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(71) Applicant: JT International SA 1202 Geneva (CH)

(72) Inventors:

 FORECAST, Christopher London, SW15 5FG (GB)  FRITH, Thomas Teddington, Middlesex TW11 0LX (GB)

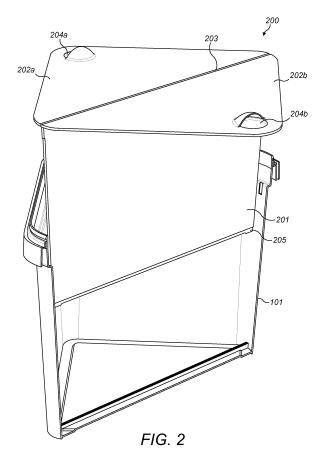
TAYLOR, Oliver
 Tenterden, Kent TN30 7AP (GB)

 WADSWORTH, Luke Harrogate, Yorkshire HG1 4TD (GB)

(74) Representative: Gill Jennings & Every LLP
The Broadgate Tower
20 Primrose Street
London EC2A 2ES (GB)

## (54) **STORAGE CONTAINER**

(57) A container (100) for storing tobacco is disclosed. The container comprises an enclosure (101) with an opening at the top; a removable insert (200) configured to slide into the enclosure such that it divides the enclosure into a first storage chamber (301a) and a second storage chamber (301b), wherein the first storage chamber is closed by a first lid (202a) and the second storage chamber is closed by a second lid (202b), the first and the second lids being hinged to an upper edge of the insert such that the first lid can be opened independently of the second lid.



#### Description

#### Field of the invention

**[0001]** The present invention relates to a storage container. In particular, the present invention relates to a storage container for storing environmentally sensitive natural products such as tobacco, or smoking articles comprising such products, the storage container providing safe storage as well as easy access to the stored product and/or article.

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#### **Background**

[0002] Some users of smoking articles prefer making their own cigarettes by rolling tobacco in a sheet of rolling paper. Alternatively, by tubing loose tobacco cut-filler with a filling machine into empty cigarette tubes comprising an empty cylindrical paper tube attached in the usual way to a filter component with a tipping paper. This is not only cheaper but also allows the users to choose their desired flavor and quantity of tobacco in their cigarettes. A storage container for storing tobacco in bulk is often used by such users. Generally, such storage container may used by a user several times throughout a day or a week at least. The user takes a small amount of tobacco from the container when needed and closes the container to preserve the remaining tobacco for later use.

**[0003]** However, every time the container is opened the entire tobacco content is exposed to the atmosphere and the stored tobacco tends to dry out. Moreover, the user may not remember to close the lid of the container while he is rolling or tubing a cigarette, thereby exposing the stored tobacco to air over extended periods. Thus, the quality of tobacco stored in the container deteriorates over time. The user may dispose off the leftover tobacco in the container when that happens. This leads to unnecessary wastage and an increase in cost for the user.

**[0004]** Therefore, there exists a need for a storage container that can store tobacco in fresh state over an extended period of time, while allowing the user to easily access it from the container when desired.

**[0005]** It is an object of the aspects of the present invention to provide a solution to the above mentioned or other problems.

#### Summary

**[0006]** According to a first aspect of the present invention, there is provided a container for storing tobacco comprising an enclosure with an opening at the top; a removable insert configured to slide into the enclosure such that it divides the enclosure into a first storage chamber and a second storage chamber, wherein the first storage chamber is closed by a first lid and the second storage chamber is closed by a second lid, the first and the second lids being hinged to an upper edge of the insert such that the first lid can be opened independently of the

second lid.

**[0007]** Advantageously, the container can be used for storing the tobacco for routine use as well as for future use. As the lids can be opened independently of each other, it is possible to preserve the freshness of the tobacco stored in the chamber for future use. Moreover, by pulling out the removable insert, it is easy to move tobacco from one chamber to another hygienically and conveniently. Moreover, the container is easy of manufacture and has low manufacturing costs.

**[0008]** Preferably, the enclosure and the insert comprise complementary engagement features to attach the insert to the base of the enclosure.

