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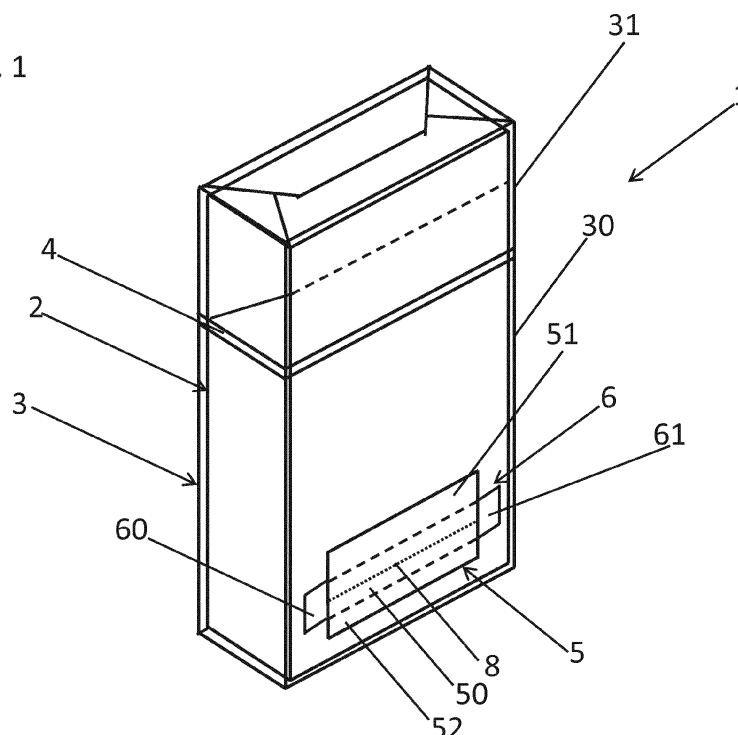
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(54) **PACKET OF SMOKING ARTICLES AND METHOD FOR MANUFACTURING THE SAME**

(57) Packet (1) of smoking articles and method for manufacturing the same, which packet (1) comprises: smoking articles; a container (2) that contains the articles; a wrapping (3) that wraps the container (2); a tear tape (4) that is fixed to the wrapping (3) to facilitate the removal of the same; a stamp (5) that is fixed to the container (2)

with the exception of a free portion (50); a tearing element (6) which is arranged between the container (2) and the stamp (5) at the free portion (50) and which protrudes from the free portion (50) with respective ends connected to the wrapping (3).

Fig. 1



Description

PRIORITY CLAIM

[0001] This application claims priority from Italian Patent Application No. 102017000068918, filed on 21/06/2017.

TECHNICAL FIELD

[0002] The present invention relates to a packet of smoking articles. In particular, the present invention relates to a packet of smoking articles which provides an outer wrapping and which has a stamp (or state stamp or tax seal) which must be torn when the wrapping is removed.

PRIOR ART

[0003] A packet of smoking articles is known from the patent EP 0 895 946. Said packet comprises: a container that contains a group of smoking articles; a wrapping that wraps the container; a tear tape which is fixed to the wrapping to facilitate the removal of the wrapping from the container; a stamp which is fixed to the container and to the wrapping and which is arranged between the tear tape and the wrapping. Therefore, when the tear tape is removed, the stamp is torn and a part of it remains fixed to the wrapping while another part remains fixed to the container.

[0004] The method for manufacturing the aforesaid known packet, also described in the document EP 0 895 946, provides, first of all, to fix the stamp to a sheet of wrapping material and then to fix the tear tape to the sheet of wrapping material so as to face the stamp. Subsequently, the container is wrapped with the sheet of wrapping material (to which the stamp and the tear tape have already been fixed).

[0005] The aforesaid packet, however, does not allow a free positioning of the stamp on the container. In fact, in the aforesaid known packet the position of the stamp is limited to the position of the tear tape.

[0006] Moreover, the fact of arranging the stamp first on the sheet of wrapping material and then wrapping the container with said sheet of wrapping material, makes it difficult to ensure a correct alignment of the stamp on the container with a consequent unpleasant effect.

[0007] The patent DE939977C describes a soft packet of cigarettes provided with a stamp which is arranged astride of an upper end and must be broken to access the cigarettes.

[0008] The patent application EP2548819A1 describes a rigid packet of cigarettes with a hinged lid provided with a stamp and an overwrapping made of transparent plastic material. According to a first embodiment, one end of the stamp is glued to a box with a hinged lid and the opposite end of the stamp is glued to the overwrapping so that, by eliminating the overwrapping, the

stamp is necessarily torn; according to a different embodiment, the two ends of the stamp are glued to the box with a hinged lid and a tear tape of the overwrapping is glued to a central portion of the stamp so that by eliminating the overwrapping the stamp is necessarily torn.

DESCRIPTION OF THE INVENTION

[0009] The object of the present invention is to provide a packet of smoking articles and a method for manufacturing the same that overcomes the aforementioned drawbacks.

[0010] The aforesaid object was obtained by means of a packet of smoking articles and by a method for manufacturing the same according to the appended claims.

BRIEF DESCRIPTION OF THE DRAWINGS

[0011] The present invention will now be described with reference to the attached drawings, which illustrate non-limiting embodiments thereof, wherein:

- Figure 1 is a perspective view of an embodiment of the packet object of the present invention;
- Figures 2-5 are perspective views of different steps of the method for manufacturing the packet of Figure 1;
- Figures 6-8 are perspective views of respective embodiments of a packet object of the present invention;
- Figures 9 and 10 are rear views of further embodiments of a packet object of the present invention.

PREFERRED EMBODIMENTS OF THE INVENTION

[0012] With reference to the attached figures, a packet of smoking articles object of the present invention has been generically denoted with the numerical reference 1.

[0013] The term "smoking article" refers to an article relating to the tobacco industry such as a cigarette, a cigar, an electronic cigarette, a cartridge for an electronic cigarette or a heat-not-burn product. Generally, a smoking article is an object having a cylindrical shape with longitudinal development along a respective development axis.

[0014] With reference to Figures 1-5, a first embodiment of the packet object of the present invention is described in the following.

[0015] The packet 1 comprises: a group of smoking articles; a container 2 that contains the group of smoking articles; a wrapping 3 that wraps the container 2; a tear tape 4 that is fixed to the wrapping 3 to facilitate the removal of the wrapping 3 from the container 2; and a stamp 5 (or state stamp or tax seal) that is placed on the container 2 inside the wrapping 3.

