



(12) **EUROPEAN PATENT APPLICATION**

(43) Date of publication:
06.11.2019 Bulletin 2019/45

(51) Int Cl.:
B65D 43/02 (2006.01)

(21) Application number: **19169081.7**

(22) Date of filing: **12.04.2019**

(84) Designated Contracting States:
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR
Designated Extension States:
BA ME
Designated Validation States:
KH MA MD TN

(71) Applicant: **Jiangmen City Xinhui Henglong Innovative Housewares Co., Ltd.**
Jiangmen Guangdong (CN)

(72) Inventor: **NIE, Huayao**
Jiangmen, Guangdong (CN)

(74) Representative: **m patent group**
Postfach 33 04 29
80064 München (DE)

(30) Priority: **03.05.2018 CN 201820650993 U**

(54) **STORAGE JAR**

(57) A storage jar, including: a jar body (10) with an accommodating cavity for accommodating stored substances; a lid body (20) for covering the accommodating cavity; a buckling structure (30) for detachably connecting the jar body (10) to the lid body (20); and a limiting

structure (40) arranged offset from the buckling structure (30) in a circumferential direction of the jar body (10) and cooperating with the buckling structure (30) to fix the lid body (20) on the jar body (10).

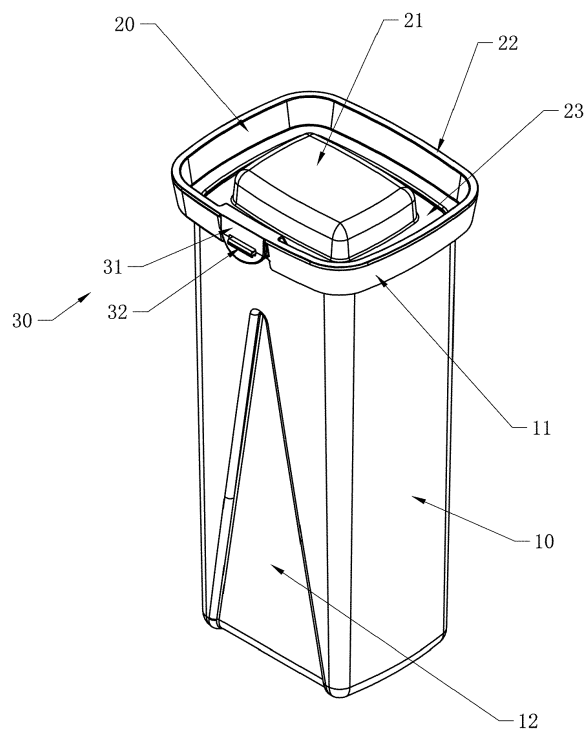


Fig.1

Description

FIELD

[0001] The invention relates to a storage container, and in particular, to a storage jar.

BACKGROUND

[0002] In the prior art, a storage jar is a container for storing substances, which structurally includes a jar body and a lid body that are mainly made of plastic or glass.

[0003] The jar body is used to accommodate stored substances. The lid body is used to cover the jar body. Stored substances may be filled in or taken out when the lid body is opened or removed.

[0004] When the lid body covers the jar body, the stored substances are separated from outside.

[0005] However, the storage jar is liable to be damaged after being repeatedly opened and closed.

SUMMARY

[0006] The invention aims to resolve the foregoing technical problems, and provides a storage jar which is more reliable to open and close and is less susceptible to damage.

[0007] The present invention is implemented by adopting the following technical solutions.

[0008] According to a first aspect of the invention, there is provided a storage jar, including: a jar body with an accommodating cavity for accommodating stored substances; a lid body for covering the accommodating cavity; a buckling structure for detachably connecting the jar body to the lid body; and a limiting structure arranged offset from the buckling structure in a circumferential direction of the jar body and cooperating with the buckling structure to fix the lid body on the jar body.

[0009] When removing the lid body from the jar body, the lid body may be pushed towards or pushed away from one side of the buckling structure, and the buckling structure is then operated to complete the removal, so that the required travel distance of the buckling structure can be reduced, which in turn reduces the deformation of the buckling structure and the possible damage of the storage jar during opening and closing, and thus increases the reliability of the storage jar. In another aspect, by arrangement of fewer buckling structures on the storage jar, it reduces the difficulty to manufacture the storage jar and thus reduces the manufacturing costs. In addition, the foregoing structure is also applicable to containers such as food containers and crispers, which achieves the same effect and can be widely applied and popularized.