**[0009]** Advantageously, this allows the insert to be firmly held inside the enclosure.

**[0010]** Preferably, the enclosure further comprises at least two grooves formed on its inner surface to guide the insert into the enclosure.

**[0011]** Advantageously, this allows easy insertion of the insert into the enclosure. These grooves may also further assist in firmly holding this insert inside the enclosure.

**[0012]** Preferably, the first and the second lids are connected to the insert by a living hinge.

[0013] Advantageously, this allows flexible movement of the lids and also saves manufacturing costs as no additional component is needed to achieve this function.

**[0014]** Preferably, the container further comprises a locking mechanism to click open and close the lids on to the storage chambers.

**[0015]** Advantageously, this allows the lids to securely close the storage chambers.

**[0016]** Preferably, the container further comprises a sealing arrangement on either the lids or the enclosure so as to form a fluid barrier.

**[0017]** Advantageously, this allows preserving the freshness of the stored tobacco when the lids are closed.

**[0018]** Preferably, at least one of the lids further comprises a finger recess configured to engage with a user's finger to pull the lid upwards to provide access to the corresponding storage chamber.

**[0019]** Advantageously, this allows the user to easily open the lids to access the stored tobacco.

**[0020]** Preferably, the first and the second storage chambers are configured to be visually distinct from one another.

**[0021]** Advantageously, this allows the user to distinguish the chamber containing the tobacco for routine use from the chamber containing the tobacco for future use.

**[0022]** Preferably, at least one of the lids is transparent or translucent.

**[0023]** Advantageously, this allows the user to inspect the stored tobacco without opening the lid.

**[0024]** Preferably, the enclosure has a polygonal structure and the insert is configured to slide diagonally across two opposing edges of the enclosure.

**[0025]** Advantageously, this allows dividing the enclosure into two equal storage chambers.

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**[0026]** Preferably, the enclosure has a polygonal structure and the insert is configured to slide laterally between two opposing sides of the enclosure.

**[0027]** Advantageously, this allows dividing the enclosure into storage chambers of variable sizes.

**[0028]** Preferably, the living hinge is configured with a notch between the lids such that each lid can hinge about at least 90°.

**[0029]** Advantageously, this allows the lids to open fully vertically upwards.

**[0030]** Preferably, the container further comprises a cover configured to fit over the rim of the enclosure so as to cover the lids disposed over the storage chambers.

**[0031]** Advantageously, this allows forming an additional layer of protection over the storage chambers.

[0032] Preferably, the container described above is used for storing tobacco.

**[0033]** According to another aspect of the invention, there is provided an insert for a container comprising an elongate plate; and at least two flaps hinged along an upper edge of the plate such that at least one of the flaps is configured to rotate along a living hinge formed integrally in the upper edge of the plate.

**[0034]** Advantageously, the insert can divide a container into at least two storage chambers that can be used for different purposes. The flaps on the insert can be used as lids for the storage chambers. The insert can be easily removed from the container to either clean the container or store a large item. As the insert is formed as one integral unit, it has low manufacturing cost.

**[0035]** All of the features contained herein may be combined with any of the above aspects and in any combination.

#### Brief description of the drawings

**[0036]** For a better understanding of the invention and to show how embodiments of the same may be carried into effect, reference will now be made, by way of example, to the accompanying drawings in which:

Fig. 1 shows a perspective view of a storage container without lids according to an aspect of the present invention.

Fig. 2 shows a cross-sectional view of the container of Fig. 1 with an insert.

Fig. 3 shows a cross-sectional view of the storage container with the insert of Fig. 2 being inserted into the container.

Fig. 4 shows a cross-sectional view of the storage container with the insert fully contained inside the container.

Figs. 5A and 5B show closing and opening of a lid formed in the insert.

Fig. 6 shows a perspective view of the storage container with a top cover.

#### **Detailed description**

**[0037]** Various aspects of a storage container according to the present invention will be described based on the drawings. Dimensions, materials, shapes, relative dispositions and the like of components described in the present embodiment are not intended to limit the technical scope of the invention to only the dimensions, materials, shapes, relative dispositions and the like, unless otherwise especially specified.