[0016] With reference, for example, to Figure 2, the container 2 is of the hinged-lid type. In said embodiment, the container 2 comprises a containment portion 20 hav-

ing a bottom wall 21, a lateral wall 22 which rises from the bottom wall 21 and an opening opposite to the bottom wall 21. In detail, the lateral wall 22 comprises a front wall, a rear wall 22a opposite and parallel to the front wall and two lateral sides 22b that connect the front wall and the rear wall 22a to one another. Furthermore, the container 2 comprises a lid 23 that is hinged to the rear wall 22a of the lateral wall 22 of the containment portion 20 and that is mobile for opening and closing the opening of the containment portion 20.

[0017] It is understood that the container 2 of the packet 1 object of the present invention may be of any other type with respect to the one described above and illustrated in the figures. For example, the container 2 may be of the sliding type.

[0018] The wrapping 3 of packet 1 can be obtained starting from a sheet of wrapping material, for example polypropylene or cellophane. With reference to Figure 1, the wrapping 3 is obtained by folding a sheet of wrapping material around the container in a soap-bar fashion. The wrapping 3 is preferably transparent.

[0019] The stamp 5 is fixed to the container 2 with the exception of a free portion 50. The packet 1 comprises a tearing element 6 that is arranged between the container 2 and the stamp 5, at the free portion 50 of the stamp 5, and which protrudes from the free portion 50 with respective first 60 and second 61 ends, which are connected to the wrapping 3.

[0020] Advantageously, by removing the wrapping 3 from the packet 1, the tearing element 6 is pulled by the wrapping 3 thus causing the tearing of the stamp. Therefore, at the removal of the wrapping 3, i.e. at the first opening of the packet 1, the tear of the stamp 5 is ensured.

[0021] Preferably, the stamp 5 comprises a weakening line 8 to facilitate the tearing of the stamp 5 when the wrapping 3 is removed.

[0022] With weakening line a creasing line or an embossed line we mean, that is suitable to allow the detachment of a part of the stamp 5 from another part of the stamp 5 (thus determining the tearing thereof). As an alternative to the weakening line 8, a pre-breaking line may be provided, i.e. a line, even partial, comprising one or more cuts/incisions.

[0023] With further reference to Figure 2, the weakening line 8 is obtained at the free portion 50 of the stamp 5. In particular, the weakening line 8 is formed at the free portion 50 so as to divide the free portion 50 into two equal parts.

[0024] Again with reference to Figures 1-5, the stamp 5 has a rectangular shape having four sides opposite and parallel two by two. The free portion 50 of the stamp 5 connects two opposite sides of the stamp 5 (in particular, the short sides of the rectangle). The weakening line 8 coincides with the symmetry line of the stamp 5 and is parallel to two sides of the stamp 5.

[0025] The stamp 5 comprises a first portion 51 fixed to the container 2 and a second portion 52 fixed to the

container 2. The first portion 51 and the second portion 52 can be fixed to the container 2, for example, by means of an adhesive. The free portion 50 is arranged between the first portion 51 and the second portion 52.

[0026] The tearing element 6 is strip shaped and has a longitudinal development along a development axis X. Said development axis X is parallel to (and preferably coincident with) the weakening line 8. Therefore, when the wrapping 3 is removed, the tearing element 6 tears the stamp 5 along the weakening line without tearing any part of the stamp 5. Advantageously, the tear of the stamp 5 is obtained and, at the same time, a pleasant appearance of the packet 1 is maintained.

[0027] The first end 60 of the tearing element 6 and the second end 61 of the tearing element 6 protrude from opposite sides of the stamp 5. In this regard, the tearing element 6 has a length along its development direction which is greater than the length of the free portion 50 of the stamp 5.

[0028] The first end 60 of the tearing element 6 and the second end 61 of the tearing element 6 are both fixed to the wrapping 3. For example, the first 60 and second 61 ends of the tearing element 6, can be fixed to the wrapping 3 by means of an adhesive (such as glue or hot-melt glue).

[0029] Alternatively, according to the embodiment illustrated in Figure 8, the first end 60 of the tearing element 6 is fixed to the tear tape 4 and the second end 61 of the tearing element 6 is fixed to the wrapping 3. Also in this case, the first 60 and second 61 ends of the tearing element 6 can be fixed to the tear tape 4 and to the wrapping 3 by means of an adhesive (such as glue or hot-melt glue).

[0030] It is understood that, according to embodiments not illustrated, the free portion 50 of the stamp 5 could connect two consecutive sides of the stamp 5, just as the weakening line 8 may also not be parallel to the sides of the stamp 5 (it could, for example, be undulating or zig-zagged).

[0031] The stamp 5 is fixed to the containment portion 20 of the container 2. In detail, the stamp 5 is fixed to the rear wall 22a of the lateral wall 22 of the containment portion 20 of the container 2. The stamp 5 is fixed near the bottom wall 21 of the containment portion 20 with respect to the opening of the containment portion 20.

[0032] It is understood that the stamp 5 could be fixed in any other part of the container 2.

[0033] The tear tape 4 is fixed to the wrapping 3 so as to at least surround the lateral wall of the container 2.

[0034] With particular reference to Figure 1, the tear tape 4 defines a first wrapping 3 portion 30 (which wraps the containment portion 20 of the container 2) and a second wrapping 3 portion 31 (which wraps the lid 23 of the container 2). The stamp 5 faces the first wrapping 3 portion 30, since it is fixed to the lateral wall 22 of the containment portion 20 of the container 2. The first 60 and second 61 ends of the tearing element 6 are also fixed to the first wrapping portion 30. In this case, by removing

the tear tape 4 the first wrapping 3 portion 30 is separated from the second wrapping 3 portion 31 so that they can be removed from the container 2 thus causing the tearing of the stamp 5.

[0035] Alternatively, with reference to the embodiment of Figure 7, the first end 60 of the tearing element 6 is fixed to the second wrapping 3 portion 31 while the second end 61 of the tearing element 6 is fixed to the first wrapping 3 portion 30. Advantageously, after the removal of the tear tape 4, by removing the second wrapping 3 portion 31 from the container 2, the removal of the first wrapping 3 portion 30 is also favoured, thus causing the tear of the stamp 5.

[0036] As a further alternative not illustrated, the tear tape 4 could be shaped so as to allow the complete removal of the wrapping 3: for example, the tear tape 4 could comprise a first part which corresponds to a traditional tear tape like the one illustrated in the attached figures, and a second part which branches off, in a tilted manner, from the first part of tear tape 4 and develops towards the bottom wall 21 of the container 2.

[0037] With reference to figure 6 a second embodiment of the packet object of the present invention is illustrated. This second embodiment, with respect to the first one described above, has a different orientation of the free portion 50 of the stamp 5. Consequently, resulting differently is the orientation of the tearing element 6, which is arranged between the free portion 50 of the stamp 5 and the container 2.

