



(12) **EUROPEAN PATENT APPLICATION**

(43) Date of publication:
12.12.2007 Bulletin 2007/50

(51) Int Cl.:
B65D 85/10 (2006.01) B65D 77/04 (2006.01)

(21) Application number: **06290949.4**

(22) Date of filing: **09.06.2006**

(84) Designated Contracting States:
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC NL PL PT RO SE SI SK TR
Designated Extension States:
AL BA HR MK YU

(71) Applicant: **British American Tobacco France SAS**
92100 Boulogne Bilancourt (FR)

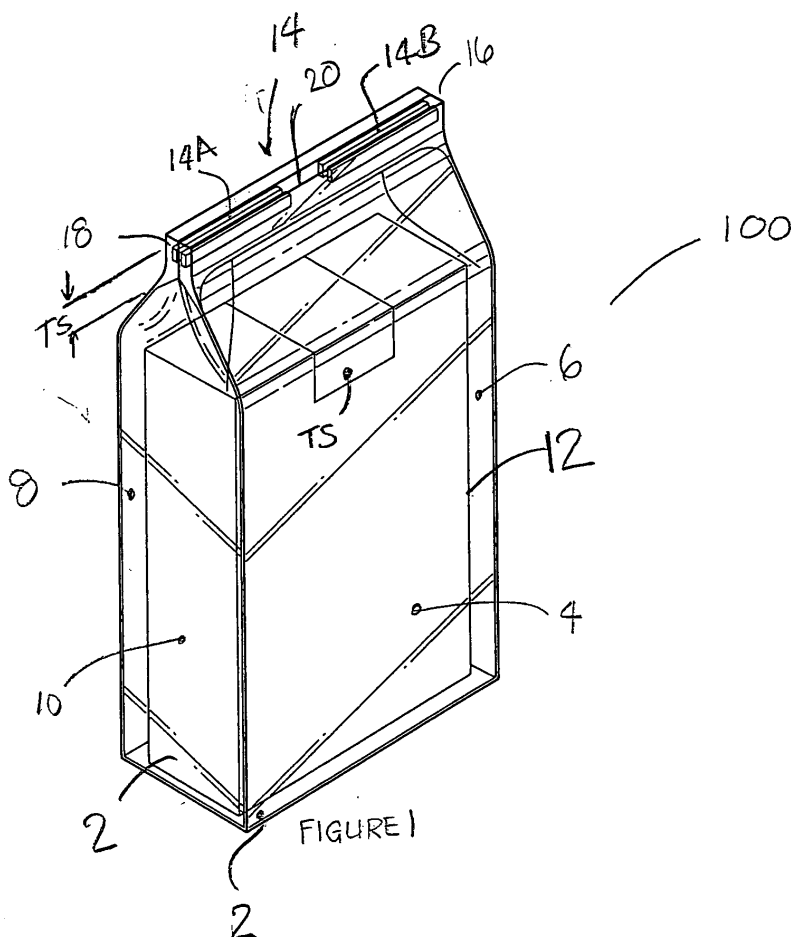
(72) Inventor: **Ruggaber, Urs c/o Ruggaber Design**
4800 Zofingen (CH)

(74) Representative: **Harding, Charles Thomas**
D Young & Co
120 Holborn
London EC1N 2DY (GB)

(54) **Container with magnetic sealing means**

(57) A combination of a pliable impermeable container (100) and tobacco related products, which may or may not be arranged in a packet (12). The container (100)

being sealable by sealing means (14A, 14B) provided by magnets. In addition, a container (100) for containing tobacco related products, which container is of pliable impermeable material.



Description

[0001] The present invention relates to a container for containing tobacco-related products. Tobacco related products may include, for example, cigarettes, cigars, cigarillos, tobacco or smokeless tobacco.

[0002] Generally packaging for tobacco related products such as cigarettes, cigars and cigarillos is in the form of a cardboard box having a hinged lid to close the pack to contain the products therein. Alternatively, a slide and shell pack may be used where, for example, cigarettes are held on a tray like member and are accessed by sliding the tray from the shell surrounding the tray. The slide and shell pack is closed when the tray is enclosed and surrounded by the shell.

