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(54) **Foodstuff dispensing apparatus**

(57) A foodstuff dispensing apparatus comprises a main body divided into a storage portion and a dispensing portion. The dispensing portion is in fluid communication

with the storage portion and the dispensing portion has an opening from which a user may pick a desired amount of foodstuff. Said dispensing portion is provided with a self closing lid and fitted with a liner.

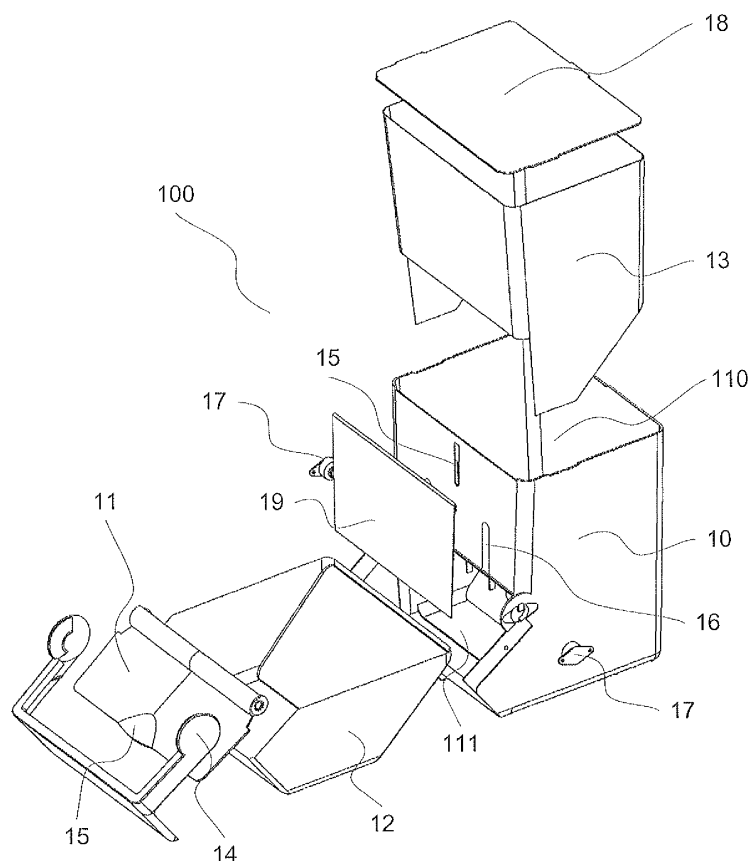


Fig. 1

Description

Field of the Invention

[0001] The present invention relates to a foodstuff dispensing apparatus, comprising a main body divided into a storage portion and a dispensing portion, wherein the dispensing portion is in fluid communication with the storage portion, wherein the dispensing portion has an opening from which a user may pick a desired amount of foodstuff and wherein the dispensing portion is being provided with a self-closing lid.

[0002] Furthermore, the present invention relates to a liner, suitable for the dispensing portion and/or the storage portion.

Background of the Invention

[0003] In Sweden, it is popular to sell foodstuff by weight. Stores carry a wide selection of foodstuff, such as candy etc., which are usually displayed in racks with compartments, where each compartment typically contains one variety of foodstuff. Customers pick foodstuff from the compartments themselves, thus combining the different varieties into a preferred assortment.

[0004] It is known that foodstuff is displayed in a foodstuff dispensing apparatus, comprising a main body divided into a storage portion and a dispensing portion, wherein the dispensing portion is in fluid communication with the storage portion, wherein the dispensing portion has an opening from which a user may pick a desired amount of foodstuff and wherein the dispensing portion is provided with a self-closing lid.

[0005] A problem with these existing apparatuses is that they are hard to clean. New foodstuff is usually simply added to top up the level, without any cleaning. This may cause a build-up material, such as sugar, in the apparatus, that may loosen from the foodstuff. Typically, in order to clean the apparatus, the setting in which they are placed to form racks needs to be disassembled and the apparatus needs to be washed, which is tedious and time-consuming.