[0038] In detail, the free portion 50 of the stamp 5 connects two opposite sides of the stamp 5 (in particular, the long sides of the rectangle). The weakening line 8 coincides with a line of symmetry of the stamp 5 and is parallel to two sides of the stamp 5. The free portion 50 has a development substantially parallel to the development direction of the packet 1.

[0039] In this case, the tearing element 6 has a length measured along the development direction which is greater with respect to the height of the stamp 5 (the stamp 5 is a rectangle). The first 60 and second 61 ends of the tearing element 6 are both fixed to the first wrapping 3 portion 30.

[0040] With reference to figure 9 a further embodiment of the packet 1 of the present invention is illustrated. This embodiment is similar to those described above, with the exception of the shape of the tearing element 6.

[0041] In said fifth embodiment, the first end 60 and the second end 61 of the tearing element 6 are connected to one another thus defining an eyelet 7 in the tearing element 6. Furthermore, the first end 60 of the tearing element 6 is fixed to the wrapping 3 (alternatively, according to an embodiment not illustrated, it could be fixed to the tear tape 4).

[0042] The eyelet 7 surrounds the first portion 51 of the stamp 5, i.e. the tearing element 6 has an eyelet 7 (that is, a through window obtained inside the same) which is crossed by the stamp 5 (i.e. the stamp 5 is arranged inside the eyelet 7); in this embodiment, only the

first end 60 of the tearing element 6 is fixed to the wrapping 3 or to the tear tape 4 while the second end 61 of the tearing element 6 is not fixed either to the wrapping 3 or to the tear tape 4.

[0043] In other words, the first end 60 of the tearing element 6 is directly fixed to the wrapping 3 while the second end 61 of the tearing element 6 is connected to the first end 60 and is fixed to the wrapping 3 by means of same (that is, the second end 61 of the tearing element 6 is indirectly fixed to the wrapping 3). Advantageously, said embodiment requires the application of an adhesive only at the first end 60 of the tearing element 6.

[0044] Moreover, said embodiment ensures the tear of the stamp 5 by removing only the second wrapping 3 portion 31 from the container 2. Advantageously, the user can maintain the first wrapping 3 portion 30 which confers protection to the containment portion 20 of the container 2 and avoids the possible spilling of tobacco dust from the bottom wall 21.

[0045] With reference to figure 10 a further embodiment of the packet 1 object of the present invention is illustrated. Said embodiment differs from that of figure 9 for the positioning of the tearing element 6.

[0046] With reference to Figure 10, the free portion 50 of the stamp is formed by a first free strip 50a of the stamp 5 and by a second free strip 50b of the stamp 5 (the first and second strips 50a, 50b are substantially parallel to the development of the packet 1).

[0047] In other words, the stamp 5 comprises the first portion 51 fixed to the container 2, the second portion 52 fixed to the container 2 and a third portion 53 fixed to the container 2. The first strip 50a of the free portion 50 is arranged between the first portion 51 and the second portion 52 while the second strip 50b of the free portion 50 is arranged between the first portion 51 and the third portion 53.

[0048] The first end 60 and the second end 61 of the tearing element 6 are connected to one another defining the eyelet 7 in the tearing element 6, which eyelet 7 faces the first portion 51 of the stamp.

[0049] As already described with reference to Figure 9, also with reference to the embodiment of Figure 10, the first end 60 of the tearing element 6 is fixed to the wrapping 3 (alternatively it may be fixed to the tear tape 4) while the second end 61 of the tearing element 6 is connected to the first end 60 and is fixed to the wrapping 3 by means of the same (the second end 61 is indirectly fixed to the wrapping 3).

[0050] The tearing element 6 is preferably made of a plastic material. Furthermore, the tearing element 6 is preferably transparent.

[0051] Also object of the present invention is the method for manufacturing any one of the aforementioned embodiments of the packet 1. The method comprises the steps of:

a) arranging the group of smoking articles in the container 2;

- b) arranging the tearing element 6 on the container 2;
- c) fixing the stamp 5 to the container 2, with the exception of the free portion 50, so that the tearing element 6 is arranged between the container 2 and the stamp 5 at the free portion 50 and that the tearing element 6 protrudes from the free portion 50 with the respective first 60 and second 61 ends;
- d) fixing the tear tape 4 to a sheet of wrapping material, which sheet of wrapping material is intended to form the wrapping 3;
- e) wrapping the container 2 with the sheet of wrapping material (step e is performed after step d);
- f) connecting the first end 60 and/or the second end 61 of the tearing element 6 to the wrapping 3 or to the sheet of wrapping material.

[0052] The proposed method provides to fix the stamp 5 to the container 2 before wrapping the container 2 with the sheet of wrapping material. Advantageously, the proposed method makes it possible to obtain a packet 1 in which the stamp 5, which will be torn when the wrapping 3 is removed, is fixed to the container 2 with a correct alignment.

[0053] Preferably, step f) comprises the step of arranging an adhesive 9 on the first end 60 and/or on the second end 61 of the tearing element 6, before step e).

[0054] Said adhesive can be glue or hot-melt glue. For example, in the case where the adhesive 9 is glue, step f) provides to connect the first end 60 and/or the second end 61 of the tearing element 6 to the sheet of wrapping material and then to wrap the container 2 with the sheet of wrapping material in order to obtain the wrapping 3. Whereas, in the case in which the adhesive 9 is hot-melt glue, step e) is performed before step f), which step f) envisages to fix the first end 60 and/or the second end 61 of the tearing element 6 to the wrapping 3 thus activating the glue, for example, by means of heat sealing.

[0055] Preferably, step b) can comprise the sub-step of fixing the tearing element 6 to the container 2. Advantageously, it is easier to produce the packet 1 in the machine. In this regard, the adhesive 9 which is used to fix the tear element 6 to the container 2 must be weaker than the adhesive with which the tearing element 6 is fixed to the wrapping 3.

[0056] Step c) is performed by gluing the stamp 5 to the container 2, in particular by gluing the first portion 51 and the second portion 52 (and possibly the third portion 53) of the stamp 5 to the container 2.

[0057] Preferably, step b) is performed before step c)

[0058] With reference to Figures 2-5, a first preferred embodiment of the method of the present invention to manufacture the packet of Figure 1 is described.