[0003] Both of the packs described above are generally made from cardboard or stiff paper in the form of a cut blank. The blank is foldable to form a packet, and generally the surface that forms the exterior of the formed packet is coated to provide a wipe clean surface, which also assists in reducing the ingress of damp to the cigarettes through the packet, thereby keeping the contents fresh. However, by folding the blank into the structure described above, the structure has overlapping sections which may provide voids through which dampness may enter the packet and cause deterioration of the cigarettes contained therein due to damp.

[0004] Accordingly, the present invention provides a combination comprising smoking articles contained in a pliable impermeable container that is sealable by sealing means applied thereto. The pliable impermeable container is sealable such that a substantially airtight seal is formed. The container may be made of rubber, latex or silicon rubber. The container may be translucent or transparent. Preferably, the container is transparent. It is preferred that the container includes printing on at least part of its outer surface. Printing may be included on at least part of the inner surface, wherein such printing should be readable from the outside.

[0005] Preferably, the container has a substantially rectangular base, each edge forming the base has a panel attached thereto and upstanding therefrom to provide a container having a substantially rectangular cross-section. Sealing means may be provided at one end of the container, which end is preferably opposite the base.

[0006] Preferably, closure of the container by the sealing means is effected by the bringing into face-to-face contact end sections of the two opposite facing panels, which are carrying the sealing means. Accordingly, the sealing means on both faces will communicate with the sealing means on the other opposite face to effect closure and preferably form a substantially air tight seal. On closing, preferably the other panels, without sealing means attached thereto, deform by folding into the container to effect substantially airtight sealing.

[0007] Preferably, closure of the container by the sealing means is magnetic closure, wherein the sealing means is provided by one or more magnets located on

each of the two opposite panels. The one or more magnets are preferably located at a section on the panel proximate the end of the container.

[0008] Preferably, the two opposite facing panels carrying the magnet(s) are those panels upstanding from the longer edges of the rectangular base. The placement of the sealing means (magnets) near the ends of those panels upstanding from the longer edges of the rectangular base reduces the possibility that closure of the pack may damage the smoking articles contained inside. In addition, the amount of material used in producing the container may be kept to a minimum.

[0009] The magnet(s) may be attached to the interior surface of the two opposite panels such that the magnetic surface is exposed and closure is effected by magnet-to-magnet contact. For an almost airtight seal using magnet-to-magnet contact it is preferred that the one or more magnets extends along substantially the whole width of the panel. The magnet(s) on each panel are arranged to magnetically attract the magnet(s) on the other panel.

[0010] Alternatively, the magnet(s) may be embedded in the material forming the container, such that closure is effected by face-to-face contact of the interior surfaces of the two panels. For a substantially airtight seal using face-to-face contact the magnet(s) may extend over part or the whole width of the panel. Preferably, the sealing means for face-to-face sealing is provided by two bar magnets arranged with a space between them on each of the two opposite facing panels. The space between the magnets provides a magnet free zone/void.

[0011] Providing a magnet free zone/void may assist in opening the closed container. Opening may be effected by inserting an implement such as a fingernail between the two panels at the location of the magnet free zone/void or between two magnets such as to break the magnetic seal. Alternatively, applying a transverse load to the ends of the sealed section such that the seal is breakable at the magnet free zone/void, which will simultaneously break the magnetic contact.

[0012] The tobacco related products may be loosely arranged inside the container. Preferably, the tobacco related products are arranged in a package, which is insertable into the container. The package may be of any suitable packing material, such as paper, card or film. The package may suitably be any conventional pack for tobacco-related products, such as a hinged-lid pack. Preferably, the package is made of foil or foiled paper. The package may be further wrapped in cellophane.

[0013] A further aspect of the present invention provides a container for tobacco related products, which container is a pliable impermeable container that is sealable by sealing means applied thereto.

[0014] Further particular and preferred aspects of the present invention are set out in the claims. Features of the dependent claims may be combined with features of the independent claims as appropriate and in combinations other than those explicitly set out in the claims.