[0006] Since cleaning is hard and time consuming, it may not be performed as often as it should, which may lead to reduced hygiene.

[0007] Not cleaning the apparatuses may also cause a problem to people with allergies. If a foodstuff comprises an allergen, such as nuts, peanuts, coconut, almond etc., traces of these substances may be transferred to another variety of foodstuff, which may be subsequently contained in the apparatus. A person may then suffer from an allergic shock when eating foodstuff under the assumption that it did not comprise the allergenic substance, but because of lack of cleaning, traces of allergens from the previous variety of foodstuff was comprised in the new variety.

[0008] Furthermore, it is a common problem that the dispenser lid is not closed, which may cause the content

to dry, by losing moisture to the environment. If the foodstuff is not properly covered, there is also a hygienic risk, since airborne particles, such as virus and bacteria, have open access to the foodstuff. To overcome these issues, some apparatuses are fitted with a device for automatically lowering the dispenser lid, well known to a person skilled in the art. However, in order for these devices to be able to close the dispenser lid even from its most upright position, said devices have so low dampening that the lid closes too fast.

[0009] A rack structure for displaying and dispensing candy is disclosed in US 5,553,723. This structure does however not enable the compartments to be kept clean.

[0010] Thus, there is a need for a new apparatus providing a simple way to keep compartments clean. Hence, an improved system for keeping compartments clean would be advantageous.

[0011] Consequently, an improved showcase would be advantageous and in particular an apparatus allowing for increased flexibility, cost-effectiveness, improved hygiene and/or protection of the content would be advantageous.

Summary of the Invention

[0012] Accordingly, the present invention solves, or at least mitigates, the above problems by providing a foodstuff dispensing apparatus comprising a liner fitted in the dispensing portion. The foodstuff dispensing apparatus may further comprise an upper liner, fitted in the storage portion. Alternatively, a single liner may be fitted in both the dispensing portion and the storage portion.

[0013] The present invention has the advantage over the prior art that it allows for compartments to be kept clean, thus leading to better protection of the foodstuff and increased hygiene.

[0014] To allow easy access to the liner the foodstuff dispensing apparatus may comprise a detachable front.

[0015] In order to protect and keep the liner in place, said detachable front may have means suitable for retaining the liner.

[0016] Furthermore, the invention allows for multiple varieties of foodstuff being dispensed from the same main body, by fitting multiple liners inside the main body and to allow separate dispensing of multiple varieties of foodstuff from one main body.

[0017] In order to allow reliable closing, the self-closing lid and the main body are provided with means for mutual repulsion. Said means may be magnets, mutually positioned so that they face each other with the same magnetic pole.

[0018] Furthermore, in order to prevent misplacement and avoid losing the detachable front, said front may be hinged to the main body.

[0019] Also, to enable safe grouping or stacking of the main body may, the main body may have means for stacking or grouping multiple apparatuses.

[0020] In order to allow compartments to be kept clean,

better protection of the foodstuff and increased hygiene, the invention also provides a liner, suitable for the dispensing portion and/or the storage portion.

[0021] To minimize storage capacity, the liner may also be stackable.

Brief Description of the Drawings

[0022] These and other aspects, features and advantages of which the invention is capable of will be apparent and elucidated from the following description of embodiments of the present invention, reference being made to the accompanying drawings, wherein

Fig. 1 is an exploded perspective view of a dispenser according to one embodiment of the invention;

Fig. 2 is an exploded perspective view of a dispenser according to another embodiment of the invention;

Fig. 3 is a schematic perspective view of a dispenser according to the above embodiments;

Fig. 4 is a schematic perspective view of a liner according to one embodiment of the present invention; and

Fig. 5 is a schematic perspective view of an upper liner according to one embodiment of the present invention.

