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## PACK OF RIGID HINGE-LID TYPE FOR

 TOBACCO PRODUCTSInventors: Igino Conti, Bologna (IT); Angelo Li Vigni, Bologna (IT); Patrizia Persi, Monte S. Pietro (IT); Fiorenzo
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## ABSTRACT

A rigid pack with a hinged lid for tobacco products appears as a container (3) presenting an open top (4) surrounded by a free edge (3a), and a lid (5) hinged to the container along a crease line (6) and presenting a free bottom edge (5a) . When the lid (5) occupies the closed position, the two free edges ( $\mathbf{3} a, 5 a$ ) meet along a closure line (15) of which at least one portion describes a path deviating at least in part from a path parallel to the hinge line (6) and exhibiting a highlighted area (21) along at least part of its length. The highlighted area (21) serves to accentuate the closure line (15) and can be printed, if intended simply to make the line more clearly visible, or alternatively, obtained by embossing or by applying a layer of material having a high coefficient of friction with the additional end in view of providing a roughened surface which besides accentuating the closure line (15) also facilitates the operation of opening the lid (5).


FIG. 1


FIG. 3


FIG. 4


FIG. 5


FIG. 7


FIG. 8


FIG. 9


FIG. 10


FIG. 11


FIG. 12


FIG. 13


FIG. 14


# PACK OF RIGID HINGE-LID TYPE FOR TOBACCO PRODUCTS 

## TECHNICAL FIELD

[0001] The present invention relates to a pack of rigid type with a hinged lid for tobacco products.
[0002] The term "pack" used throughout the following specification can be taken to mean either a carton serving to contain a plurality of packets of cigarettes, or a single packet containing a group of cigarettes or tobacco products in general.

## BACKGROUND ART

[0003] In general, a rigid pack of the aforementioned type is fabricated from a precreased flat diecut blank and comprises a container, a lid hinged to a rear edge of the container and rotatable thus about a hinge line in such a way as to close an open end of the selfsame container, and a reinforcing frame disposed partly inside the container. The frame is anchored to a front face and to two flank faces of the container, and functions as a stabilizing element serving to retain the lid in the position assumed when the pack is closed.
[0004] Conventionally, when packs of the type in question are closed, the free bottom edge of the lid and the free top edge of the container meet in mutual contact along a closure line, and in particular, the portions of the respective edges coinciding with the front face of the pack are disposed parallel with the hinge line.
[0005] The prior art also embraces packs wherein the two free edges, or rather the parts of these same edges coinciding at least with the portion of the closure line occupying the front face of the pack, appear skew and are not disposed parallel to the hinge line.
[0006] It has been found by experiment that this latter solution assures a more effective closure of the lid, as it affords a larger area of contact between the inside of the lid and the reinforcing frame.
[0007] It has also been observed, with this solution, that consumers accustomed to handling the traditional type of packet have trouble in locating the edge of the lid at first touch, and moreover that they experience greater difficulty when opening the lid, especially when breaking open a new packet, by reason of the aforementioned larger area of contact between the frame and the lid, and are liable as a result to damage the packet.
[0008] The object of the present invention is to overcome the above noted drawbacks.