[0015] Embodiments of the present invention will be

described by way of example only with reference to the accompanying drawings in which:

Figure 1 is a perspective view of a transparent container containing a packet of cigarettes;
 Figure 2 is a front view of the container of figure 1;
 Figure 3 is a side view of the container of figure 1;
 Figure 4 is a plan view of the top of the container of figure 1;
 Figure 5 is a plan view showing the base of the container of figure 1; and
 Figures 6A to 6C illustrate the form of the container when open (Figure 6A), the form of the container when partially closed (Figure 6B) and the form of the container when closed (Figure 6C)

[0016] Referring to figures 1 to 5, the container 100 is intended for containing tobacco related products in the form of a bundle of smoking articles, such as cigarettes, which bundle is wrapped in foiled paper to form a package 12. In the example shown the package 12 is wrapped in a cellophane outer wrapper. However, the tobacco related product may be arranged in its conventional packaging, for example cigarettes may be arranged in a conventional cigarette packet (hinge-lid or slide and shell) or tobacco may be contained in a pouch, which packaging 12 is placed inside the container 100.

[0017] The container 100 is made of a transparent impermeable material such as rubber, silicon or latex, which is pliable to the touch.

[0018] The container 100 has a substantially rectangular cross-section as is clearly recognised by the form of the base 2 as illustrated in figure 5. Upstanding from the edges of the base 2 there are four substantially rectangular panels 4, 6, 8, and 10. The length/depth of each of the panels forming the front and rear panels 4, 8 of the container 100 are substantially the same and they are slightly longer than the two side panels 6 and 10. The difference in length of the front and rear panels 4, 8 relative to the side panels 6, 10 is substantially the same size as the top section TS, which provides the sealing closure for the container 100. Each of the panels 4, 6, 8 and 10 are longer/deeper than the package 12 contained within the container 100.

[0019] The container 100 is deeper than the package 12 inside. The difference in length/depth of the container 100 relative to the package 12 contained inside is such that the container 100 can be closed by bringing the top section TS of the interior faces of the front and rear panels 4 and 8 into contact with each other whilst also avoiding the application of pressure to the package 12 and its contents.

[0020] In the example shown the package 12 contains cigarettes and has a length/depth of 86mm, a width of 53mm and a breadth of 18mm. The container 100, which is suitable for holding the package 12 has front and rear panels 4 and 8, which are approximately 113mm long/deep and side panels 6 and 10, which are approximately

105mm long/deep. The width of the container 100 is about 60mm and the breadth is about 30mm. It will be appreciated that the dimensions of the container 100 are suited to the size of the package to be contained inside and as such the dimensions of the illustrated example are not intended to be limiting. The container may be dimensioned appropriately to contain more than one package arranged side-by-side and/or stacked.

[0021] The difference in length/depth of the container 100 relative to the package 12 should be at least equivalent to the breadth of the container 100, which in the example illustrated is 30mm. Alternatively, the difference in length/depth of the container 100 relative to the package 12 may be expressed by a formula in terms of the breadth dimension of the package 12 contained inside. The difference may be at least expressed as the square root of the sum of half the breadth of the package squared and the breadth of the package squared.

[0022] The attainment of an almost airtight seal and neat closure is assisted by the arrangement of the moulding of the container material at the top section TS where the side panels 6, 10 and the front and rear panels 4, 8 join. Referring to figures 6A to 6C, the profile, in cross-section of the moulding at the top section TS is in the form of a triangle TR on both the front and rear panels 4, 8, adjacent to the region where they join the side panels 6, 10. Where the side panels 6, 10 join the front and rear panels 4, 8 the top edge of the side panels 6, 10 is formed with radius R on its ends. Movement of the front and rear panels 4, 8 towards each other to effect closure causes the side panels 6, 10 to fold into the container 100 (see figure 6B) thereby providing a neat and almost air tight closure.

[0023] A closure member 14 is provided at the top section TS of each of the front and rear panels 4 and 8. Magnets arranged in the top section TS of the front and rear panels 4 and 8 provide the closure member 14. One or more magnets 14A and 14B on each face may be used to effect closure. Magnet(s) may be provided on substantially the whole width of the face to which it is applied or on part of the width. Magnet(s) may be attached to the surface of each face, but preferably the magnets 14A and 14B are embedded in the material forming the container 100.

[0024] In the example illustrated, there are two (2) bar magnets 14A, and 14B embedded in the material forming the container 100 in the top section TS of each of the panels 4 and 8. The magnets 14A and 14B are spaced apart from each other to define a magnet-free zone or void 20 between them. The magnets being embedded into the material of the container 100 means that on closing an almost airtight seal is provided by the face-to-face contact near to the two edges of the two panels 4 and 8.