Description of Embodiments

[0023] In the embodiment of the invention according to Fig. 1, an apparatus 100 is disclosed. The apparatus comprises a main body 10, which is substantially formed as a box-shaped L, wherein a storage portion 110 is substantially situated in the vertical part of the L and a dispensing portion 111 is substantially situated in the horizontal part of the L. The dispensing portion 111 is in fluid communication with the storage portion 110. Furthermore, the dispensing portion 111 has an opening, which is provided with a self-closing lid 11. The storage portion 110 also has an opening, provided with a top lid 18. The self-closing lid 11 is fitted with rotational dampers 17, well known to a person skilled in the art. The self-closing lid 11 and the main body 10 are fitted with means for mutual repulsion 15. Furthermore, the apparatus 100 has a detachable front 14, which gives access to the interior of the main body 10. The front of the main body 10 is covered with a graphics lid 19 and has a transparent part 16. A liner 12 is fitted inside the dispensing portion 111 and a top liner 13 is fitted inside the storage portion 110. The wall of the liner 12, facing away from the dispensing portion, has an inclined wall.

[0024] The opening in the dispensing portion 111 allows a user to pick a desired amount of foodstuff, whereas the opening in the storage portion 110 allows filling of foodstuff. The inclined wall of the liner 12 forces the foodstuff towards the dispensing portion 111. When foodstuff is filled through the opening in the storage portion 110, it is distributed into the dispensing portion 110 concurrent

with outtake from the dispensing portion.

[0025] The self-closing lid 11 and the top lid 18 protect the foodstuff from e.g. dehydration and airborne disease carriers. The self-closing lid 11 closes in e.g. 30 seconds because of the rotational dampers 17, which slow the fall of the self-closing lid 11. This closing, which is relatively slow, requires rotational dampers 17 with high dampening. To prohibit the self-closing lid 11 from stopping in the fully opened position, the means for mutual repulsion 15 force the self-closing lid 11 away from this position, thus commencing the self-closing process.

[0026] The liner 12 and the top liner 13 prohibit the foodstuff from contacting the walls of the main body. The liner 12 and top liner 13 are easily replaceable, e.g. to enable easy cleaning. The top liner 13 extends into the liner 12 to ensure that no opening occurs between the liners, and that the foodstuff consequently is totally separated from the main body 10.

[0027] The detachable front 14 has means suitable for retaining the liner 12, such as an edge being moulded so as to extend over the edge of the liner 12. When mounted, this secures and protects the liner 12. The detachable front 14 also has an edge, moulded so as to extend over the edge of said main body 10, suitable for retain the rotational dampers 17.

[0028] The graphics lid 19 is transparent, so as to allow display of a message, which is fitted between the main body 10 and the graphics lid 19.

[0029] The transparent part 16 allows for inspection of the level of foodstuff being stored in the storage portion 110.

[0030] The top lid 18 may have suitable means for attaching to the main body 10, such as hooks, slots, edges, hinges etc. When detached, the top lid 18 allows easy access to the top liner 13.

[0031] The bottom of the main body 10 may be perforated, in order to prevent storing of foodstuff in the main body 10 without use of the liner 12. This may increase hygiene, since the user can be confident that a liner 12 is protecting the foodstuff from touching the walls of said main body 10. Perforation of the bottom of the main body 10 also makes the main body permeable to spill, which may fall down on the floor, where it is easily collected. This may further increase hygiene.

[0032] In one embodiment, a single liner (not shown) covers both the storage portion 110 and the dispensing portion 111.

[0033] According to yet another embodiment, a liner may be in one piece, but made from different materials (not shown). If, for example, the liner 12 is a vacuum formed PET piece, it may be fitted with a plastic bag which may be unfolded to substantially line the part of said main body 10, which is not covered by said liner 12.

[0034] In one embodiment, multiple liners may be fitted into a single main body 10. This may allow multiple varieties of foodstuff to be contained in said main body 11. The different varieties are still separated, but it is possible to display smaller volumes than the main body in itself

allows. This may be advantageous to shorten the turnover of the foodstuff, which in turn ensures freshness. Furthermore, this may be advantageous for small stores with restricted storage space and low sales.

[0035] According to one embodiment, the liner 12 is stackable.

[0036] According to another embodiment, the top liner 13 is stackable.