[0010] In the storage jar according to the first aspect of the invention, preferably the limiting structure includes a limiting member and a limiting hole for accommodating the limiting member, and the limiting hole has an axis

extending in a radial direction of the jar body.

[0011] Advantageously, the limiting member can be conveniently disengaged from the limiting hole to allow the assembly/disassembly of the storage jar conveniently. Moreover, the limiting member and the limiting hole are conveniently molded during manufacturing, and the process is simplified.

[0012] In the storage jar according to the first aspect of the invention, preferably the limiting member has a plate form, and the limiting hole extends in the circumferential direction of the jar body and is strip-shaped.

[0013] Advantageously, on one hand, the strength of the limiting member can be increased to prevent the limiting member from being broken, and on the other hand, it can be ensured that the lid body reliably covers the jar body without increasing the number of limiting structures.

[0014] In the storage jar according to the first aspect of the invention, preferably the limiting member has a plate form, and the cross sectional shape of the limiting member is set to be curved and/or bent.

[0015] Advantageously, the strength of the limiting member can be further increased, and moreover, varied designs are provided.

[0016] In the storage jar according to the first aspect of the invention, preferably the buckling structure includes a buckling arm and a buckling portion engaged with each other, and the buckling arm is provided with a hand-held portion.

[0017] Advantageously, with the provision of the hand-held portion, the buckling structure can be opened by pulling the hand-held portion with a finger to allow the buckling arm to disengage from the buckling portion, and vice versa.

[0018] In the storage jar according to the first aspect of the invention, preferably the buckling arm is provided with a first hole portion for accommodating the buckling portion.

[0019] Advantageously, the buckling arm is pulled to allow the buckling portion to be inserted into the first hole portion so as to connect the buckling portion to the buckling arm accurately and reliably, and it is convenient to visually confirm the connection.

[0020] In the storage jar according to the first aspect of the invention, preferably the buckling portion is provided with an anti-disengaging convex portion or an anti-disengaging concave portion.

[0021] Advantageously, the anti-disengaging convex portion or the anti-disengaging concave portion abuts an edge of the first hole portion, so that on one hand, the buckling portion is prevented from being disengaged from the first hole portion under the effect of a static force, and on the other hand, the anti-disengaging convex portion or the anti-disengaging concave portion may further guide the buckling portion to pass through the first hole portion, thus reducing resistance of the buckling portion passing through the first hole portion.

[0022] In the storage jar according to the first aspect of the invention, preferably the buckling portion has a

plate form, and the cross sectional shape of the buckling portion is set to be curved and/or bent.

[0023] Advantageously, not only can the buckling portion be conveniently manufactured, but also the strength of the buckling portion is increased, and the buckling portion is durable and less susceptible to damage.

[0024] In the storage jar according to the first aspect of the invention, preferably the lid body is provided with a flange which is arranged within the accommodating cavity, a sealing ring is sleeved on an outer side of the flange, and the sealing ring and the accommodating cavity fit together to form a seal.

[0025] Advantageously, because the buckling structure and the limiting structure fixedly connect the lid body to the jar body, the direction of a force experienced by the buckling structure and the limiting structure is the direction of the connecting line between the lid body and the jar body, and the direction of a force experienced by the sealing ring on the flange is perpendicular to a side wall of the accommodating cavity. Therefore, the directions of the two forces are approximately perpendicular. That is, the force experienced by the sealing ring and the force experienced by the buckling structure and the limiting structure affect each other slightly or do not affect each other. The sealing performance of the storage jar is only related to the sealing ring and is insusceptible to the opening and closing of the structure. Moreover, the opening and closing of the structure is not affected by the sealing ring, so that it is less difficult to open or close the storage jar. In addition, the sealing ring is sleeved on the outer side of the flange, and the sealing ring and the lid body can be securely fixed without any glue, so that the storage jar is sanitary and environmentally friendly.

[0026] In the storage jar according to the first aspect of the invention, preferably the lid body is further provided with a first annular groove, and the flange is arranged on an inner side of the first annular groove.

[0027] Advantageously, the first annular groove increases the strength of the lid body which is therefore less susceptible to deformation during assembly, so that it is ensured that the lid body can tightly cover the jar body.

[0028] In the storage jar according to the first aspect of the invention, preferably the lid body is provided with a raised portion which is arranged on a side of the lid body facing away from the jar body.