[0025] In another example (not illustrated) the closure member 14 is not embedded, but instead is fixed at the top section TS to the interior surfaces of the front and rear panels 4 and 8 such that on closure magnet-to-magnet contact is achieved. In this example the magnet(s)

14A and 14B would preferably be applied across the whole width of the top section TS of the front and rear panels 4 and 8 to provide an almost airtight seal.

[0026] Bringing the top sections TS of the front and rear panels 4 and 8 together such that the magnetic attraction/pull of the magnets 14A and 14B will assist closes the container to provide an almost airtight seal. On closing, the top section of the side panels 6 and 10 deform inwardly to assist in providing the almost airtight seal, whilst also forming a neat closure. The upper end of the container 100 deforms on closing the container and when viewed from the direction of the side panels 6 and 10 it takes the form of a triangle (see figures 1, 3 and 6C). Due to the form and the arrangement of the moulding and the shaped edges at the top of the front, rear and side panels 4, 6, 8, 10 and the magnets 14A and 14B closure of the container 100 is effected almost automatically by applying the slightest touch to one or both of the front and rear panels 4, 8 at a position coincident with or above the top of the package.

[0027] Prising the top section TS apart by, for example inserting the tip of a fingernail or the like into the junction of the magnets or into the area void of magnets 20 breaks the magnetic seal and thus opens the container 100. Alternatively, opening the closed container 100 may be effected by simultaneously pushing on, and towards each other, the ends 16 and 18 of the closed end, which correspond with the sides of the container 100. The application of load P along the closed end by pressing on ends 16 and 18 will cause the panels 4 and 8 to separate at the void 20 in the direction P'. Separation at the void 20 will cause simultaneous separation at the magnets 14A and 14B on each panel, thus opening the container 100.

[0028] The container 100 may be printed/decorated on the outside and/or inside surfaces with indicia, badges and/or other matter, which includes relevant brand information. Alternatively, or in addition, the package 12 containing the tobacco-related products may be decorated with indicia, badges, advertisements etc., which would be viewable through the transparent or translucent outer provided by the container 100.

[0029] In the examples shown (see figures 1 to 5), the package 12 is a bundle comprising twenty (20) cigarettes, which are wrapped in aluminium foiled paper. The package 12 has a folded top, which has a tape seal T applied for removal by the consumer such that the package 12 is opened to allow access to the cigarettes therein. The package may also be wrapped in an outer wrapper made of cellophane. Preferably, the cigarettes are removable from the foiled package 12, without the need to remove the whole package 12 from the container 100.

[0030] The package 12 may be any package containing tobacco-related products, which package 12 is to include hinge-lid packets and slide and shell packets and pouches containing for example tobacco or smokeless tobacco. The container 100 is formed from pliable material such as rubber, latex or silicon rubber. The container 100 may be made by moulding. Alternatively, folding

sheet material may make the container 100. Individual sheets may provide each panel, which sheets/panels may be joined together at respective edges to form the container.

