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(71) Applicant: GIMA TT S.R.L. [IT/IT]; Via Tolara di Sotto, 121/A, 1-40064 Ozzano dell’Emilia, Bologna (IT).

(72) Inventor: DRAGHETTI, Fiorenzo; c/o Gima TT S.r.l., Via Tolara di Sotto, 121/A, 1-40064 Ozzano dell'Emilia, Bologna (IT).


Declarations under Rule 4.17:
— of inventorship (Rule 4.17(iv))

(54) Title: RIGID CONTAINER WITH HINGED LID

(57) Abstract: The present invention refers to a rigid package for smoking articles comprising: a bundle (4) of articles; an internal wrapper (3) that encloses the bundle (4) of articles; a rigid external container (2) that houses the internal wrapper (3) and that has an open extremity (21); and a rigid collar (5) that partially projects from the open extremity (21) of the external container (2), said collar (5) being placed between the internal wrapper (3) and the external container (2); an interspace (7) that is present between the internal wrapper (3) and the external container (2), in which the collar (5) comprises at least one top wall (53) arranged at a predefined distance with respect to a top wall (33) of the internal wrapper (3).
Published:

— with international search report (Art. 21(3))
Title: "Rigid container with hinged lid"

DESCRIPTION

Field of application
The present invention relates to a rigid container with a hinged lid and to a corresponding packaging method.

In the following description reference is made, for the sake of convenience, to a rigid cigarette package with hinged lid, without in any way limiting the present invention in its general scope.

Prior art

Normally a rigid cigarette package with hinged lid includes an internal wrapper that encloses a bundle of cigarettes and an external rigid container that houses the internal wrapper.

It is common practice, to optimize the amount of space made available by the package, to make an internal wrapper that is tightly enclosed by the external container, i.e. the package is completely occupied by the bundle of cigarettes contained in the internal wrapper.

When a cigarette package is made that contains a limited number of cigarettes, for example ten cigarettes, this external package has dimensions that are proportionally reduced, so that it substantially occupies half the space of a container having double the amount of cigarettes, for instance twenty.

One problem of rigid cigarette packages of reduced dimensions consists in the fact that the space that remains available on the outside surface is likewise reduced, so that also the amount of information that can be presented on the outside surfaces of such reduced-size packages
will be limited. In addition, in countries where there is a legal obligation to dedicate a certain minimal space to health warnings, it may be that packages of reduced dimensions do not offer the minimally required surface area and also that there is insufficient room to insert other desired information.

The prior art document US-A-5158664 describes a cigarette package of standard dimensions that contains a bundle of cigarettes that occupies less space thanks to the use of an internal frame.

The technical problem at the base of the present invention is therefore that of designing a rigid package for smoking articles, in particular cigarettes, that solves the inconveniences of the prior art described above, and in particular that is extremely practical, manageable, within the context of a simple and rational constructive solution.

The aim of the present invention is that of meeting the above needs and at the same time overcoming the inconveniences described above with reference to the prior art.

**Summary of the invention**

This aim is obtained by a rigid package for smoking articles, in accordance with claim 1 of the present invention.

The dependent claims describe preferred and particularly advantageous embodiments of the package according to the invention.

Furthermore, this aim is also obtained by a packaging method to make a rigid package of the previously defined type.

Further characteristics and advantages will become apparent from
the detailed description to follow, of a preferred but not exclusive embodiment of the present invention with reference to the figures included as non-limiting examples.

**Brief description of the figures**

Figure 1 shows a perspective view of a rigid package for smoking articles with the lid partially open, according to the present invention;

Figures 2, 3 and 4, show a lateral, frontal and top view respectively of the package of figure 1, with the lid completely open;

Figure 5 shows a plan view of an extended collar of figures 1-4;

Figure 6 shows a perspective view of a folded collar of figure 5;

Figure 7 shows a perspective view of the package of figure 1 with the lid closed and the external container shown as transparent;

Figure 8 shows an alternative embodiment of the collar wrapped around a wrapper with cigarettes;

Figure 9 shows a plan view of an extended collar of figure 8.