[0038] Referring to Fig. 1, there is shown a storage container 100. According to an aspect of the invention, the container 100 comprises a cuboid-shaped enclosure 101 with a base 102 and walls forming the sides of the enclosure 101. The enclosure 101 is hollow from inside and open at the top to provide access into the enclosure. The container 100 has a rim 103 and a handle 104 is attached to the rim 103 to provide ease of carrying the container. The container 100 can be made of hard plastic such as polyethylene or polypropylene using any known process of injection moulding. The handle 104 is a Ushaped flat strip of plastic attached to two opposite sides of the rim 103 by any suitable fastening means such as, for example, pins arranged at the rim sides or ends of the handle 104 and being inserted into corresponding snap fitting holes arranged on the other of the rim sides or ends of the handle 104

**[0039]** It is to be understood that any suitable material and manufacturing technique can be used for making the container. Moreover, although the container 100 has been described as cuboidal-shaped, it can be made in any suitable shape such as circular, triangular, trapezoidal, or hexagonal. Moreover, the container 100 may be made of different length, width, or depth. Furthermore, the handle 104 may be semi-circular or have any other suitable shape. The handle 104 may or may not be formed of the same material as the enclosure 101.

[0040] Fig. 2 shows the enclosure 101 of the container 100 with an insert 200 according to an aspect of the invention. The insert 200 comprises an elongate, thin, and rigid plate 201, preferably formed of the same material as the enclosure 101. In current implementation, the insert 200 is a rectangular plate suitable for the cuboidshaped enclosure 101. The length of the plate 201 of the insert 200 is preferably equal to or slightly less than the depth of the enclosure 101. However, the width of the plate 201 is equal to either the side or a diagonal length of the enclosure 101 for the insert 200 to firmly fit inside the enclosure 101. The insert 200 can be inserted diagonally across two opposing edges or corners of the enclosure 101 (as shown in the figures). In this case, the enclosure 101 is divided into two equal, substantially triangular, storage chambers. Alternatively, the insert 200 can be inserted laterally between two opposing sides of the enclosure 101. In this case, depending on the place-

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ment of the insert along the sides of the enclosure, the enclosure is divided into two equal or unequal storage chambers. The plate 201 also has an engagement feature such as a projection 205 formed along its bottom edge, which aids in fixing the insert 200 to the base 102 of the enclosure 101, as explained in detail further below. [0041] The upper edge of the plate 201 has two flaps or lids 202a, 202b disposed on either side along a living hinge 203. According to one aspect, the lids 202a, 202b are triangular-shaped flaps with a common side lying on the living hinge 203. The lids 202a, 202b have preferably the same thickness and are formed of the same material as the plate 201. In other words, the insert 200 is formed as an integral unit comprising the plate and the lids. The corners of the lids 202a, 202b are shaped such that they conform to the corners of the enclosure 101, in particular at the rim level thereof as visible in Fig. 4. The lids 202a, 202b are also provided with finger recesses 204a, 204b respectively. The finger recesses 204a, 204b are preferably integrally moulded in the lids 202a, 202b.

[0042] As the lids 202a, 202b are attached to the plate 201 via the living hinge 203, they are free to move with respect to the plate 201. The lids 202a, 202b are formed along the living hinge 203 such that there is clearance for the lids to freely move upwards. However, it is possible to restrict the downward movement of the lids 202a, 2002b such that they lie in tension at 90° to the plate 201 but are free to be moved upwards to align with the plate 201.

**[0043]** The shape and size of the insert 200 is largely dependent on that of the enclosure 101. For example, for a circular-shaped enclosure, the width of the plate 201 would be equal to the diameter of the enclosure and the lids 202a, 202b would be semi-circular shaped.

[0044] Referring now to Fig. 3, which shows the insert 200 being guided into the enclosure 101. In the shown aspect of the invention, the insert 200 is slid into the enclosure 101 diagonally. The insert 200 is gently pushed into the enclosure 100 from the top and as it reaches the base 102 of the enclosure 101, the projection 205 engages with a complementing engagement feature such as a channel or a groove 302 provided in the base 102 of the enclosure 101. In this way, the insert 200 is held firmly inside the enclosure 101. Optionally, guiding grooves (not shown) may also be provided along the sides of the enclosure 101 to serve as directional aid while inserting the insert 200 into the enclosure 101. The guiding groves may also further strengthen the hold of the insert into the enclosure.