[0037] A further embodiment of the invention is illustrated in Fig. 2. Here, the main body 10 and the detachable front 14 are hinged to one another. The hinging may pertain from the main body 10 and the detachable front 14 being made from the same piece of material, or the main body 10 and the detachable front 14 may be hinged through e.g. welding or gluing. Furthermore, the main body 10 and the detachable front 14 may be hinged by any suitable means, such as hooks, slots, edges, hinges etc.

[0038] According to another embodiment, the apparatus according to any of the above embodiments may have means, well known to a person skilled in the art, for stacking or grouping of multiple apparatuses.

[0039] A further embodiment of the invention is illustrated in Fig. 3, which shows a schematic illustration of a fully assembled apparatus, displayed in a ready-to-use position.

[0040] In another embodiment of the invention according to Fig. 4 a schematic illustration of a liner 12 according to some embodiments is shown. The liner 12 may have any form suitable for fitting in the main body 10.

[0041] In yet another embodiment of the invention according to Fig. 5, a schematic illustration of a top liner 13 according to some embodiments is shown. The top liner 13 may have any form suitable for fitting in the main body 10.

[0042] The liners mentioned in any of the preceding embodiments may be made from a range of materials, obvious to a person skilled in the art. Examples of such materials are PET and Styrofoam, which may be vacuum formed, or cardboard. Preferably, the liner is made from recycled or environmentally friendly material. PET is preferred, since most convenient stores and supermarkets already have systems for recycling of PET.

[0043] Furthermore, the liners mentioned in any of the preceding embodiments may have slight variations in form, easily anticipated by a person skilled in the art.

[0044] Although the present invention has been described above with reference to specific embodiments, it is not intended to be limited to the specific form set forth herein. Rather, the invention is limited only by the accompanying claims; other embodiments than these described above are equally possible within the scope of these appended claims.

[0045] The above description focuses on embodiments of the present invention applicable to an apparatus and in particular to a foodstuff dispensing apparatus. It will be appreciated that foodstuff comprises any kind of foodstuff, suitable for dispensing. Examples of such food-

stuff are confectionaries, candy, bread, cereals, vegetables, nuts, almonds and fruits.

5 Claims

1. Foodstuff dispensing apparatus (100), comprising a main body (10) divided into a storage portion (110) and a dispensing portion (111), wherein the dispensing portion (111) is in fluid communication with the storage portion (110), wherein the dispensing portion (111) has an opening from which a user may pick a desired amount of foodstuff and wherein the dispensing portion (111) is provided with a self-closing lid (11), **characterized by** a liner (12) fitted in the dispensing portion (111).
2. The foodstuff dispensing apparatus (100) according to claim 1, further comprising a top liner (13) fitted in the storage portion (110).
3. The foodstuff dispensing apparatus (100) according to claim 1, wherein a single liner is fitted in both the dispensing portion (111) and the storage portion (110).
4. The foodstuff dispensing apparatus (100) according to any of the preceding claims, wherein multiple liners are fitted inside the main body (10) to allow separate dispensing of multiple varieties of foodstuff from one main body.
5. The foodstuff dispensing apparatus (100) according to any of the preceding claims, further comprising a detachable front (14), allowing easy access to the liner (12).
6. Apparatus according to claim 5, wherein the detachable front (14) has means suitable for retaining the liner (12).
7. Apparatus according to any of the preceding claims, wherein the self-closing lid (11) and the main body (10) are provided with means for mutual repulsion (15).
8. Apparatus according to claim 7, wherein the means for mutual repulsion (15) are magnets, mutually positioned so that they face each other with the same magnetic pole.
9. Apparatus according to any of the preceding claims, wherein the detachable front (14), is hinged to the main body (10).
10. Apparatus according to any of the preceding claims, wherein the main body (10) has means for stacking or grouping multiple apparatuses.