[0059] The method provides for arranging the group of smoking articles in the container 2 and for gluing the tearing element 6 on the rear wall 22a of the container 2 (Figure 2). Thereafter, hot-melt glue is arranged at the first 60 and second 61 ends of the tear element 6 (Figure 3). Next, the first portion 51 and the second portion 52

of the stamp are fixed to the rear wall 22a of the container 2, so that the tearing element 6 is arranged between the container 2 and the free portion 50 of the stamp 5 (Figure 4). The first 60 and second 61 ends, of the tearing element 6 protrude from opposite sides of the stamp 5. Finally, with reference to Figure 5, after having fixed the tear tape 4 to the sheet of wrapping material, the sheet of wrapping material is wrapped around the container 2 (Figure 5) and, by means of welding, the glue previously arranged at the first 60 and second 61 ends, of the tearing element 6 is activated so that the latter is fixed to the wrapping 3.

[0060] With reference to figure 9, the method for manufacturing said packet 1 differs from that for manufacturing the packet of figure 1 in that the adhesive (glue or hot-melt glue) is arranged only at the first end 60 of the tearing element 6 and not at the second end 61.

Claims

1. A packet (1) of smoking articles, comprising:

- a group of smoking articles;
 - a container (2) that contains the group of smoking articles;
 - a wrapping (3) that wraps the container (2);
 - a tear tape (4) that is fixed to the wrapping (3) to facilitate the removal of the wrapping (3) from the container (2); and
 - a stamp (5) that is arranged on the container (2) inside the wrapping (3);
- the packet (1) being **characterized in that:**

the stamp (5) is fixed to the container (2) with the exception of a free portion (50); and
a tearing element (6) is provided, which is arranged between the container (2) and the stamp (5) at the free portion (50) and that protrudes from the free portion (50) with respective first (60) and second (61) ends, at least one of which is connected to the wrapping (3).

2. The packet (1) according to claim 1, wherein the stamp (5) comprises a weakening line (8) to facilitate the tearing of the stamp (5) when the wrapping (3) is removed.

3. The packet (1) according to claim 1 or 2, wherein: the tearing element (6) is strip shaped and has a longitudinal development along a development axis (X); the first end (60) of the tearing element (6) is fixed to the wrapping (3) or the tear tape (4); and the second end (61) of the tearing element (6) is fixed to the wrapping (3).

4. The packet (1) according to claims 2 and 3, wherein the weakening line (8) of the stamp (5) is parallel to

the development axis (X) of the tearing element (6).

5. The packet (1) according to claim 1 or 2, wherein: the tearing element (6) has an eyelet (7) inside which the stamp (5) is arranged; and only the first end (60) of the tearing element (6) is fixed to the wrapping (3) or to the tear tape (4) . 5

6. The packet (1) according to any one of the preceding claims, wherein: 10

the stamp (5) comprises a first portion (51) fixed to the container (2) and a second portion (52) fixed to the container (2); the free portion (50) is arranged between the first portion (51) and the second portion (52). 15

7. The packet (1) according to any one of the preceding claims, wherein the tear tape (4) is shaped so as to allow the complete removal of the wrapping (3). 20

8. The packet (1) according to any one of the claims from 1 to 6, wherein: the tear tape (4) defines a first wrapping (3) portion (30) and a second wrapping (3) portion (31); the stamp (5) faces the first wrapping (3) portion (30); and the first end (60) of the tearing element (6) is fixed to the second wrapping (3) portion (31). 25

9. A method for manufacturing a packet (1) according to claim 1, comprising the steps of: 30

- a) arranging the group of smoking articles inside the container (2);
- b) arranging the tearing element (6) on the container (2); 35
- c) fixing the stamp (5) to the container (2), with the exception of the free portion (50), so that the tearing element (6) is arranged between the container (2) and the stamp (5) at the free portion (50) and that the tearing element (6) protrudes from the free portion (50) with the respective first (60) and second (61) ends; 40
- d) fixing the tear tape (4) to a sheet of wrapping material, which sheet of wrapping material is intended to form the wrapping (3); 45
- e) wrapping the container (2) with the sheet of wrapping material;
- f) connecting the first end (60) and/or the second end (61) of the tearing element (6) to the wrapping (3) or to the sheet of wrapping material. 50

10. The method according to claim 9, wherein step f) comprises the step of arranging an adhesive (9) on the first end (60) and/or on the second end (61) of the tearing element (6), before wrapping the container (2) with the sheet of wrapping material. 55

11. The method according to claim 9 or 10, wherein the step b) comprises the sub-step of fixing the tearing element (6) to the container (2).