[0045] As more clearly shown in Fig. 4, when the insert 200 is completely held inside the enclosure 101, it divides the enclosure 101 into two chambers 301a, 301b. The lids 202a, 202b of the insert 200 are held at 90° to the plate 201 such that they cover the entire top opening of the enclosure 101. The left chamber 301a is covered by the left lid 202a and the right chamber 301b is covered by the right lid 202b.

[0046] The lids 202a, 202b are preferably made visu-

ally distinct from each other to help a user distinguish between two otherwise identical storage chambers. For example, to distinguish a chamber which has not yet been opened and the stored tobacco has not been exposed to the environment, from the one which is currently being used by a user for rolling or tubing smoking articles and the stored tobacco has already been exposed to the environment. This can be done in a number of ways, such as marking the lids 202a, 202b with different numbers or letters, making them of different colours, adding a pattern or the like. The lids 202a, 202b may also be made transparent or translucent for the user to be able to inspect the content inside without opening the lids.

[0047] Fig. 5A shows a partial side view of the container 100 with the lid 202a closed. The container 100 includes a locking mechanism to click open and close the lids 202a, 202b on to the storage chambers 301a, 301b. For example, in the current implementation, the rim 103 of the enclosure 101 has a protuberance or a bump 303 disposed on the corners such that the lids 202a, 202b can click open and close against it. However, any other suitable means may be employed to securely lock the lids on to the enclosure. As shown in Fig. 5B, the lid 202a can be opened independently of the lid 202b to access the substance stored inside the chamber 301a.

[0048] Although not shown in the figures, the container 100 can have a sealing arrangement on the lids 202a, 202b or the enclosure 101. For example, the lids 202a, 202b may have a seal or a gasket made of a flexible material such as rubber, or flexible lips of same material as the lids, disposed around their perimeter. The seal conforms to the sides of the enclosure 101 and forms a fluid barrier. This helps in preserving the freshness of tobacco stored inside the container 100.

[0049] As shown in Fig. 6, the container 100 has an outer cover 601 that can be placed over the enclosure 101 to cover the lids 202a, 202b. The cover 601 is secured over the outer edges of the rim 103 of the enclosure 101. The cover 601 forms an additional barrier against the atmosphere to the substance stored in the container 100. Moreover, the cover 601 also provides protection against accidental leakage if the lids 202a, 202b are not closed properly or become loose.

[0050] In use, the user fills one or both chambers 301a, 301b with fresh tobacco, for example from a pouched tobacco cut-filler, or buys from a store a container pre-filled with fresh tobacco in both chambers. The user then chooses one of the chambers for routine use and the other for future use. For example, let's say the user chooses the left chamber 301a for routine use and the right chamber 301b for future use. Whenever the user needs tobacco from the container 100, he simply engages a finger with the finger recess 204a to pull up the lid 202a to access the tobacco from the chamber 301a. By doing so, the tobacco stored in the chamber 301b is not exposed to the atmosphere and thus the moisture content in the stored tobacco is retained for a longer period of time. When the chamber 301a runs out of tobacco, the

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user simply pulls out the insert 100 from the enclosure 100 partially and tilts the container 100 sideways to transfer some of the fresh tobacco from the chamber 301b to the chamber 301a. After transferring the desired amount, the user pushes back the insert 200 into the base 102 of the enclosure 101. In this way, the user can move tobacco from one chamber to another without touching the stored tobacco, thus reducing the chances of contamination of tobacco stored in the container 100.

**[0051]** It is therefore advantageous to have the insert 200 removable as it limits the exposure of entire tobacco stored in the container 100 both during normal use and transfer. Moreover, the insert 200 can be removed completely if the user wishes to clean the container 100 or store any large item in the container 100.

**[0052]** Alternatively, a user may also choose, once the first chamber 301a is empty, to access the second one 301b directly by opening its lid 202b, leaving the first chamber 301a empty until further refill.