11. Liner, suitable for the dispensing portion (111) or the storage portion (110) according to any of the preceding claims.
12. Liner, suitable for the dispensing portion (111) and the storage portion (110) according to any of the preceding claims. 5
13. Liner according to claim 12 or 13, wherein said liners are stackable. 10

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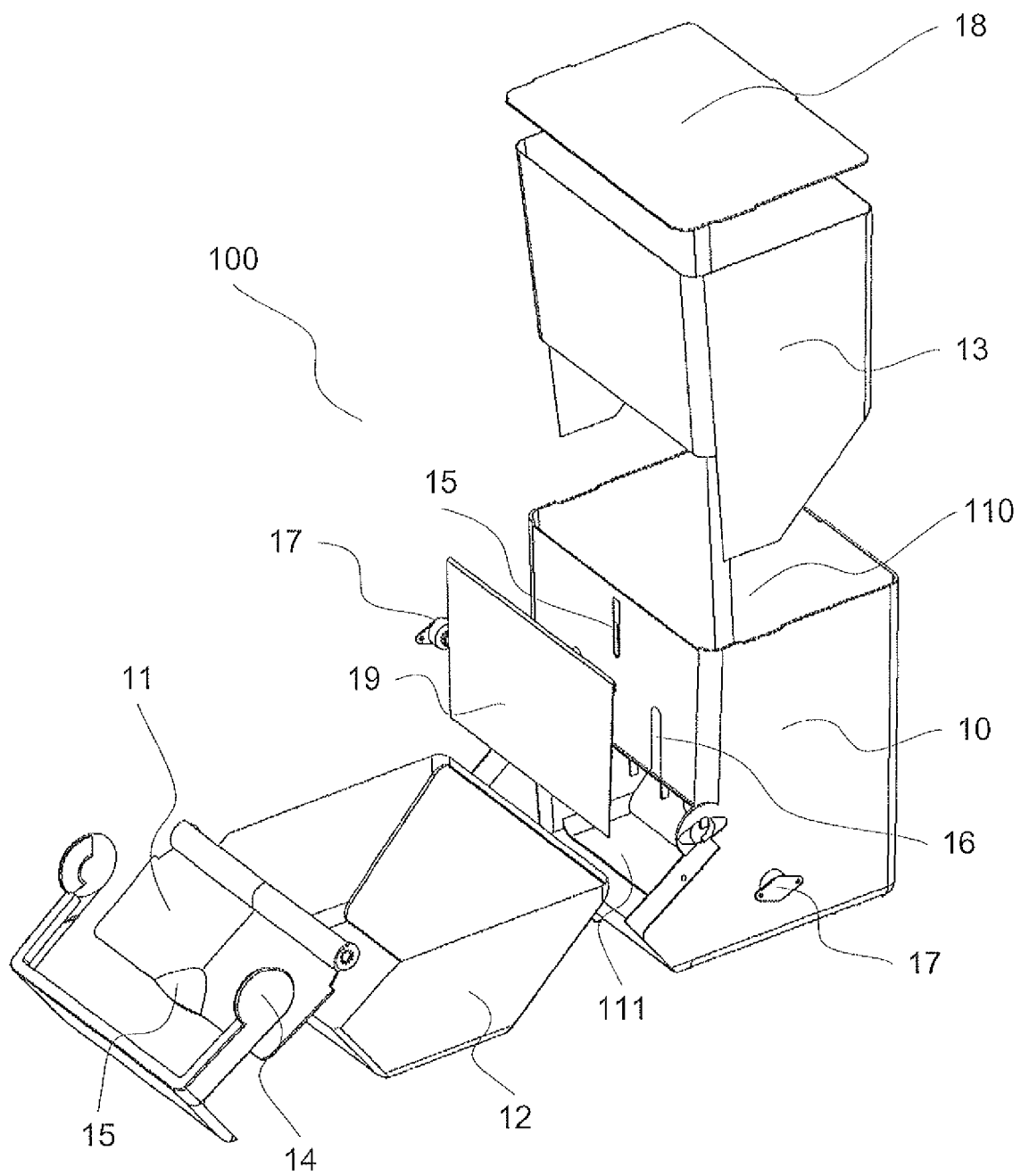