**Detailed description**

With reference to figures 1-4, the reference number 1 is used to generally indicate a rigid package for smoking articles, in particular cigarettes. The package 1 comprises an external container 2 made of stiff paper or cardboard, with a cup-like shape and an internal wrapper 3 housed inside the container 2. The internal wrapper 3 encloses the bundle 4 of cigarettes of a parallelepiped shape (Fig.4).

The external container 2 presents an open upper extremity 21 and it is equipped with a lid 22, having a cup-like shape and being hinged to the container 2 along a hinge 23 to rotate, with respect to the container
between an open position (illustrated in figures 1-3) and a closed position (not illustrated) of the open upper extremity 21.

The lid 22, when it is in its closed position, lends a rectangular parallelepiped shape to the external container 2 with a top wall and a bottom wall, parallel to and opposite each other, two large lateral walls, parallel to and opposite each other, and two small lateral walls, also parallel to and opposite each other. In particular a large lateral wall defines a front wall of the external container 2, whereas the other large lateral wall defines a rear wall of the external container 2. Between the lateral walls and the front and rear walls four longitudinal edges are defined, in this example right-angled, whereas between the top and bottom walls and the front, rear and lateral walls eight transverse edges are defined.

The package 1 further comprises a rigid collar 5 (i.e. made of cardboard or stiff paper), which is folded around the internal wrapper 3 to cover at least partially an upper portion of the internal wrapper 3 and which is attached (usually by means of gluing) to the external container 2 or to the internal wrapper 3 itself or even to both the internal wrapper 3 and to the external container 2. The internal wrapper 3 is in turn attached by means of gluing to the external container 2 at a point where the collar 5 that is placed between the internal wrapper 3 and the external container 2 is not present. The collar 5 partially projects from the open upper extremity 21 (together with the internal wrapper 3 that it partially covers) and involves a corresponding internal surface of the lid 22 when that lid 22 is placed in the closed position. Preferably the
collar 5 has a pair of barbs 6 (shown in figure 4) that project laterally to engage the lateral walls of the lid 22 in order to keep the lid 22 in the closed position.

Advantageously between the internal wrapper 3 and the external container 2 there is at least one empty interspace.

In the illustrated example two lateral interspaces 7 are formed between the internal wrapper 3 and the external container 2.

In practice, the internal wrapper 3 is smaller than the external container 2, as on the sides of the internal wrapper 3 two interspaces are formed.

The interspace 7 is comprised between the lateral wall of the external container 2 and the lateral wall of the internal wrapper 3.

The collar 5 comprises a front wall 51, which is internally located in the central area that is in contact with a front wall of the internal wrapper 3 and externally placed in contact with the front wall of the external container 2; two lateral walls 52, which are laterally placed with respect to the front wall 51, are externally placed in contact with the lateral walls of the external container 2 and internally they face each other in the respective interspace 7; two top walls 53, which internally face in the respective interspace 7 and, when the lid 22 is in the closed position, a gap is formed between two top walls 53 and the internal side of the top wall of the external container 2, i.e. the lid 22.

In practice the internal wrapper 3 extends upwards for a portion that forms a lateral ridge with the respective top wall 53 of the collar 5.

In the area in which the collar 5 partially extends out from the
extremity 21, a central portion is removed from the front wall 51 of the collar 5 to form a front access opening. The portion is removed along a U-shaped cutting line.

The internal wrapper 3 has a parallelepiped shape with a front wall 31, which is externally placed in contact with the collar 5; two lateral walls 32, located laterally with respect to the front wall 31, are externally located facing the respective interspace 7; a top wall, which, when the lid 22 is in its closed position, is externally placed in contact with the top wall of the external container 2; and a rear wall, which is externally placed in contact with the rear wall of the external container 2.