[0053] In an alternative arrangement, only one chamber is accessible from the top while the other is not. For example, the lid 202a can be opened and closed by the user to access the tobacco stored in the chamber 301a as described above, while the lid 202b may not be provided with a finger recess to restrict access to the chamber 301b from the top. This prevents the user from inadvertently opening the chamber containing the fresh tobacco for future use. However, in the same way as described above, even with this arrangement the user can transfer the content from one chamber to the other by pulling out the insert.

[0054] The storage container described above can be modified in various ways as long as it has at least two separate chambers that are securely sealed to protect the content inside. For example, the container may have an insert formed of two intersecting plates so that it can divide the enclosure in four chambers. In this arrangement, there will be four lids in the insert for closing the four chambers. The chambers may not be of equal size, for example, the daily use chamber may be made smaller than the future use chamber. Moreover, the lids may not open upwards but slide laterally along channels formed in the sides of the enclosure. Although the container in the present invention is primarily described to store tobacco, it can also be used to store cigarettes, cigars or any other items which may be affected by exposure to the atmosphere.

**[0055]** Although the present invention is described in terms of the embodiment set forth above, the invention should not be understood to be limited by the statements and the drawings configuring part of this disclosure. From this disclosure, various alternative embodiments, examples, and operational technologies will be obvious to those skilled in the art.

#### Claims

- 1. A container for storing tobacco comprising:
  - an enclosure with an opening at the top; a removable insert configured to slide into the enclosure such that it divides the enclosure into a first storage chamber and a second storage chamber,
  - wherein the first storage chamber is closed by a first lid and the second storage chamber is closed by a second lid, the first and the second lids being hinged to an upper edge of the insert such that the first lid can be opened independently of the second lid.
- The container of claim 1, wherein the enclosure and the insert comprise complementary engagement features to attach the insert to the base of the enclosure.
- The container of claim 1 or 2, wherein the enclosure further comprises at least two grooves formed on its inner surface to guide the insert into the enclosure.
- **4.** The container of any preceding claim, wherein the first and the second lids are connected to the insert by a living hinge.
- 30 5. The container of any preceding claim, wherein the container further comprises a locking mechanism to click open and close the lids on to the storage chambers.
- 6. The container of any preceding claim, wherein the container further comprises a sealing arrangement on either the lids or the enclosure so as to form a fluid barrier.
- 7. The container of any preceding claim, wherein at least one of the lids further comprises a finger recess configured to engage with a user's finger to pull the lid upwards to provide access to the corresponding storage chamber.
  - **8.** The container of any preceding claim, wherein the first and the second storage chambers are configured to be visually distinct from one another.
- 50 9. The container of any preceding claim, wherein at least one of the lids is transparent or translucent.
  - **10.** The container of any preceding claim, wherein the enclosure has a polygonal structure and the insert is configured to slide diagonally across two opposing edges of the enclosure.
  - 11. The container of claims 1 to 9, wherein the enclosure

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has a polygonal structure and the insert is configured to slide laterally between two opposing sides of the enclosure.

- **12.** The container of claim 10 or 11 as dependent directly or indirectly on claim 4, wherein the living hinge is configured with a notch between the lids such that each lid can hinge about at least 90°.
- 13. The container of any preceding claim, further comprising a cover configured to fit over the rim of the enclosure so as to cover the lids disposed over the storage chambers.
- **14.** Use of the container of any preceding claim for storing tobacco.
- **15.** An insert for a container comprising:

an elongate plate; and at least two flaps hinged along an upper edge of the plate such that at least one of the flaps is configured to rotate along a living hinge formed integrally in the upper edge of the plate. 20