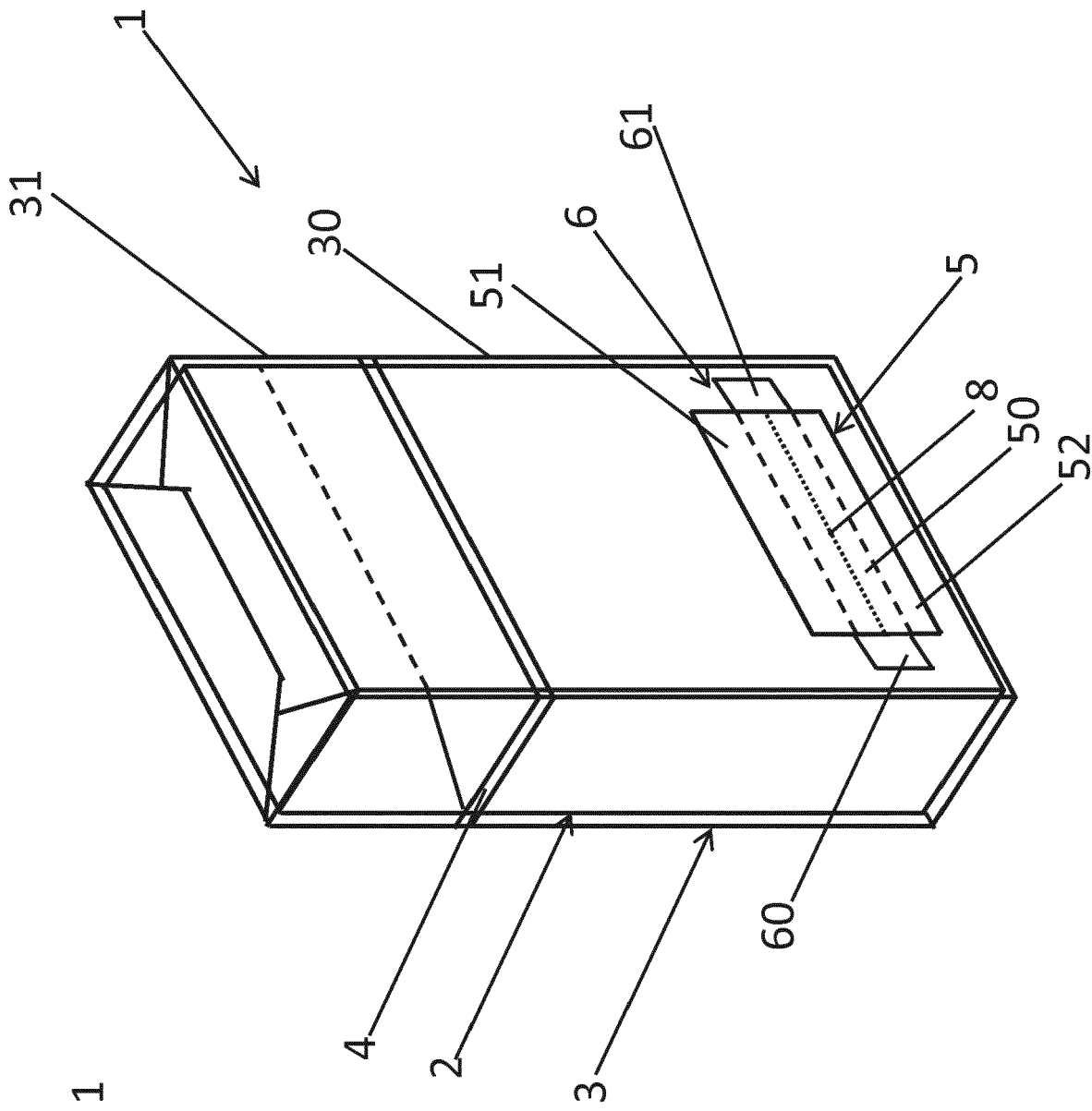


Fig. 1

Fig. 3

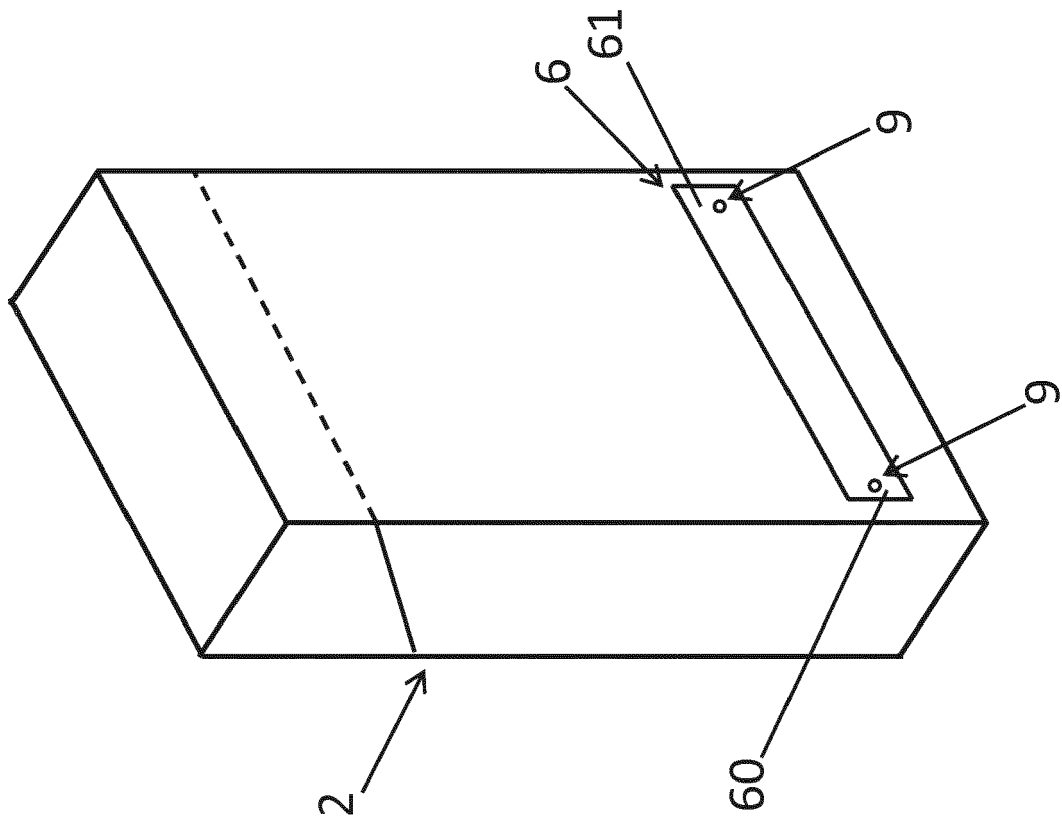


Fig. 2