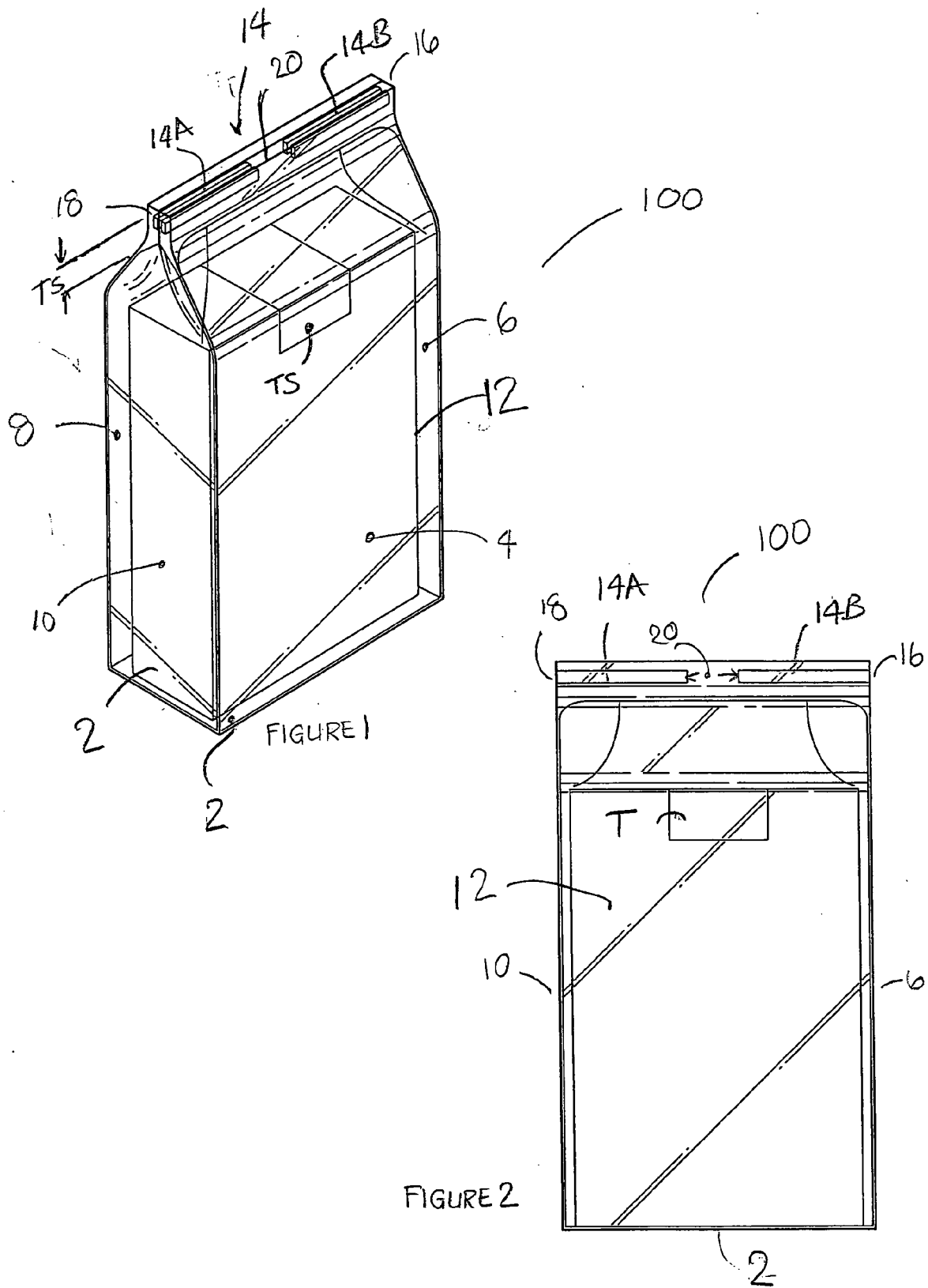
[0031] The example of the container 100 as illustrated in figures 1 to 6 is shown to have rectangular edges. However, the form of the edges is not essential to the invention. The edges adjoining the front, rear, side and bottom panels of the container may be rounded, bevelled or elliptical or they may take another form, which includes those known in the art.