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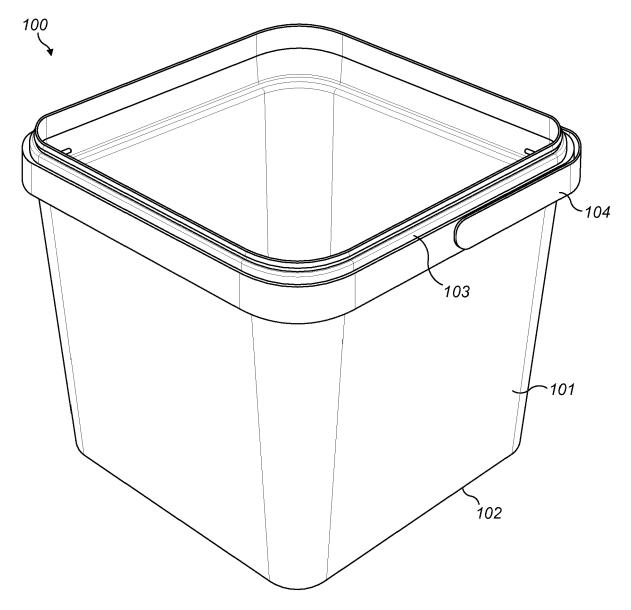
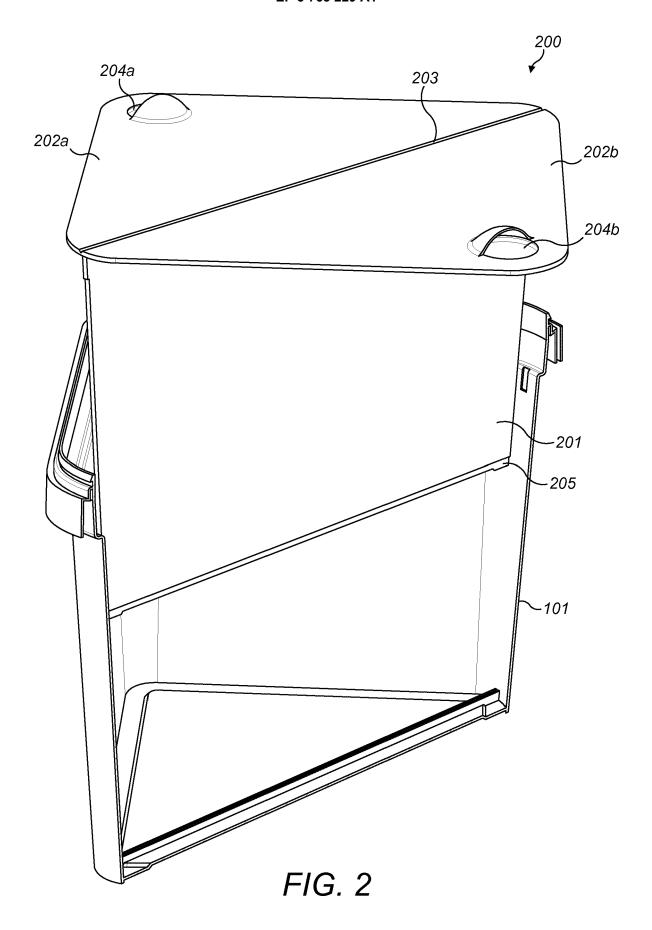
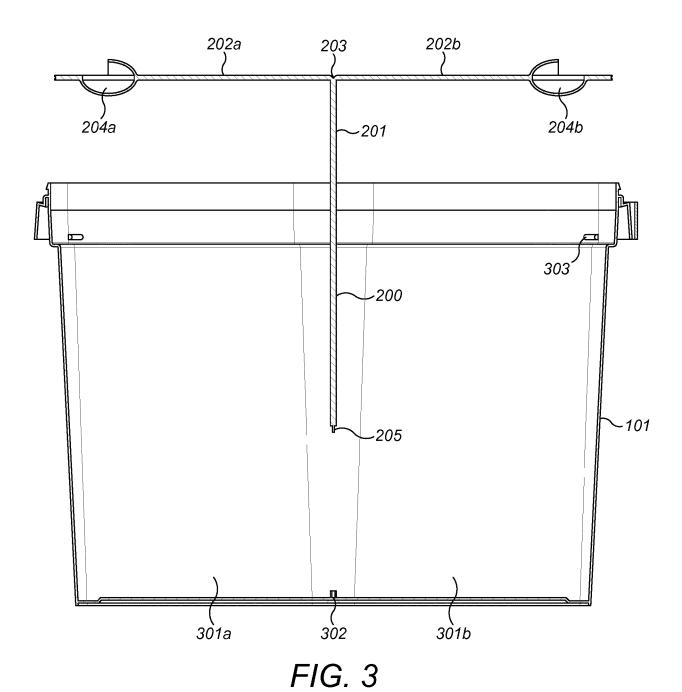