According to what is illustrated in figures 5 and 6 the collar 5 is made of a single blank 50 that is folded around the internal wrapper 3. The blank 50 comprises: a main panel 51' which forms the front wall 51 of the collar 5; two panels 53' which form the top walls 53 of the collar 5 and which are divided from the main panel 51' by a respective transverse weakened line 60; and two panels 52' to form the lateral walls 52 of the collar 5, placed on opposite sides of the main panel 51' and divided from the main panel 51' by two longitudinal weakened lines 61. Furthermore the blank 50 comprises two tabs 53" that are glued internally to the two panels 53' forming the top walls 53' of the collar 5, and they are placed on opposite sides of the panels 53' and divided from the panels 53' by the longitudinal weakened line 61.

In order to better block the position of the smaller internal wrapper 3 placed inside the larger external container 2, the top walls 53 of the
collar 5 have their free edges in contact with the lateral wall 32 of the internal wrapper 3 so as to distance the internal wrapper 3 from the external container 2 at the interspace.

In particular, the distance between the lateral wall of the external container 2 and the lateral wall of the internal wrapper 3 is held at a fixed distance by the top wall 53 of the collar 5 that places itself right between the lateral wall of the external container 2 and the lateral wall of the internal wrapper 3.

The top walls 53 of the collar 5 are located coplanar to each other and parallel to and distanced from the top wall 33 of the internal wrapper 3.

Thanks to this positioning the internal wrapper 3 cannot move inside the larger external container 2 and the collar 5 holds the internal wrapper 3 firmly and well-positioned at the centre of the external container 2.

Naturally it is also possible to have a different position for the internal wrapper 3 with respect to the external container 2.

For example, by making the dimensions of the top walls 53 of the collar 5 of a particular size it is possible to block the internal wrapper 3 in a position that is different from the central one, which is the result when the two top walls 53 of the collar 5 are identical.

The placement of a top wall 53 of the collar 5 at a height that is less than the height of the internal wrapper 3 makes it possible to obtain optimal stabilization of the internal wrapper 3.

Moreover, the top walls 53 have their lateral edge 53a in direct
contact with the lateral walls 32 of the internal wrapper 3, again at a
pre-set distance with respect to the top wall of the internal wrapper 3.

Basically the lateral edges 53a of the top walls 53 of the collar 5
are not folded, but come in direct contact with the internal wrapper 3,
which results in an extremely simple but effective support structure.

According to an alternative embodiment shown in figures 8 and 9,
in which the same numbered references are used as previously, the
collar can present two lateral recesses, indicated as 55 in figure 8, that
are placed in direct contact with the internal wrapper 3.

Each of these recesses is made by applying a pair of parallel cuts
56 to create a collar portion between the cuts that is folded.

The pair of cuts 56 runs perpendicular and passes along the
respective longitudinal weakened line 61, cutting a portion of the main
panel 51' (which forms the front wall 51 of the collar 5) and a portion of
the respective panel 52' (which constitutes the lateral wall 52 of the
collar 5).

In the present description and in the enclosed claims, the reference
to the collar should be interpreted as any internal reinforcing element
intended to hold in a firm way the internal wrapper of smaller
dimensions than the external wrapper.

As will be appreciated from the description the rigid package for
smoking articles according to the present invention makes it possible to
meet the needs and overcome the drawbacks discussed in the
introductory part of the present description with reference to the prior
art.
In fact it is possible to use an external container of standard dimensions, for example a container for twenty cigarettes, to contain also a smaller number of cigarettes, for example ten, while at the same time preserving an ordered and functional placement inside an internal wrapper of appropriate dimensions, and held firmly inside a larger external container.

Obviously, in order to meet contingent and specific needs a person skilled in the art can apply numerous modifications and variations to the findings disclosed, all of which are contained by the scope of protection of the invention as defined by the following claims.
CLAIMS

1. Rigid package for smoking articles comprising:
a bundle (4) of articles;
an internal wrapper (3) that encloses the bundle (4) of articles;
a rigid external container (2) that houses the internal wrapper (3) and
that has an open extremity (21); and
a rigid collar (5) that partially projects from the open extremity (21) of
the external container (2), said collar (5) being placed between the
internal wrapper (3) and the external container (2);
an interspace (7) that is present between the internal wrapper (3) and
the external container (2), characterized in that
the collar (5) comprises at least one top wall (53) arranged at a
predefined distance with respect to a top wall (33) of the internal
wrapper (3).