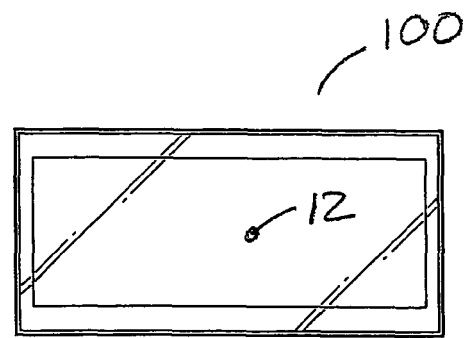
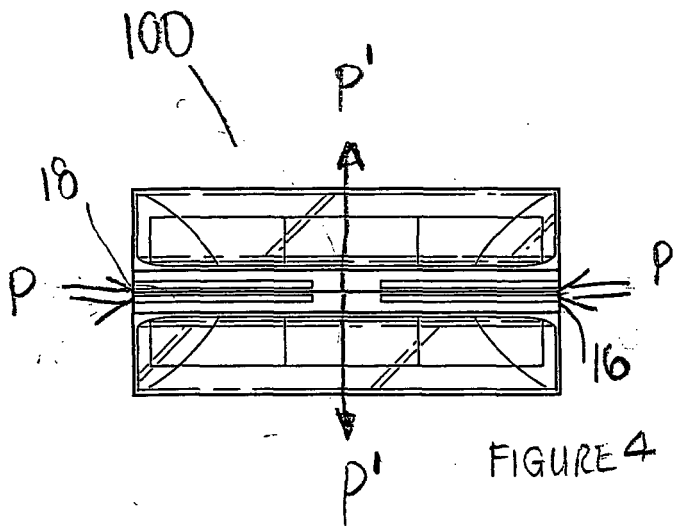
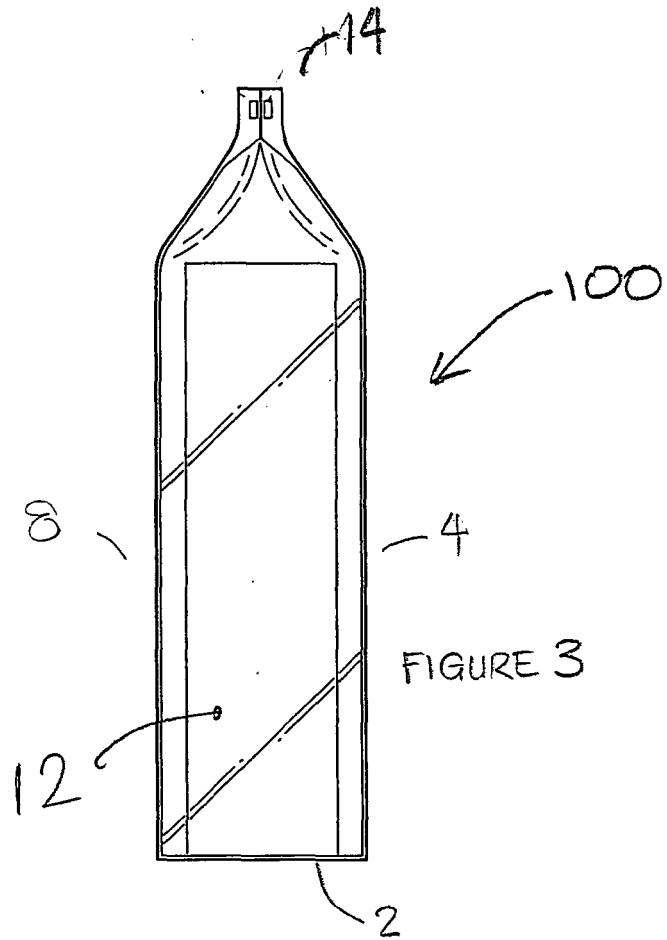
Claims

1. A combination comprising tobacco related products contained in a pliable impermeable container that is sealable by sealing means applied thereto.
2. A combination according to Claim 1, wherein the sealing means is provided at one end of the container.
3. A combination according to claim 1 or 2, wherein the container has a substantially rectangular base, each edge forming the base having a panel attached thereto and upstanding therefrom to provide a container having a substantially rectangular cross-section and wherein the sealing means is provided on each of and proximate the end of two opposite facing panels, which end is opposite the base.
4. A combination according to claim 3, wherein closure of the container is effected by bringing into face-to-face contact end sections of the two opposite facing panels, which are carrying the sealing means.
5. A combination according to claim 3 or 4, wherein the two opposite facing panels carrying the sealing means are those panels upstanding from the longer edges of the rectangular base.
6. A combination according to any one of the preceding claims, wherein the sealing means is provided by one or more magnets.
7. A combination according to claim 6, wherein the one or more magnets is located in corresponding positions on each of two opposite facing panels.
8. A combination according to claim 7, wherein the one or more magnets is fixed to the interior surfaces at corresponding positions on each of the two opposite facing panels.
9. A combination according to claim 7, wherein the one or more magnets is embedded in the material of the container in corresponding positions on each of two

opposite facing panels.