## DISCLOSURE OF THE INVENTION

[0009] The stated object is realized according to the present invention in a pack of rigid hinge-lid type for tobacco products, exhibiting a substantially parallelepiped appearance and comprising a container with an opening that defines a free top edge, also a lid hinged to the container along a respective hinge line and presenting a respective bottom edge which when occupying a closed position in contact with the free top edge of the opening presented by the container defines a closure line of which at least one part, coinciding at least with a front face of the pack, describes a
path deviating at least partly from a path parallel to the hinge line, characterized in that it presents a highlighted area located along at least one part of the closure line and serving to accentuate the selfsame closure line.
[0010] The invention will now be described in detail, by way of example, with the aid of the accompanying drawings, in which:
[0011] FIGS. 1 to 10 illustrate a pack according to the present invention, viewed schematically and in perspective, in particular a packet of cigarettes shown in a number of possible embodiments and pictured in open and closed configurations;
[0012] FIGS. 11 and 12 illustrate further embodiments of a pack according to the present invention, viewed schematically and in perspective;
[0013] FIGS. 13 and 14 illustrate a pack according to the present invention, viewed schematically and in perspective, in particular a carton containing packets of cigarettes shown in two possible embodiments and pictured in open and closed configurations.
[0014] With reference to FIGS. 1 to 10 of the drawings, 1 denotes a pack for tobacco products, in its entirety, embodied in this particular instance as a rigid packet 2 serving to contain a group of cigarettes (not illustrated), comprising a cupped container $\mathbf{3}$ with an open top end 4 surmounted by a lid 5 also of cupped embodiment, joined to the container 3 along a hinge line 6 and rotatable thus between an open position, illustrated in FIGS. 2, 4, 6, 8 and 10, and a position in which the open top end 4 is closed, illustrated in FIGS. $1,3,5,7$ and 9 .
[0015] The container 3 presents a bottom end face 7, a front face 8, a rear face 9 and two flank faces 10. The free top edges $\mathbf{8} a$ and $\mathbf{1 0} a$ of the front face $\mathbf{8}$ and the flank faces 10 combine to establish a free top edge $3 a$ of the container 3, coinciding thus with the aforementioned open top end 4 which is directed toward the lid 5 .
[0016] In like manner, the lid 5 presents a front face 11, a rear face 12, two flank faces 13 , and a top end face 14.
[0017] The front face $\mathbf{8}$ of the container $\mathbf{3}$ and the front face $\mathbf{1 1}$ of the lid 5 make up the front face $2 a$ of the packet 2, whilst the flank faces $\mathbf{1 0}$ of the container and the flank faces $\mathbf{1 3}$ of the lid make up the flank faces $2 b$ of the packet 2.
[0018] The front face 11 and the flank faces $\mathbf{1 3}$ of the lid present respective free edges $11 a$ and $\mathbf{1 3} a$ combining to establish the bottom edge $5 a$ of the lid 5 and coinciding thus with an open bottom end, which is directed toward the container $\mathbf{3}$ when the lid $\mathbf{5}$ occupies the closed position.
[0019] In the closed position, the meeting edges $3 a$ and $5 a$ of the container $\mathbf{3}$ and the lid $\mathbf{5}$ establish a line of closure 15 on the packet 2.
[0020] The single packet 2 contains an inner wrapper 16 enveloping a group of cigarettes (not illustrated) and presents a stiffening frame 17 interposed between the rigid material of the packet 2 and the inner wrapper 16, which is anchored to the container 3 and comprises a portion $17 a$ positioned internally of the container $\mathbf{3}$ and a portion $\mathbf{1 7 b}$ projecting from the container through the open top end 4.
[0021] More precisely, the frame 17 presents a breast piece 18 secured in part to the front face $\mathbf{8}$ of the container 3 , on the inside, and two side pieces 19 secured in part to the flank faces $\mathbf{1 0}$ of the container 3 , on the inside.
[0022] The breast piece $\mathbf{1 8}$ of the frame $\mathbf{1 7}$ terminates uppermost in an edge 20 of "U" profile disposed with the concave outline directed toward the lid 5 .
[0023] In the examples of FIGS. 1 to $\mathbf{1 0}$ showing the packet 2 in the closed condition, that is to say with the bottom free edge $5 a$ of the lid 5 engaging the free top edge $3 a$ of the container 3 , the two meeting edges combine to establish the aforementioned closure line 15 , which describes a path deviating from a path parallel to the aforementioned hinge line 6 .
[0024] In the case of FIG. 1, more exactly, the closure line 15 describes an arcuate path across the front face $2 a$, of which the concave outline is directed toward the bottom end face 7, and two arcuate extremities on the flank faces $2 b$ each with the concave outline directed toward the top end face 14.
[0025] In the case of FIG. 3 the closure line $\mathbf{1 5}$ describes an arcuate path with the concave outline directed toward the top end face 14, both on the front face $2 a$ and on the flank faces $2 b$.
[0026] In the examples of 5, 7 and 9 , finally, the closure line $\mathbf{1 5}$ describes an undulating path that can extend across both the front face $2 a$ and the flank faces $2 b$ of the packet 2 , as illustrated in FIG. 5, or the front face $2 a$ only as illustrated in FIGS. 7 and 9.
[0027] It will be clear that the closure lines $\mathbf{1 5}$ shown in the accompanying drawings are illustrated by way of example only, and that in practice the lines $\mathbf{1 5}$ might describe any given path deviating at least in part from a path parallel to the hinge line 6 along which the lid 5 and the container 3 are joined.
[0028] According to the present invention, the single packet 2 presents a highlighted area 21 occupying at least one part of the closure line 15 and serving to accentuate the selfsame line 15.
[0029] In the examples of FIGS. 1, 2, 5 and 6 the highlighted area 21 extends along the full length of the closure line 15, whilst in the examples of FIGS. 3, 4, 7, 8, 9 and 10 the highlighted area 21 extends along only a part of the closure line 15 .
[0030] The highlighted area 21 is presented by the lid 5 in all of the embodiments illustrated, and might be printed, as in the examples of FIGS. 1, 2, 3 and 4. Alternatively, the highlighted area 21 might be produced by means of a reeding or embossing operation as in the example of FIGS. 5 and 6. Finally, the highlighted area 21 might be produced by applying a layer 22 of a substance having a high coefficient of friction, such as paint, lacquer or the like, as in the examples of FIGS. 7 to $\mathbf{1 0}$.
[0031] To this end, it is important to observe that in the case of the examples illustrated both in FIGS. 5 and 6 and in FIGS. 7, 8, 9 and 10, the respective highlighted areas 21 afford a roughened surface intended both to render the
closure $\mathbf{1 5}$ more readily identifiable and to facilitate the operation of easing the lid 5 away from the container 3 .
[0032] Moreover, it should be specified that the highlighted areas 21 obtained by embossing in the example of FIGS. 5 and 6, or by the application of material in the examples of FIGS. 7, 8, 9 and 10, can be produced in combination with and/or in addition to a printing operation.
[0033] As illustrated by way of example in FIGS. 11 and 12, all of the packs 1 illustrated in FIGS. 1 to $\mathbf{1 0}$ can be fashioned with bevelled longitudinal corner edges 23 (FIG. 11) or with rounded longitudinal corner edges 24 (FIG. 12).
[0034] Similarly, as illustrated in FIGS. 13 and 14, the packs 1 can be embodied as cartons $\mathbf{2 5}$ serving to contain a plurality of packets 2 . The carton 25 will exhibit the same characteristics as described for the packets of FIGS. 1 to 12, including the possibility of incorporating bevelled or rounded longitudinal corner edges.
[0035] The packs $\mathbf{1}$ or $\mathbf{2 5}$ might be fashioned adopting any one of the geometries described in Italian patent applications B099A 000029 filed Jan. 21, 1999, B02000A 000343 filed Jul. 7, 2000, BO2000A 000367 filed Jun. 23, 2000 or BO2000A 000676 filed Nov. 20, 2000, or any other given geometry.

