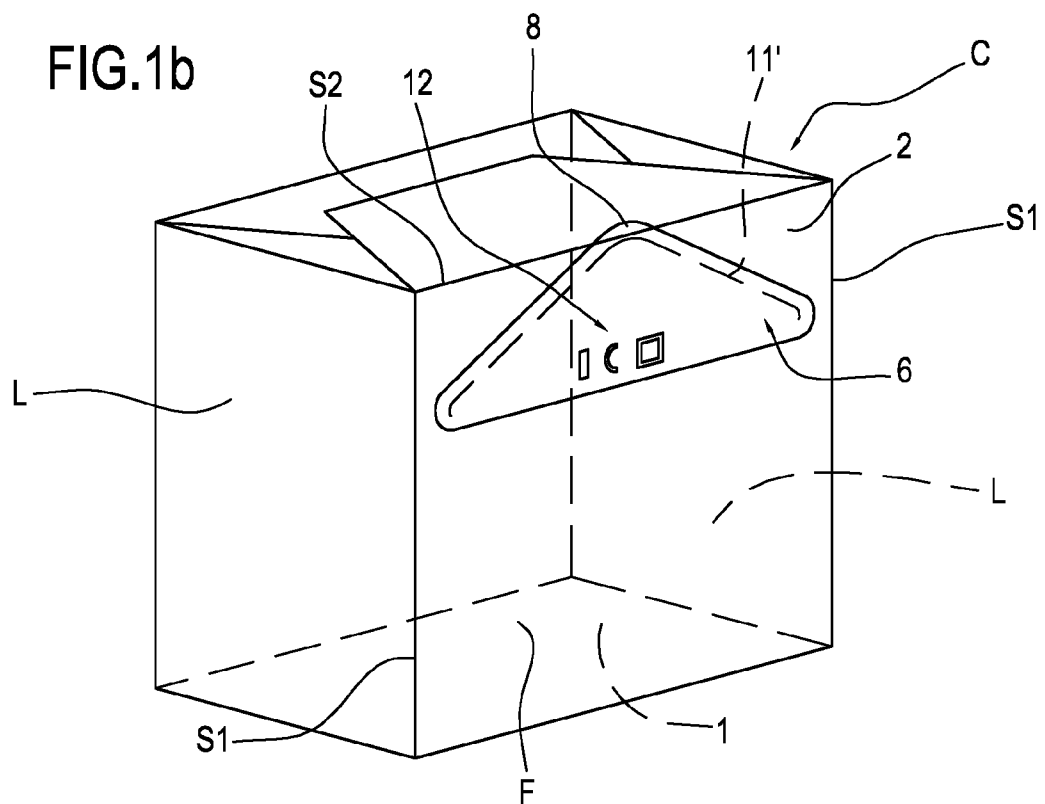


FIG.1b



2/4

FIG.1c

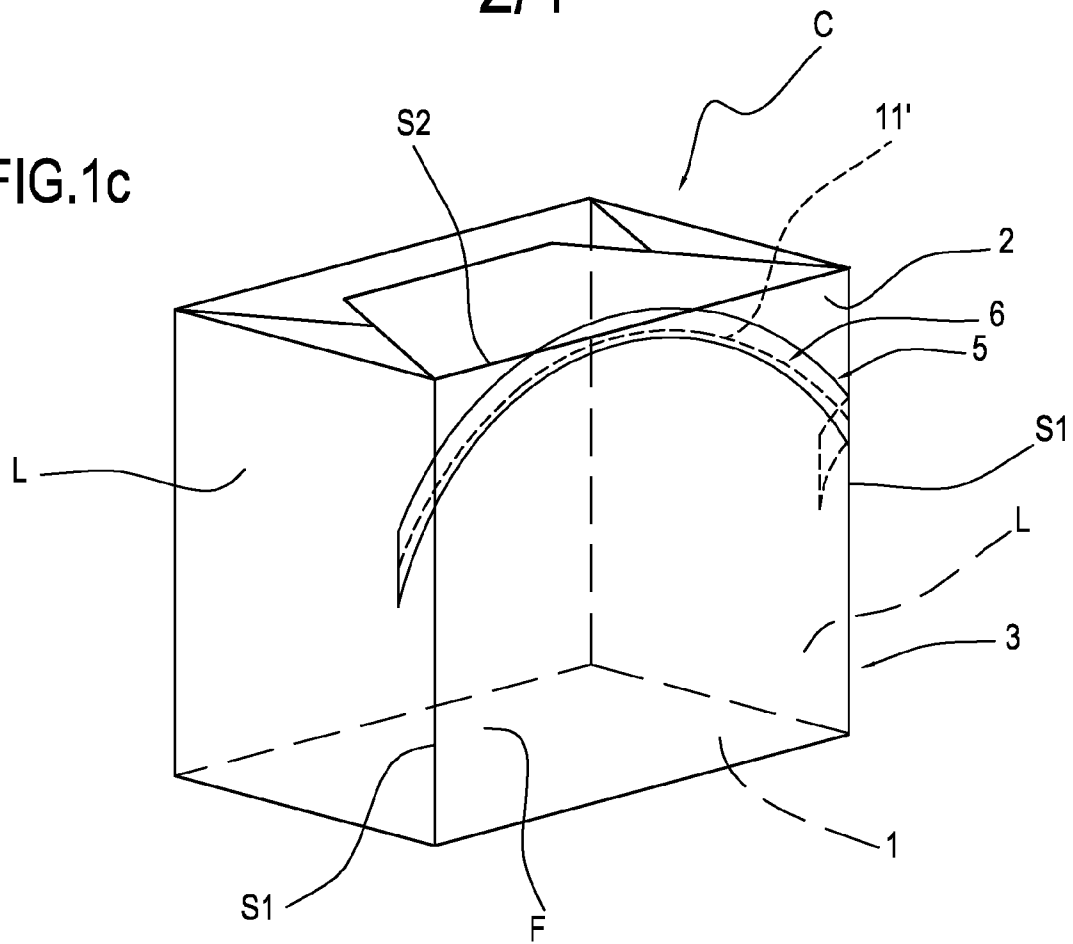


FIG.2

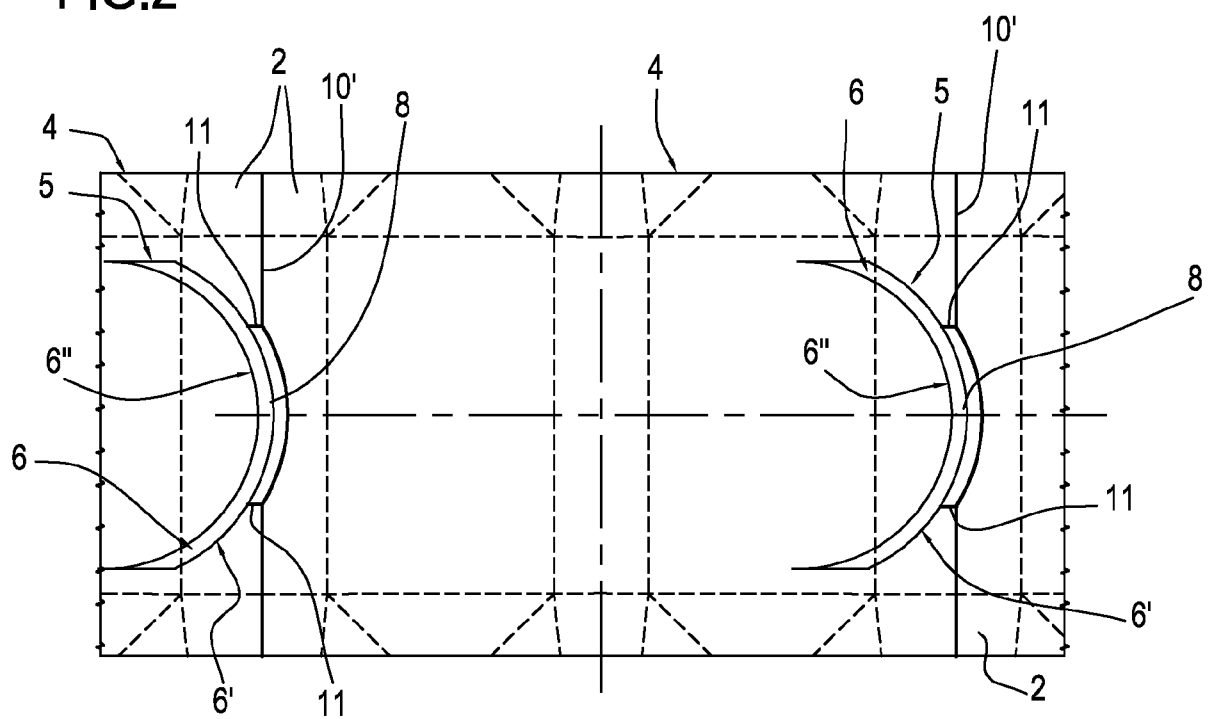


FIG.3 3/4

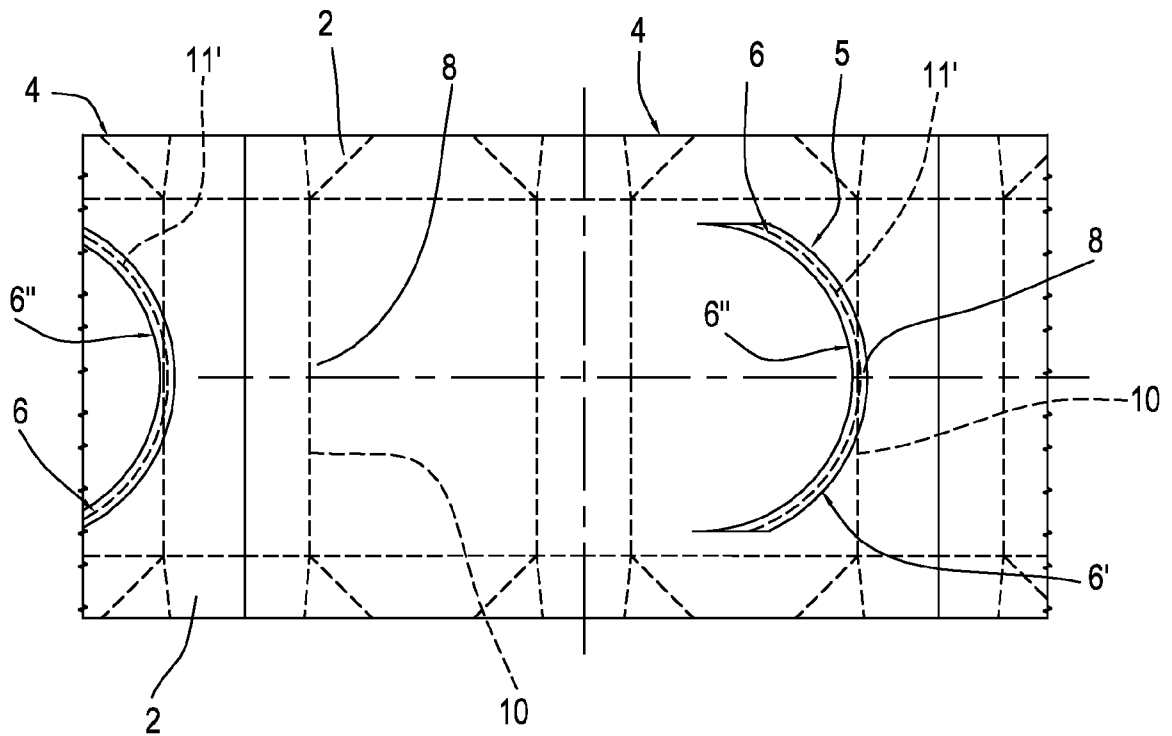


FIG.4

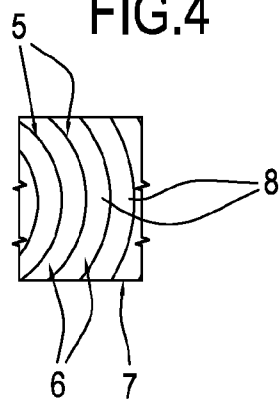


FIG.5

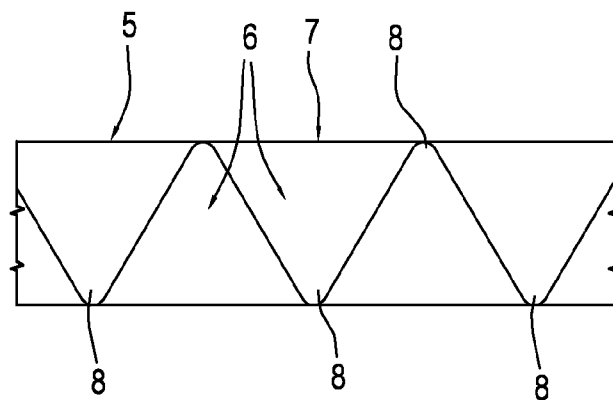


FIG.6

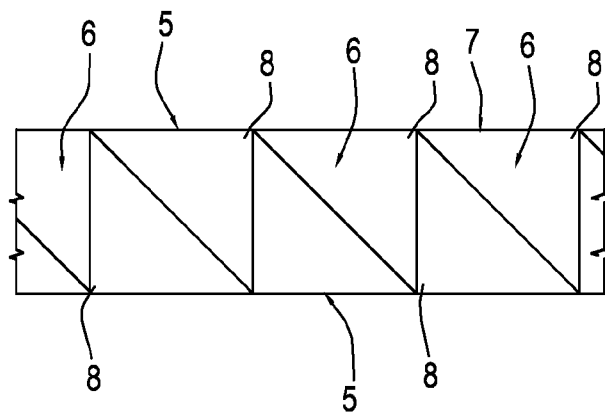
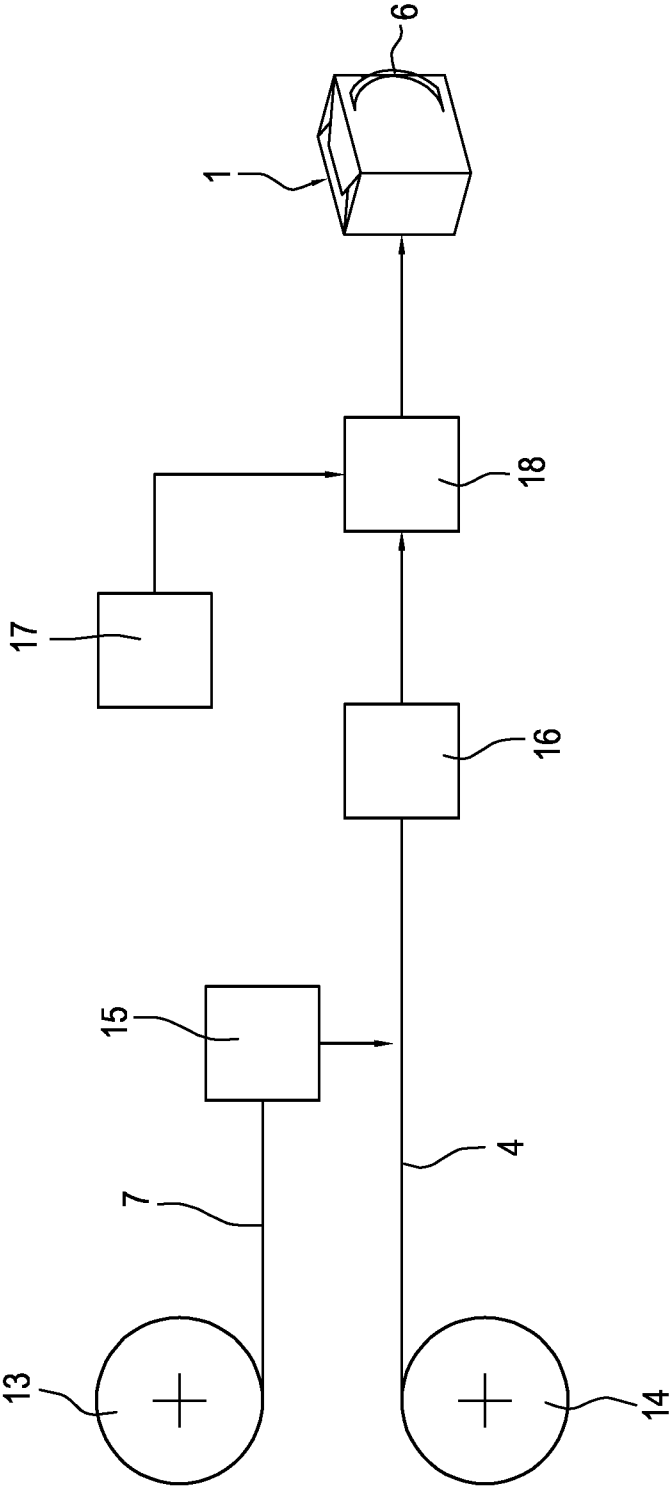


FIG.7



INTERNATIONAL SEARCH REPORT

International application No
PCT/IB2014/059162

A. CLASSIFICATION OF SUBJECT MATTER
INV. B65D85/10
ADD.

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
B65D

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

EP0-Internal, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	EP 2 138 411 A1 (GD SPA [IT]) 30 December 2009 (2009-12-30) abstract; claim 1; figures 1-5 paragraph [0016] - paragraph [0037] -----	1-16
X	WO 2012/085196 A1 (PHILIP MORRIS PROD [CH]; REVELLY JACQUES [CH]; FORESTIER JACQUES [CH]) 28 June 2012 (2012-06-28) abstract; figures 1-3 page 11, line 9 - page 12, last line -----	1,15,16
X	EP 1 839 845 A1 (G D S S P A [IT] GD SPA [IT]) 3 October 2007 (2007-10-03) cited in the application abstract; figures 1,7,8 paragraph [0017] - paragraph [0044] -----	1,15,16



Further documents are listed in the continuation of Box C.



See patent family annex.

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Date of the actual completion of the international search

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INTERNATIONAL SEARCH REPORT

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