10. A combination according to any one of claims 6 to 9, wherein the one or more magnets extend across the width of the panel to which they are attached. 5
11. A combination according to any one of claims 6 to 9, wherein the one or more magnets extend partially across the width of the panel to which they are attached. 10
12. A combination according to any one of the preceding claims, wherein closure is effected by touching the container in the region coincident with or above a top edge of the tobacco related products contained inside. 15
13. A combination according to any one of the preceding claims, wherein the container is of rubber, latex or silicon rubber. 20
14. A combination according to any one of the preceding claims, wherein the container is transparent or translucent. 25
15. A combination according to any one of the preceding claims, wherein the smoking articles are arranged in a packet.
16. A combination according to claim 14, wherein the packet is made from material comprising foil. 30
17. A container for tobacco related products, which container is a pliable impermeable container that is sealable by sealing means applied thereto. 35
18. A container according to Claim 17, wherein the sealing means is provided at one end of the container.
19. A container according to Claim 17 or 18, comprising a substantially rectangular base, wherein each edge forming the base comprises a panel attached thereto and upstanding therefrom to provide a container having a substantially rectangular cross-section and wherein the sealing means is provided on each of and proximate the end of two opposite facing panels, which end is opposite the base. 40
45
20. A container according to Claim 19, wherein closure of the container is effected by bringing into face-to-face contact end sections of the two opposite facing panels, which are carrying the sealing means. 50
21. A container according to Claim 19 or 20, wherein the two opposite facing panels carrying the sealing means are those panels upstanding from the longer edges of the rectangular base. 55
22. A container according to any one of the claims 17 to 20, wherein the sealing means is provided by one or more magnets.
23. A container according to claim 22, wherein the one or more magnets is located in corresponding positions on each of two opposite facing panels.
24. A container according to claim 23, wherein the one or more magnets is fixed to the interior surfaces at corresponding positions on each of the two opposite facing panels.
25. A container according to claim 23, wherein the one or more magnets is embedded in the material of the container in corresponding positions on each of two opposite facing panels.
26. A container according to any one of claims 22 to 25, wherein the one or more magnets extend across the width of the panel to which they are attached.
27. A container according to any one of claims 22 to 25, wherein the one or more magnets extend partially across the width of the panel to which they are attached.
28. A container according to any one of the claims 17 to 27, wherein closure is effected by touching the outside of the container in the region proximate the closure edge.
29. A combination according to any one of the claims 17 to 28, wherein the container is of rubber, latex or silicon rubber.
30. A container according to any one of claims 17 to 29, wherein the container is transparent or translucent.