1) A pack of rigid hinge-lid type for tobacco products, exhibiting a substantially parallelepiped appearance and comprising a container (3) with an opening (4) that defines a free top edge ( $\mathbf{3} a$ ), also a lid (5) hinged to the container (3) along a respective hinge line (6) and presenting a respective bottom edge ( $5 a$ ) which when occupying a closed position in contact with the free top edge ( $3 a$ ) of the opening (4) presented by the container (3) defines a closure line (15) of which at least one part, coinciding at least with a front face (2a) of the pack (1), describes a path deviating at least partly from a path parallel to the hinge line (6), characterized in that it presents a highlighted area (21) located along at least one part of the closure line (21) and serving to accentuate the selfsame closure line (15).
2) A pack as in claim 1, wherein the highlighted area (21) extends along the entire length of the closure line (15).
3) A pack as in claim 1 or 2 , wherein the highlighted area (21) is presented by the lid (5).
4) A pack as in claims 1 to 3 , wherein the highlighted area (21) is printed.
5) A pack as in claims 1 to 4 , wherein the highlighted area (21) is produced by embossing so as to produce a roughened surface.
6) A pack as in claims 1 to 4 , wherein the highlighted area (21) is produced by applying a layer (22) of a substance with a high coefficient of friction so as to produce a roughened surface.
7) A pack as in claims 1 to 6 , presenting bevelled corner edges (23).
8) A pack as in claims 1 to 6 , presenting rounded corner edges (24).
9) A pack as in claims 1 to 8 , embodied as a packet (2) of cigarettes.
10) A pack as in claims 1 to 8 , embodied as a carton (25) containing a plurality of packets (2) of cigarettes.