[0029] Advantageously, the raised portion is raised towards the side of the lid body facing away from the jar body. Therefore, the raised portion may serve to form a portion for a hand to pick up or put down the lid body conveniently. In addition, the raised portion may be designed as a thin shell to increase the storage space of the storage jar. Certainly, the raised portion may also help to increase the strength of the lid body.

[0030] In the storage jar according to the first aspect of the invention, preferably the lid body is provided with a second annular groove, and the raised portion is arranged on an inner side of the second annular groove.

[0031] Advantageously, the second annular groove

can increase the strength of an edge of the raised portion, thus reducing the risk of breakage of the edge of the raised portion during opening and closing of the storage jar.

[0032] In the storage jar according to the first aspect of the invention, preferably the jar body is provided with an end surface abutting the lid body, and a sealing ring is provided between the end surface and the lid body.

[0033] Advantageously, by arrangement of the sealing ring on the end surface, the space of the accommodating cavity is not occupied. In addition, it is convenient to replace the sealing ring, and suitable resilience of a sealing gasket further keeps the buckling structure and the limiting structure from loosening easily.

[0034] In the storage jar according to the first aspect of the invention, preferably the jar body is provided with an end surface abutting the lid body, a first turnup is provided at an edge of the end surface, and the lid body is accommodated on an inner side of the first turnup.

[0035] Advantageously, on one hand, the first turnup expands the sectional profile of the jar body facilitating the entry of the stored substances into the accommodating cavity without leakage; on the other hand, the first turnup enables an inner side of the jar body to be stepped down from the first turnup to the bottom wall of the jar body, so that the jar body may be manufactured using a process other than blow molding. In addition, the jar body has uniform wall thickness, high quality, and low costs. Furthermore, the first turnup does not impede the discharge of substances when pouring, so that the accommodating cavity can be completely emptied.

[0036] In the storage jar according to the first aspect of the invention, preferably the buckling structure and/or the limiting structure are/is arranged at the first turnup.

[0037] Advantageously, the formation of the accommodating cavity is not affected and the volume of the accommodating cavity is not reduced. The first turnup may further deform to increase the elasticity of the buckling structure and the limiting structure, and the buckling structure and the limiting structure are less susceptible to partial deformation and less likely to fracture. In addition, the entire storage jar has a simple and elegant appearance.

[0038] In the storage jar according to the first aspect of the invention, preferably the lid body is then further provided with a second turnup covering an end portion of the first turnup.

[0039] Advantageously, the second turnup covers the end portion of the first turnup, that is, covers the top of the first turnup, so as to prevent dust or the like from entering the accommodating cavity through a gap between the lid body and the first turnup, thereby protecting stored substances from pollution.

[0040] In addition, the lid body may further be taken out from a space defined by the first turnup by tilting the second turnup, so that the lid body is conveniently opened and closed.

[0041] In the storage jar according to the first aspect

of the invention, preferably the jar body is made of a transparent plastic material.

[0042] Advantageously, through the transparent jar body, the number and quality of substances in the jar body can be conveniently observed, so that it is convenient to estimate how long the substances can last and make a preparation in advance.

[0043] In the storage jar according to the first aspect of the invention, preferably the jar body is provided with a first groove in a side wall of the jar body, and the first groove is provided in an outer surface of the jar body.

[0044] Advantageously, the first groove increases the strength of the jar body and reduces the deformation of the jar body, so that the jar body can be vertically placed.

[0045] In the storage jar according to the first aspect of the invention, preferably the first groove is communicated with the bottom wall of the jar body.

[0046] Advantageously, the communication of the first groove with the bottom wall of the jar body allows the first groove to be directly demolded without having to arranging a complex structure such as a wedge.

[0047] In the storage jar according to the first aspect of the invention, preferably the cross sectional area of the first groove increases in a direction towards the bottom wall of the jar body.

[0048] Advantageously, the cross sectional area of the first groove increases in the direction towards the bottom wall of the jar body, so that on one hand it is convenient to demold the jar body, and on the other hand, a finger may be put in the first groove to lift the storage jar, and the finger tends to move towards the top of the first groove. However, in this case, the cross sectional area of the first groove gradually decreases, and the jar body does not fall off easily from a hand, so that it is convenient to move the storage jar with both hands. Furthermore, when a protrusion is formed in the accommodating cavity to form the first groove in the jar body, the cross sectional area corresponding to the protrusion decreases in the direction towards the top of the jar body, so that substances are conveniently poured from the accommodating cavity.