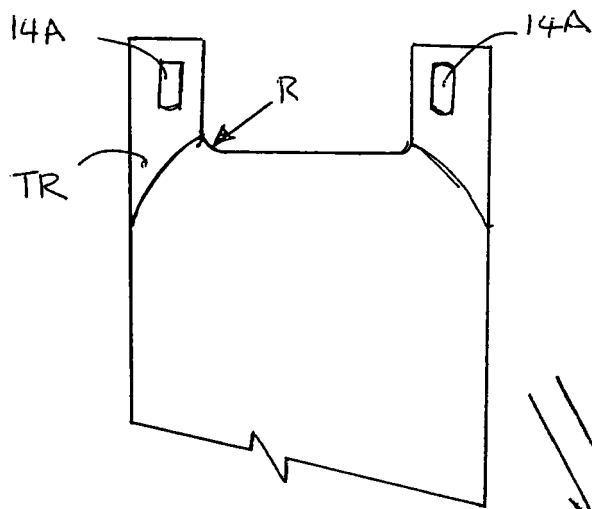


FIGURE 6A

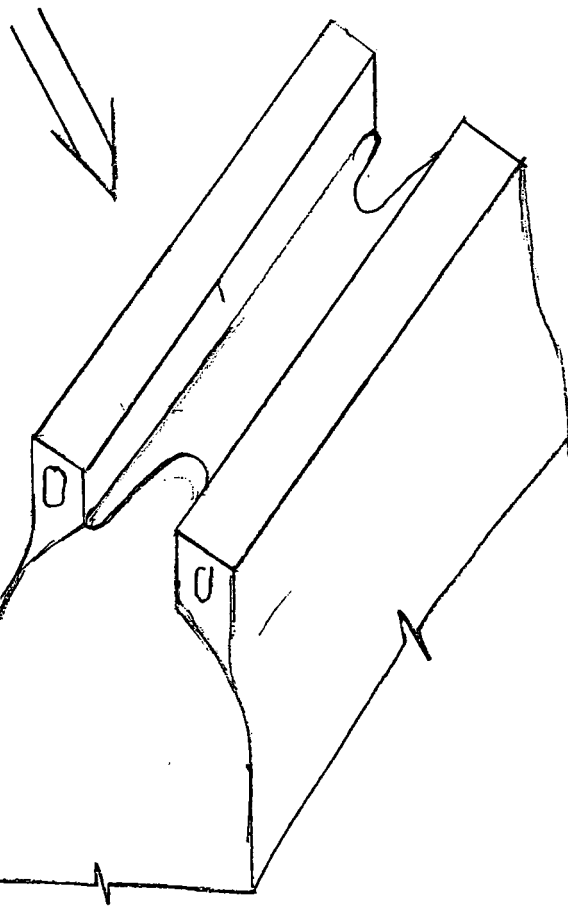


FIGURE 6B

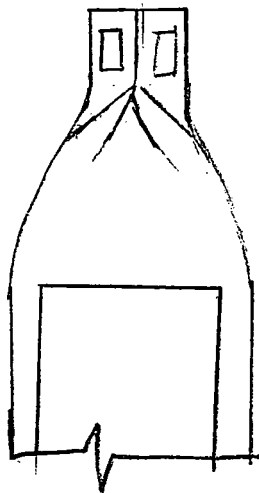


FIGURE 6C



European Patent
Office

EUROPEAN SEARCH REPORT

Application Number
EP 06 29 0949

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	DE 299 05 925 U1 (NIEMEYER BV [NL]) 17 August 2000 (2000-08-17)	1-12, 16-28	INV. B65D85/10 B65D77/04
Y	* page 5, paragraph 4 - page 6, paragraph 1; claim 9; figures 1,4,6 * -----	13	
X	WO 95/19754 A (MINNESOTA MINING & MFG [US]) 27 July 1995 (1995-07-27) * pages 10-14; figures 1-3 * -----	1-12, 17-28	
X	US 4 033 013 A (PETERSON JOHN ELWOOD) 5 July 1977 (1977-07-05) * column 1, lines 55-61; claims 3,4; figures 1-3,5,7 * -----	1-12, 17-28	
X	US 2 020 804 A (SEGAL HYMAN R) 12 November 1935 (1935-11-12) * page 2, column 1, line 55 - page 2, column 2, line 8; figure 6 * -----	1,2, 13-15, 17,18, 29,30	
Y	US 4 702 376 A (PAGLIARO ERNEST H [US]) 27 October 1987 (1987-10-27) * column 2, lines 15-32 * -----	13	TECHNICAL FIELDS SEARCHED (IPC) A24F B65D
The present search report has been drawn up for all claims			
Place of search Munich		Date of completion of the search 23 March 2007	Examiner Cazacu, Corneliu
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			

3
EPO FORM 1503 03.82 (P04C01)



European Patent
Office

Application Number

EP 06 29 0949

CLAIMS INCURRING FEES

The present European patent application comprised at the time of filing more than ten claims.

- ☐ Only part of the claims have been paid within the prescribed time limit. The present European search report has been drawn up for the first ten claims and for those claims for which claims fees have been paid, namely claim(s):
- ☐ No claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for the first ten claims.

LACK OF UNITY OF INVENTION

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

see sheet B

- ☒ All further search fees have been paid within the fixed time limit. The present European search report has been drawn up for all claims.
- ☐ As all searchable claims could be searched without effort justifying an additional fee, the Search Division did not invite payment of any additional fee.
- ☐ Only part of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the inventions in respect of which search fees have been paid, namely claims:
- ☐ None of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims, namely claims:



European Patent
Office

**LACK OF UNITY OF INVENTION
SHEET B**

Application Number
EP 06 29 0949

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

1. claims: 1-5, 17-21/6-12, 22-28

location/type of the sealing means

2. claims: 13, 14, 16 and 29, 30

container material

3. claim: 15

manner in which the smoking articles are arranged

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 06 29 0949

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

23-03-2007

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
DE 29905925 U1	17-08-2000	NONE	
WO 9519754 A	27-07-1995	DE 69407200 D1 DE 69407200 T2 EP 0741555 A1 JP 9508287 T	15-01-1998 09-07-1998 13-11-1996 26-08-1997
US 4033013 A	05-07-1977	NONE	
US 2020804 A	12-11-1935	NONE	
US 4702376 A	27-10-1987	EP 0262321 A2 JP 63100046 A	06-04-1988 02-05-1988