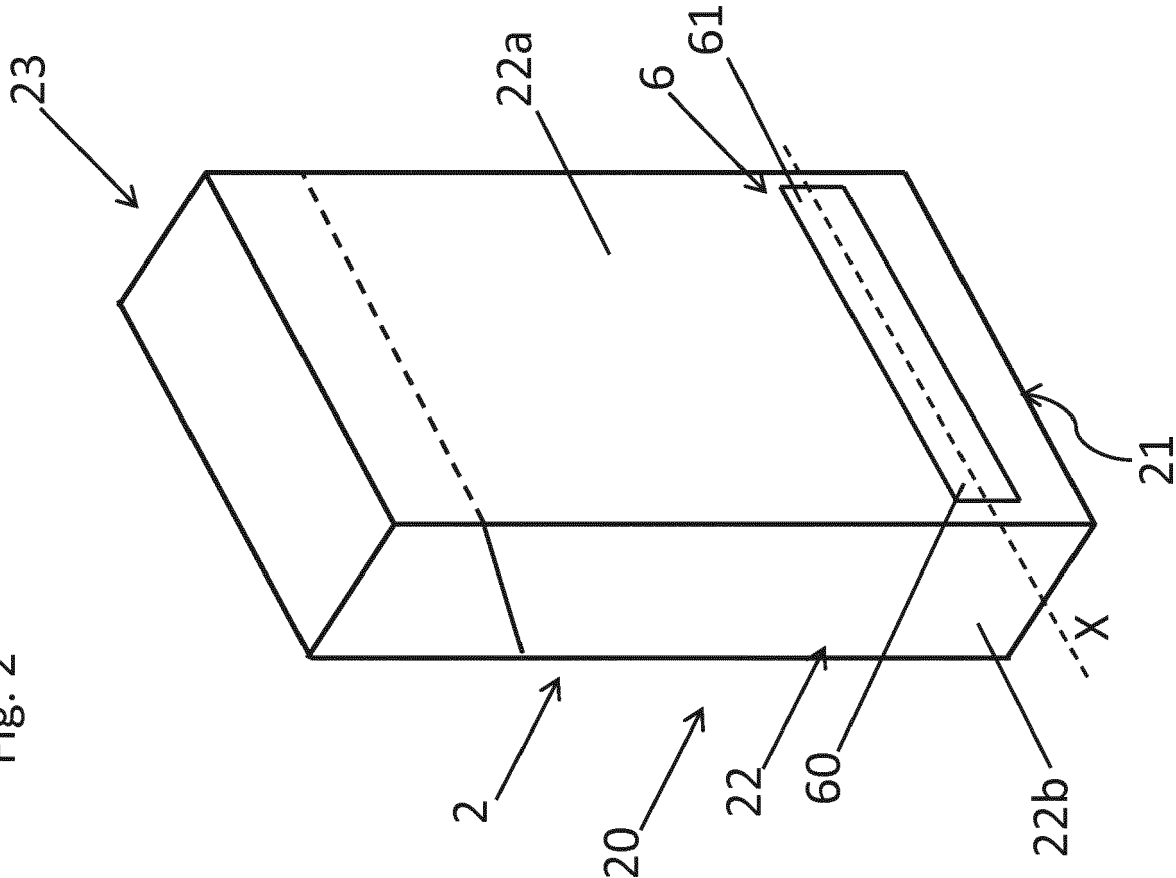


Fig. 5

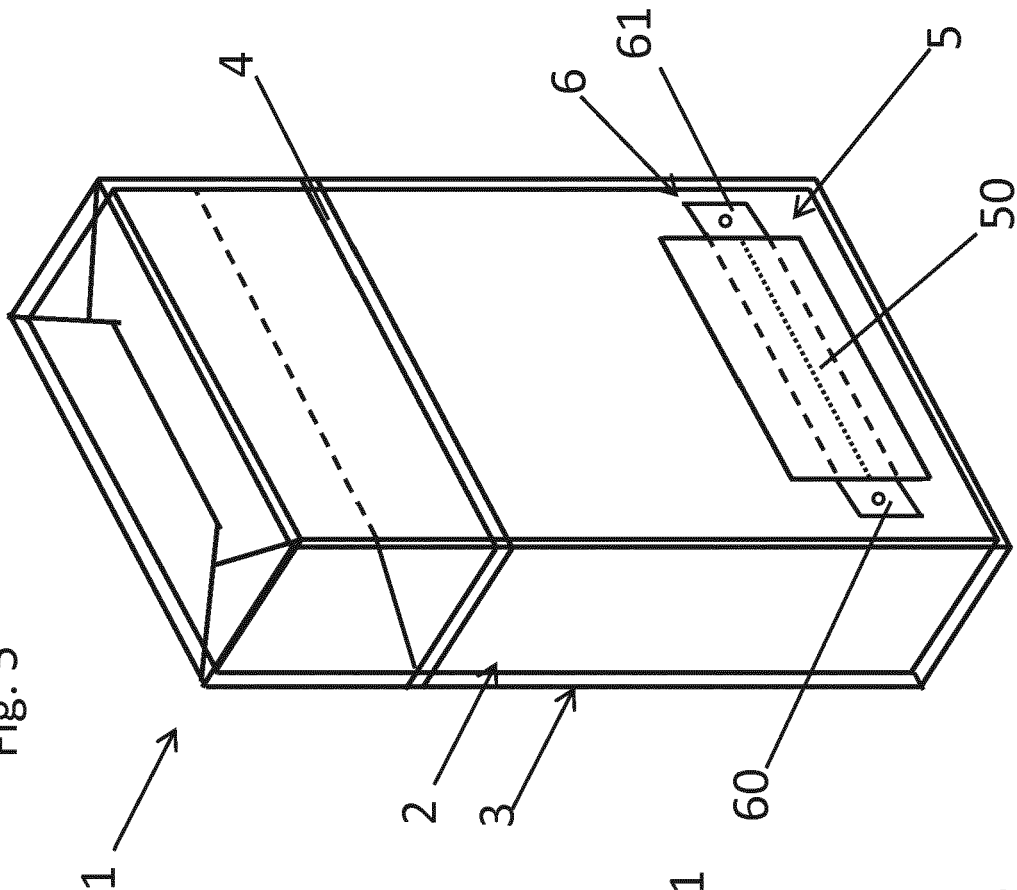
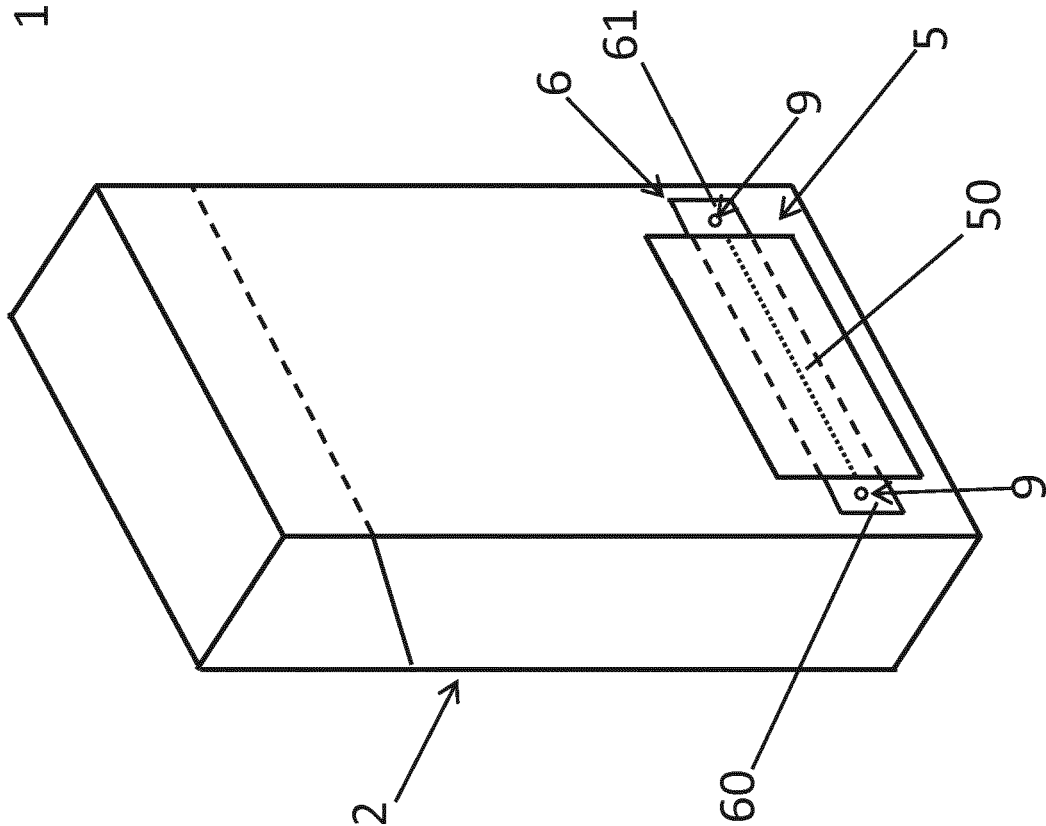