[0049] In the storage jar according to the first aspect of the invention, preferably the first groove is provided in the side wall of the jar body in the thickness direction.

[0050] Advantageously, people tend to hold the jar body in the thickness direction to move the storage jar. Therefore, the provision of the first groove is provided in the side wall of the jar body in the thickness direction facilitates to put a finger in the first groove.

BRIEF DESCRIPTION OF THE DRAWINGS

[0051] To illustrate the technical solutions in the embodiments of the invention more clearly, a brief introduction will be made below to the accompanying drawings required for describing the embodiments.

[0052] Apparently, the accompanying drawings in the following description show some embodiments of the in-

vention rather than all the embodiments, and those ordinary skilled in the art may still derive other design schemes and drawings from these accompanying drawings without creative efforts.

FIG. 1 is a schematic structural view of an embodiment of a storage jar according to the invention;

FIG. 2 is a schematic sectional view of the embodiment in FIG. 1;

FIG. 3 is a schematic sectional view of a lid body in FIG. 2; and

FIG. 4 is a schematic sectional view of a jar body in FIG. 2.

DETAILED DESCRIPTION OF THE EMBODIMENTS

[0053] The concept, specific structures, and produced technical effects of the invention are clearly and thoroughly described below with reference to the embodiments and the accompanying drawings for thorough understanding of the objectives, features, and effects of the invention.

[0054] Obviously, the described embodiments are merely some embodiments of the invention, rather than all the embodiments of the invention. Based on the embodiments of the invention, all other embodiments derived by a person skilled in the art without any creative efforts shall fall within the protection scope of the invention as defined by the appended claims.

[0055] In addition, all connection relationships involved herein do not merely mean that members are directly connected, but instead, a connection accessory may be added or reduced according to specific implementation cases to form a preferred connection structure. All technical features in the invention can be combined with each other without causing any contradictions.

[0056] As shown in FIG. 1, a storage jar in this embodiment includes a jar body 10 and a lid body 20.

[0057] The jar body 10 is provided with an accommodating cavity for accommodating stored substances. The accommodating cavity is provided, at a top of the cavity, with an opening for filling or taking out the stored substances.

[0058] The lid body 20 is arranged at the top of the jar body 10 and may cover the accommodating cavity, so that substances in the accommodating cavity are separated from outside.

[0059] As shown in FIG. 1, the jar body 10 has a cross section of approximately rectangular shape. Certainly, circular, elliptical, polygonal designs, among other designs, may all be possible.

[0060] As shown in FIG. 1, FIG. 2, and FIG. 4, in some embodiments, a first groove 12 is provided in a side wall of the jar body 10, and the first groove 12 is provided in an outer surface of the jar body 10. Therefore, the first

groove 12 increases the strength of the jar body 10, and the jar body 10 is less susceptible to deformation, so that the jar body 10 can be vertically placed.

[0061] The first groove 12 may have a triangle shape as shown in the figures or may be of another design, which is set according to requirements.

[0062] For convenient manufacturing, the first groove 12 may be communicated with the bottom wall of the jar body 10. In this way, the first groove 12 can be directly demolded without having to arranging a complex structure such as a wedge.

[0063] To make it convenient to move the storage jar, the cross sectional area of the first groove 12 may increase in a direction towards the bottom wall of the jar body 10.

[0064] The increase of cross sectional area of the first groove 12 in the direction towards the bottom wall of the jar body 10, on one hand, is convenient to demold the jar body 10, and on the other hand, facilitates a finger to extend into the first groove 12 to lift the storage jar, and the finger tends to move towards the top of the first groove 12. However, in this case, the cross sectional area of the first groove 12 gradually decreases, and the jar body 10 does not fall off easily from a hand, so that it is convenient to move the storage jar with both hands.

[0065] Furthermore, when a protrusion is formed in the accommodating cavity to form the first groove 12 in the jar body 10, the cross sectional area corresponding to the protrusion decreases in the direction towards the top of the jar body 10, so that substances are conveniently poured from the accommodating cavity.

[0066] Certainly, different positions of the first groove 12 may be held according to the size of a hand to satisfy an actual requirement.

[0067] To make it convenient to hold the jar body 10, the first groove 12 may be provided in the side wall of the jar body 10 in the thickness direction. People tend to hold the jar body 10 in the thickness direction to move the storage jar, and therefore, the provision of the first groove 12 in the side wall of the jar body 10 in the thickness direction makes it very convenient to put a finger in the first groove 12.