FIG. 1





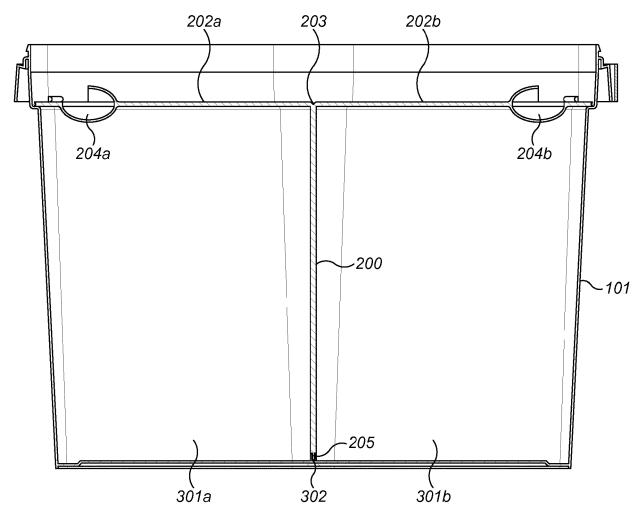


FIG. 4

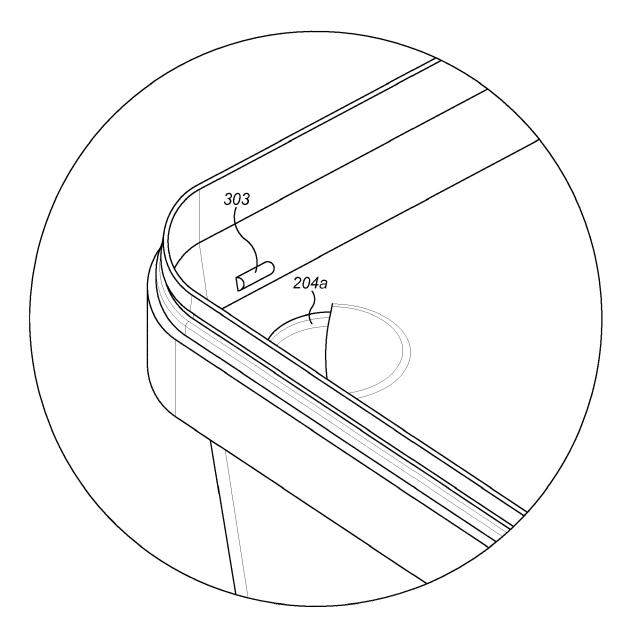


FIG. 5A

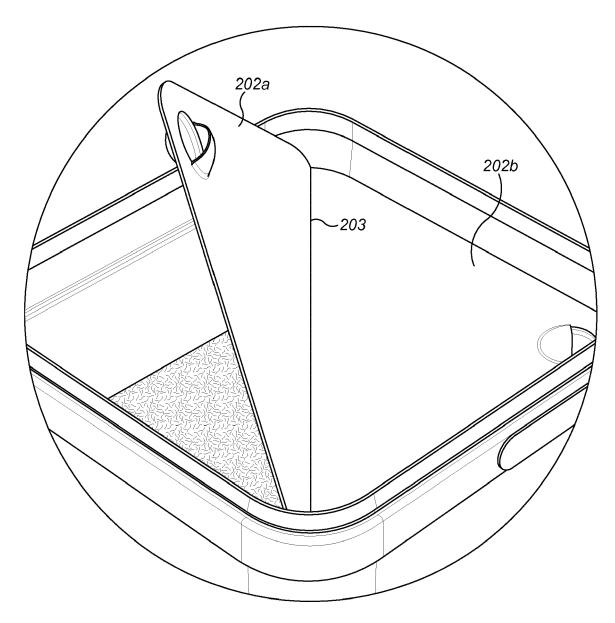
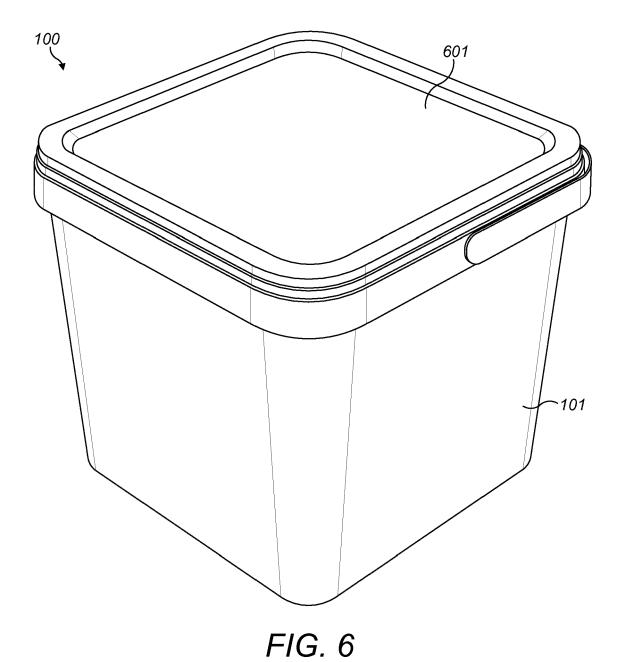


FIG. 5B





#### **EUROPEAN SEARCH REPORT**

Application Number EP 19 18 5849

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		DOCUMENTS CONSID					
	Category	Citation of decument with in	dication, where appropriate,	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)		
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20	Y	WO 2018/138639 A1 ( SA [CH]) 2 August 2 * page 23, lines 26	6				
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35	A	US 6 050 442 A (WYSOCKI EDWARD H [US]) 18 April 2000 (2000-04-18) * column 3, line 36 - column 5, line 19 *		1			
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3 50 (i)	-The present search report has been drawn up for all claims						
	Place of search  Munich		Date of completion of the search  10 January 2020 Koc		b, Michael		
3 03.82 (P04	X:par	CATEGORY OF CITED DOCUMENTS  T: theory or principle underlying the invention  E: earlier patent document, but published on, or  X: particularly relevant if taken alone  Y: particularly relevant if combined with another  D: document cited in the application					
50 (LOOPOL) 28 % 80 KM 1203 PM	doc A : tecl O : nor P : inte	ument of the same category nnological background n-written disclosure rmediate document	same category L : document cited for other reasons ckground				



Application Number

EP 19 18 5849

	CLAIMS INCURRING FEES					
10	The present European patent application comprised at the time of filing claims for which payment was due.					
	Only part of the claims have been paid within the prescribed time limit. The present European search report has been drawn up for those claims for which no payment was due and for those claims for which claims fees have been paid, namely claim(s):					
15	No claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for those claims for which no payment was due.					
20	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:					
25						
	see sheet B					
30						
	All further search fees have been paid within the fixed time limit. The present European search report has been drawn up for all claims.					
35	As all searchable claims could be searched without effort justifying an additional fee, the Search Division did not invite payment of any additional fee.					
40	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:					
45	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:					
50	1-14					
55	The present supplementary 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 (Rule 164 (1) EPC).					



# LACK OF UNITY OF INVENTION SHEET B

**Application Number** 

EP 19 18 5849

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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: 1-14

A container for storing tobacco comprising an enclosure with an opening at the top, a removable insert configured to slide into the enclosure such that it divides the enclosure into a first storage chamber and a second storage chamber, wherein the first storage chamber is closed by a first lid and the second storage chamber is closed by a second lid, the first and the second lids being hinged to an upper edge of the insert such that the first lid can be opened independently of the second lid.

2. claim: 15

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An insert for a container comprising an elongate plate and at least two flaps hinged along an upper edge of the plate such that at least one of the flaps is configured to rotate along a living hinge formed integrally in the upper edge of the plate.

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

EP 19 18 5849

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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.

10-01-2020

10	Patent document cited in search report	Publication date	Patent family member(s)	Publication date
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