Fig. 1

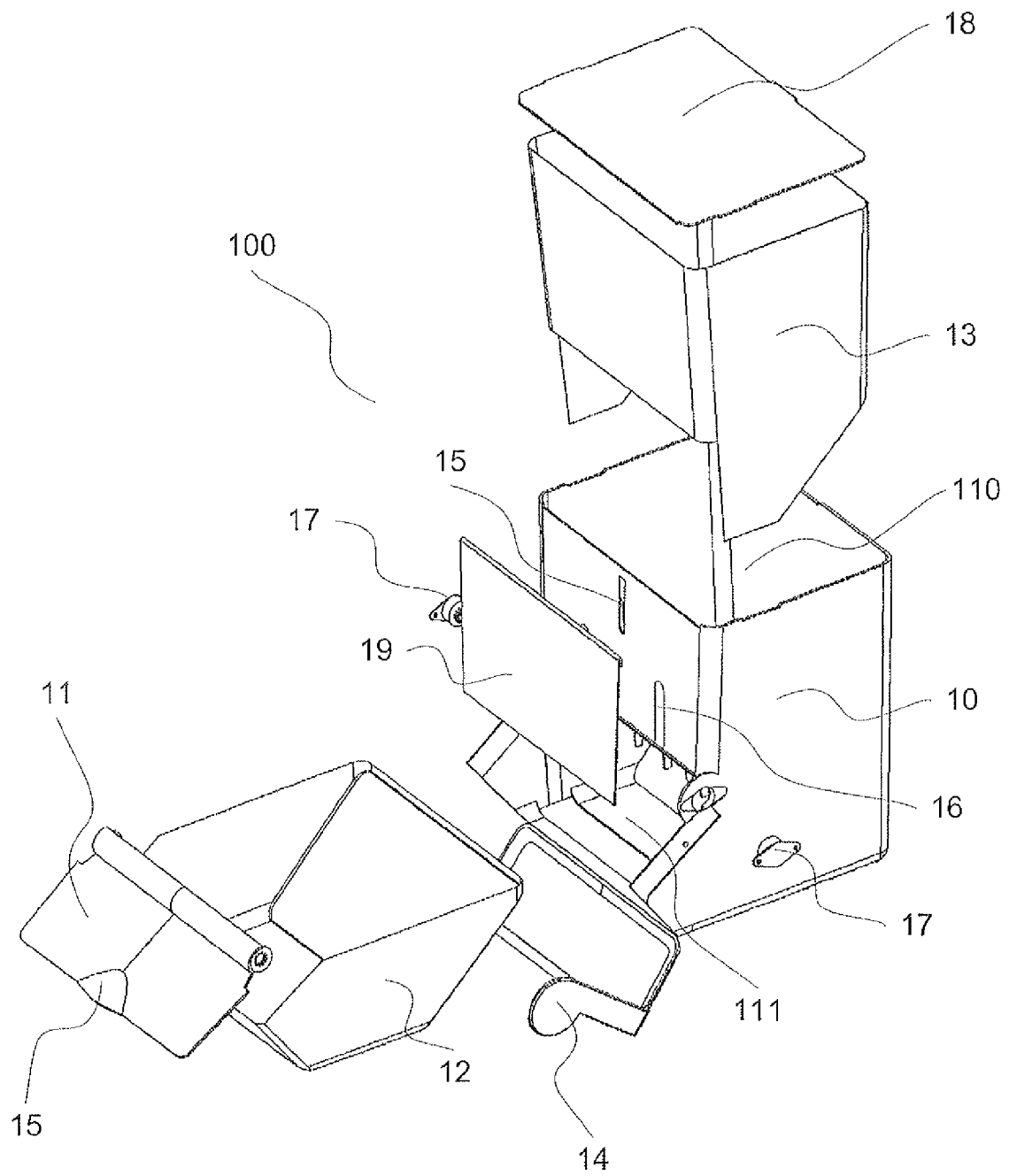


Fig. 2

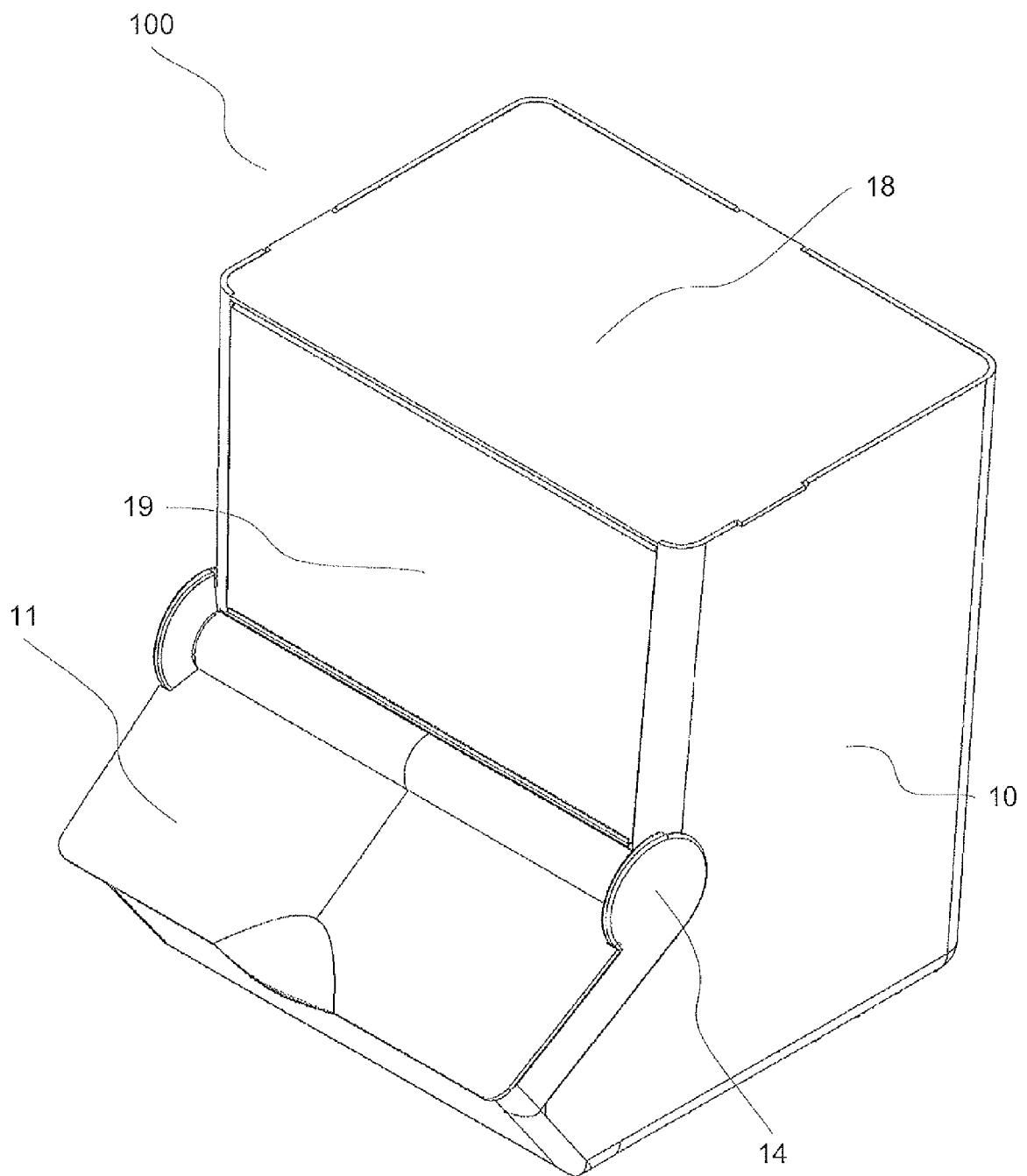


Fig. 3

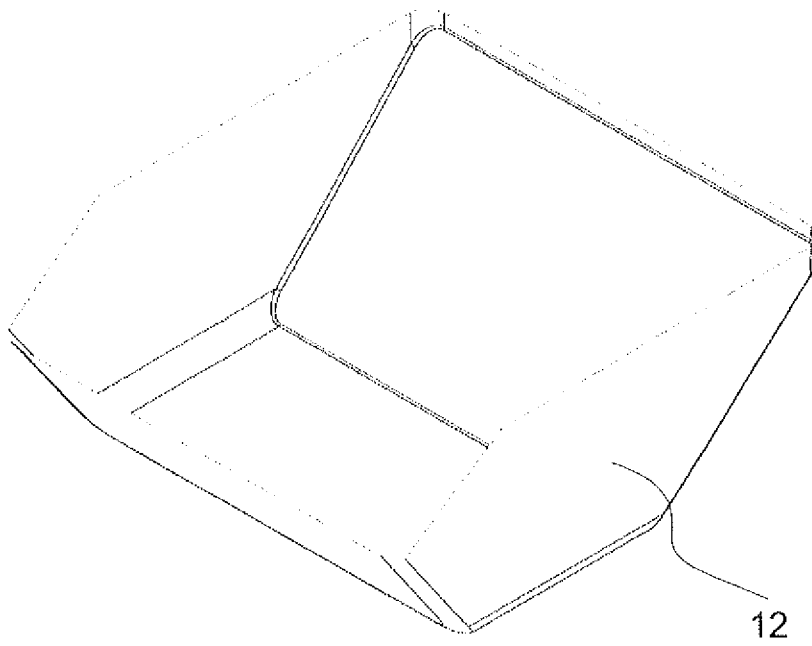


Fig. 4

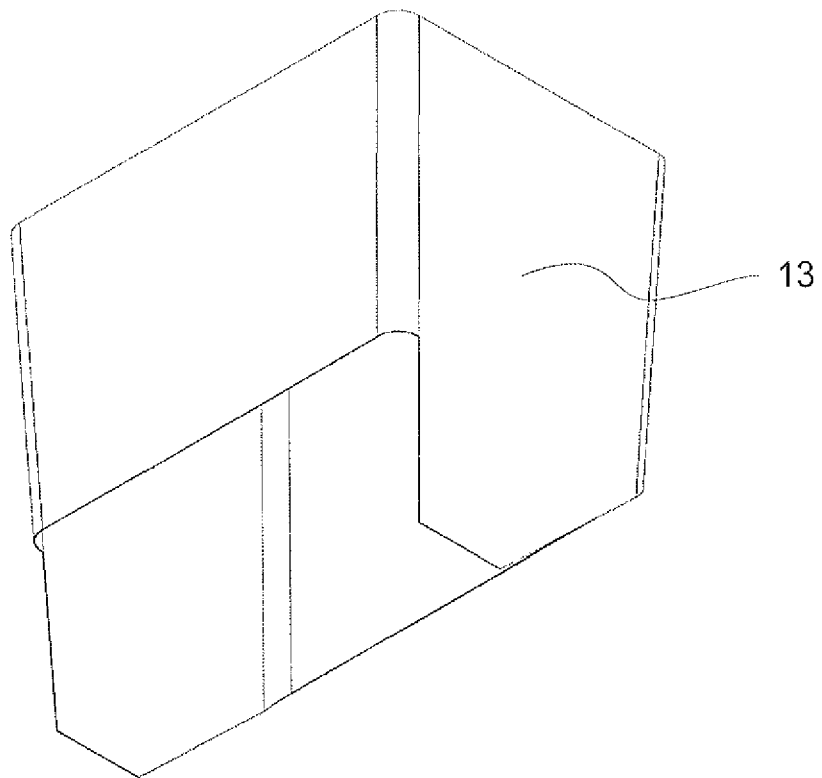


Fig. 5



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Application Number
EP 09 16 1031

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Place of search The Hague		Date of completion of the search 25 September 2009	Examiner Jones, Clive
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EPO FORM 1503 03.82 (F04C01)

**ANNEX TO THE EUROPEAN SEARCH REPORT
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