[0068] Certainly, there may be a plurality of first grooves 12 distributed on two opposite sides of the jar body 10.

[0069] As shown in FIG. 1, FIG. 2, and FIG. 4, in some embodiments, the jar body 10 is provided with an end surface abutting the lid body 20, a first turnup 11 is provided at an edge of the end surface, and the lid body 20 is accommodated within an inner side of the first turnup 11.

[0070] On one hand, the first turnup 11 expands the sectional profile of the jar body 10 to facilitate the entry of the stored substances into the accommodating cavity without scattering and leakage. On the other hand, the first turnup 11 enables an inner side of the jar body 10 to be arranged in a step form, and gradually becomes smaller from the first turnup 11 to the bottom wall of the

jar body 10, so that the jar body 10 may be manufactured using a process other than blow molding. In addition, the jar body 10 has uniform wall thickness, high quality, and low costs. Furthermore, the first turnup 11 does not impede the discharge of substances in the accommodating cavity during being poured, so that the accommodating cavity can be completely emptied.

[0071] The jar body 10 may be made of a transparent plastic material. Through the transparent jar body 10, the number and quality of substances in the jar body 10 can be conveniently observed, so that it is convenient to estimate how long the substances can last and make a preparation in advance.

[0072] As shown in FIG. 1, FIG. 2, and FIG. 3, in some embodiments, the lid body 20 may be provided with a second turnup 22 covering an end portion of the first turnup 11. The second turnup 22 covers the end portion of the first turnup 11, that is, covers the top of the first turnup 11, so as to prevent dust or the like from entering the accommodating cavity through a gap between the lid body 20 and the first turnup 11, thereby protecting stored substances from pollution.

[0073] In addition, the lid body 20 may further be taken out from a space defined by the first turnup 11 by tilting the second turnup 22, so that the lid body 20 is conveniently opened and closed.

[0074] In some embodiments, the lid body 20 may be provided with a raised portion 21 which is arranged on a side of the lid body 20 facing away from the jar body 10.

[0075] The raised portion 21 is raised towards the side of the lid body 20 facing away from the jar body 10. Therefore, the raised portion 21 may serve to form a portion for a hand to pick up and put down the lid body 20 conveniently. In addition, the raised portion 21 may be designed as a thin shell to increase the storage space of the storage jar. Certainly, the raised portion 21 may also help to increase the strength of the lid body 20.

[0076] In some embodiments, the lid body 20 may be provided with a second annular groove 23, and the raised portion 21 is arranged on an inner side of the second annular groove 23. The second annular groove 23 can increase the strength of an edge of the raised portion 21, thus reducing the risk of breakage of the edge of the raised portion 21 during disassembling.

[0077] The second annular groove 23 and the raised portion 21 may be arranged at the same side of the lid body 20 or at different sides. That is, one of the second annular groove 23 and the raised portion 21 is located at a side of the lid body 20 facing the jar body 10, and the other is located at the other side of the lid body 20 facing away from the jar body 10.

[0078] The second annular groove 23 may be a single groove or may be a plurality of grooves arranged in a circle surrounding the raised portion 21 to produce the same effect.

[0079] As shown in FIG. 1 and FIG. 2, in some embodiments, a buckling structure 30 is provided between the lid body 20 and the jar body 10 for detachably connecting

the jar body 10 to the lid body 20.

[0080] Specifically, the buckling structure 30 includes a buckling arm 31 and a buckling portion 32 engaged with each other. The buckling arm 31 is provided with a hand-held portion 33. The hand-held portion 33 may be a half-moon arc-shaped plate as shown in the figures. Certainly, the hand-held portion 33 may have another shape provided that a force-applying point for a hand is provided.

[0081] When the lid body 20 needs to be removed, the hand-held portion is pulled with a finger 33 to further disengage the buckling arm 31 from the buckling portion 32 to open the buckling structure 30.

[0082] When the lid body 20 needs to be assembled, the hand-held portion 33 is pulled in the opposite direction to bring the buckling arm 31 to approach the buckling portion 32, so as to buckle the buckling structure 30 to fixedly connect the lid body 20 to the jar body 10.

[0083] To achieve more reliable buckling, the buckling arm 31 may be provided with a first hole portion 35 for accommodating the buckling portion 32.