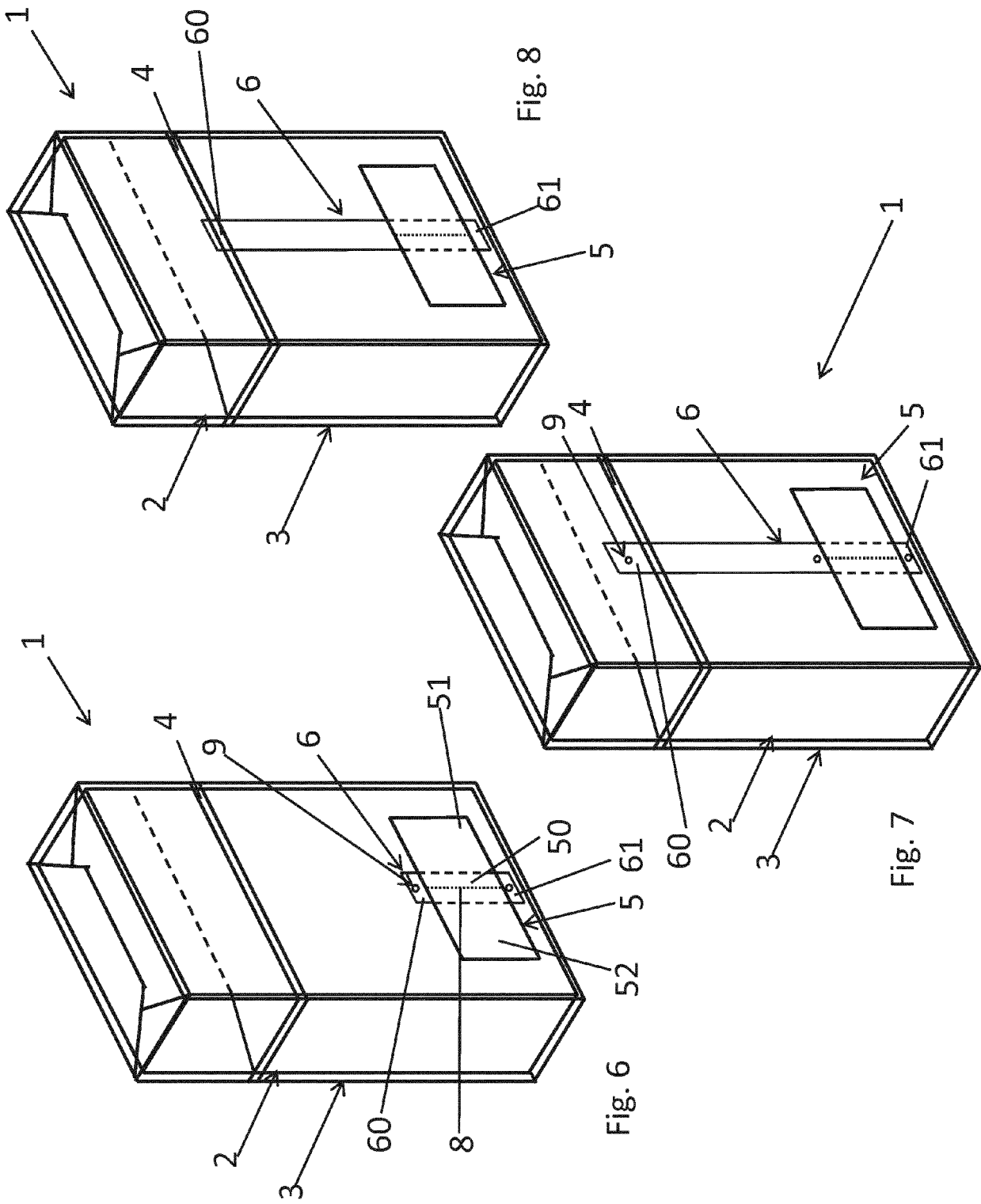
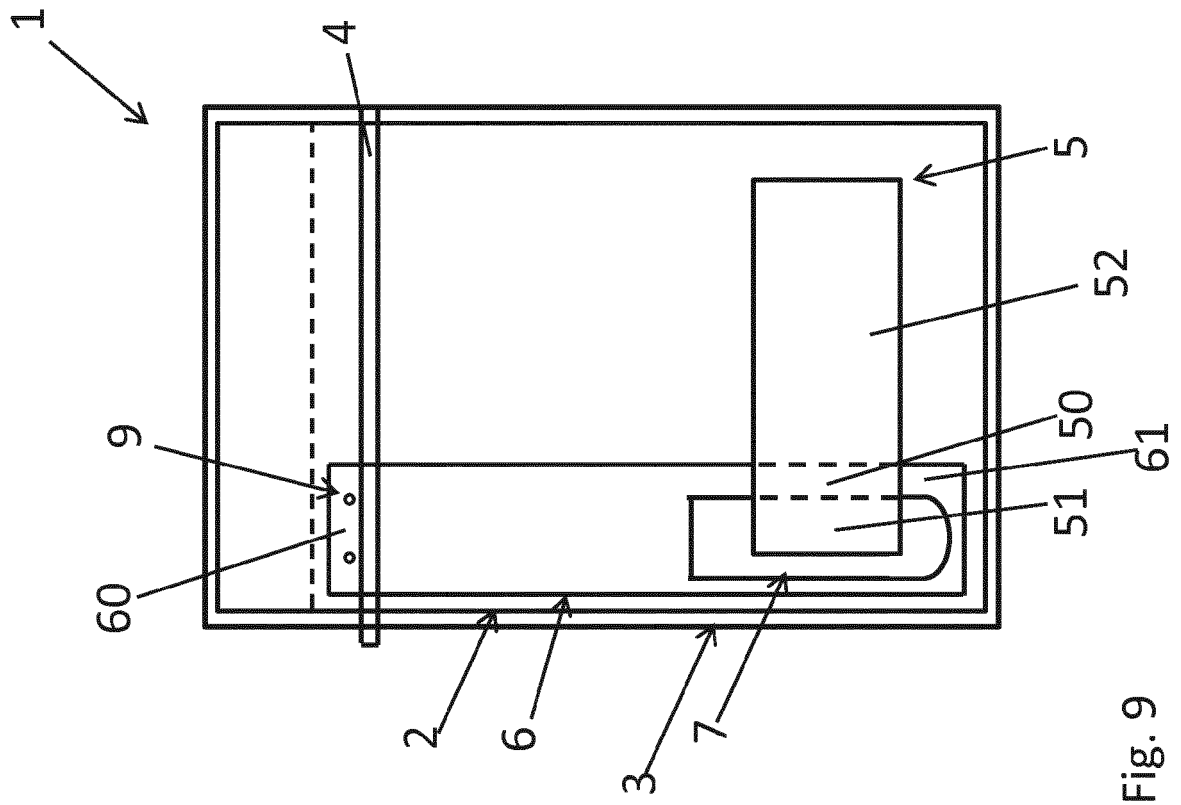
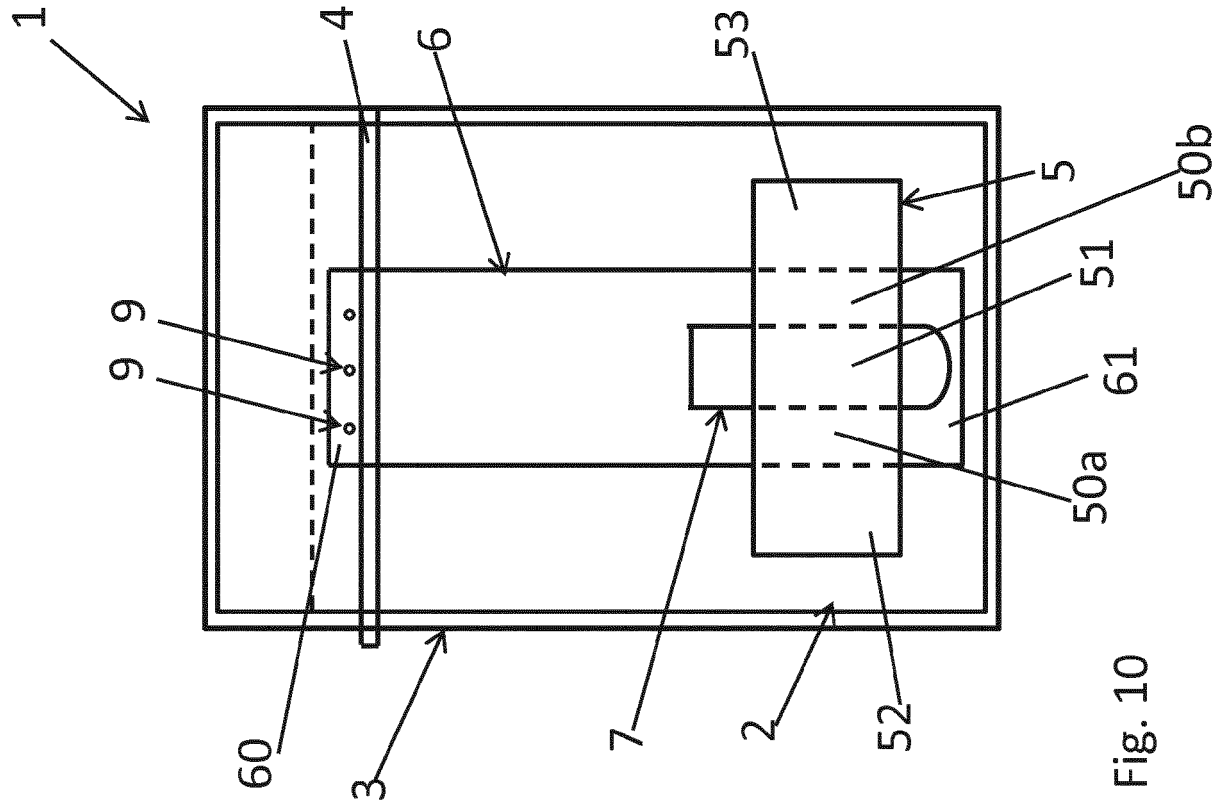