2. Package (1) according to claim 1, wherein said top wall (53) of the
collar (5) is arranged parallel to said top wall (33) of the internal
wrapper (3).

3. Package (1) according to claim 1 or 2, wherein said top wall (53) of
the collar (5) presents a lateral edge (53a) that is in direct contact with
the internal wrapper (3) to distance the internal wrapper (3) from the
external container (2) at the interspace (7).

4. Package (1) according to any of the preceding claims, wherein the
collar (5) comprises two of said at least one top wall (53) arranged on
opposite sides of the internal wrapper (3) and facing the interspaces (7)
formed on the two opposite sides (32) of the internal wrapper (3).
5. Package (1) according to any of the preceding claims, wherein the internal wrapper (3) is attached to the external container (2), at a point where there is no collar (5) placed between the internal wrapper (3) and the external container (2).

6. Package (1) according to any of the preceding claims, wherein the external container (2) comprises a lid (22) hinged along the open extremity (21), an empty space being formed between the lid (22) and the top wall (53) of the collar (5) when the lid (22) is in the closed position.

7. Package (1) according to any of the preceding claims, wherein the lateral walls (52) of the collar (5) are in contact with the lateral walls of the external container (2).

8. Package (1) according to any of the preceding claims, wherein the collar (5) comprises at least one lateral recess (55) that is placed in direct contact with the internal wrapper (3).

9. Package (1) according to claim 8, wherein said lateral recess (55) is formed by a limited portion of the lateral wall and of the front wall of the collar folded towards the inside of the collar.

10. Package (1) according to claim 9, wherein said limited portion of the collar (5) is made by applying a pair of parallel cuts (56).

11. Package (1) according to any of the preceding claims, wherein the collar (5) is made from a single blank (50) that is folded around the internal wrapper (3), the blank (50) comprising:

   a first panel (51′) that constitutes a front wall (51) of the collar (5);

   two second panels (53′) that constitute the top walls (53) of the collar
(5), each second panel (53') being divided from the first panel (51') by a respective transverse weakened line (60); and two third panels (52') which constitute the lateral walls (52) of the collar (5), are located on opposite sides of the first panel (51') and divided from the first panel (51') by two longitudinal weakened lines (61).

12. Package (1) according to claim 11, wherein the blank (50) comprises two parallel cuts (56) that are transverse to the two longitudinal weakened lines (61), said cuts being applied on the first panel (51') and on the third panel (52') in order to create a recess (55) of the collar (5) that will come in direct contact with the internal wrapper (3).

13. Packaging method for the creation of a rigid package for cigarettes; the packaging method comprising the steps of:

- arranging a sheet of internal wrapper;
- folding the sheet of wrapper around a bundle (4) of articles to create an internal wrapper (3) that encloses the bundle (4) of articles;
- folding a first blank around the internal wrapper to create a rigid external container (2) that houses the internal wrapper (3);
- folding a second blank (50) which constitutes a collar (5) around the internal wrapper (3) before folding the first blank around the internal wrapper (3),

the packaging method is characterised in that it further comprises the steps of folding the two second panels (53') of the second blank (50) in such a way as to create a respective top wall (53) of the collar (5) located in such a manner that said respective top wall (53) will be placed at a predefined distance with regard to a top wall (33) of the internal
wrapper (3).
INTERNATIONAL SEARCH REPORT

A. CLASSIFICATION OF SUBJECT MATTER

INV. B65D5/66 B65D85/10 B65D5/50

ADD.

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

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
B65D B65B

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)

EPO-Internal, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

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Further documents are listed in the continuation of Box C.
See patent family annex.

* Special categories of cited documents:
  "A" document defining the general state of the art which is not considered to be of particular relevance
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NL-2280 HV Rijswijk
Tel. (+31-70) 340-2040; Fax: (+31-70) 340-3016

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