Fig. 4









EUROPEAN SEARCH REPORT

Application Number
EP 18 17 9167

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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 939 977 C (MUELLER KLAUS HEINRICH) 8 March 1956 (1956-03-08)	1-4,6-11	INV. B65D85/10
A	* page 2, lines 19-91; figures 1-3 *	5	
A	EP 2 548 819 A1 (FOCKE & CO [DE]) 23 January 2013 (2013-01-23) * paragraphs [0008], [0015], [0017] - [0025]; figures 1-6 *	1-11	
A	EP 1 861 324 A2 (PHILIP MORRIS PROD [CH]) 5 December 2007 (2007-12-05) * paragraph [0019]; figure 1 *	10	
A,D	EP 0 895 946 A1 (FOCKE & CO [DE]) 10 February 1999 (1999-02-10) * paragraphs [0004], [0009], [0014] - [0018], [0036]; figures 1-8 *	1-11	
			TECHNICAL FIELDS SEARCHED (IPC)
			B65D
The present search report has been drawn up for all claims			
Place of search Munich		Date of completion of the search 11 September 2018	Examiner Leijten, René
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			

EPO FORM 1503 03/82 (P04C01)

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

EP 18 17 9167

5 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
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11-09-2018

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
DE 939977	C	08-03-1956	NONE
EP 2548819	A1	23-01-2013	BR 102012017861 A2 18-02-2014 CA 2783065 A1 19-01-2013 DE 102011109233 A1 24-01-2013 EP 2548819 A1 23-01-2013 RU 2012130492 A 27-01-2014
EP 1861324	A2	05-12-2007	DK 1861324 T3 02-11-2009 EA 200701983 A1 28-02-2008 EP 1861324 A2 05-12-2007 ES 2328732 T3 17-11-2009 PT 1861324 E 17-08-2009 SI 1861324 T1 31-10-2009 UA 88950 C2 10-12-2009 WO 2006097850 A2 21-09-2006
EP 0895946	A1	10-02-1999	BR 9802841 A 19-10-1999 CN 1207357 A 10-02-1999 DE 19733794 A1 11-02-1999 EP 0895946 A1 10-02-1999 JP 4128661 B2 30-07-2008 JP H11130173 A 18-05-1999 US 6138437 A 31-10-2000

REFERENCES CITED IN THE DESCRIPTION

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Patent documents cited in the description

- IT 102017000068918 [0001]
- EP 0895946 A [0003] [0004]
- DE 939977 C [0007]
- EP 2548819 A1 [0008]