[0084] Therefore, the buckling arm 31 is pulled to allow the buckling portion 32 to be inserted into the first hole portion 35 so as to connect the buckling portion 32 to the buckling arm 31 accurately and reliably, and it is convenient to visually confirm the connection.

[0085] In some embodiments, to prevent the buckling arm 31 from naturally disengaging from the buckling portion 32, as shown in FIG. 2, the buckling portion 32 may be provided with an anti-disengaging convex portion 34 or an anti-disengaging concave portion.

[0086] The anti-disengaging convex portion 34 or the anti-disengaging concave portion abuts an edge of the first hole portion 35, so that on one hand, the buckling portion 32 is prevented from being disengaged from the first hole portion 35 under the effect of a static force, and on the other hand, the anti-disengaging convex portion 34 or the anti-disengaging concave portion may further guide the buckling portion 32 to pass through the first hole portion 35, thus reducing resistance of the buckling portion 32 passing through the first hole portion 35.

[0087] The buckling portion 32 has a plate form, and the cross sectional shape of the buckling portion 32 is set to be curved and/or bent. By being curved and/or bent, it is meant that the cross section of the buckling portion 32 may have an arc shape, a semicircular shape, a shape of a door frame, a frame shape or a shape formed of a plurality of straight segments connected sequentially.

[0088] Such unique design of the buckling portion 32 not only facilitates the manufacturing of the buckling portion 32, but also increases the strength of the buckling portion 32, so that the buckling portion 32 is durable and less susceptible to damage.

[0089] Certainly, the number of the buckling structure 30 is not limited to one and may be increased or reduced according to the shape of the storage jar.

[0090] In the process of opening and closing the storage jar, due to the fact that it is necessary to tile the

buckling arm 31 and overcome the resistance of the buckling portion 32, the buckling arm 31 are at the risk of fracturing after repeated use. In addition, when there are more buckling structures 30, the buckling arm 31 is more likely to fracture.

[0091] As shown in FIG. 2, a limiting structure 40 is further provided between the jar body 10 and the lid body 20. The limiting structure 40 and the buckling structure 30 are arranged offset from each other in a circumferential direction of the jar body 10. The limiting structure 40 and the buckling structure 30 cooperate to fix the lid body 20 to the jar body 10.

[0092] The limiting structure 40 and the buckling structure 30 being arranged offset from each other in the circumferential direction of the jar body 10 means that the limiting structure 40 and the buckling structure 30 are arranged at an outer edge of the jar body 10 and do not overlap, thus the limiting structure 40 and the buckling structure 30 can fixedly connect the lid body 20 to the jar body 10. Because the jar body 10 may have various shapes, the limiting structure 40 and the buckling structure 30 are not necessarily located on opposite sides of the jar body 10.

[0093] In this embodiment, taking a line vertically passing through the center of the opening of the accommodating cavity as an axis, the direction of rotation around the axis on an periphery of the jar body 10 is the circumferential direction of the jar body 10, and the direction of a vertical connecting line of the periphery of the jar body 10 and the axis is the radial direction of the jar body 10.

[0094] The limiting structure 40 and the buckling structure 30 are preferably arranged on opposite sides of the jar body 10 in the thickness direction, so that the number of the limiting structures 40 and the number of the buckling structures 30 are reduced.

[0095] In some embodiments, the limiting structure 40 includes a limiting member 41 and a limiting hole 42 for accommodating the limiting member 41, and the limiting hole 42 has an axis extending in the radial direction of the jar body 10.

[0096] The limiting member 41 is conveniently disengaged from the limiting hole 42 to facilitate the disassembling of the storage jar. Moreover, the limiting member 41 and the limiting hole 42 are conveniently formed during manufacturing, and the process is simplified.

[0097] In some embodiments, the limiting member 41 has a plate form, and the limiting hole 42 extends in the circumferential direction of the jar body 10 and is strip-shaped.

[0098] In this way, on one hand, the strength of the limiting member 41 can be increased to prevent the limiting member 41 from being broken, and on the other hand, it can be ensured that the lid body 20 reliably covers the jar body 10 without increasing the number of limiting structures 40.

[0099] In some embodiments, the limiting member 41 has a plate form, and the cross sectional shape of the limiting member 41 is set to be curved and/or bent, which

has the same advantage as described with respect to the buckling portion 32, and it further allows for varied designs.

[0100] Certainly, the limiting structure 40 is not limited to the limiting member 41 and the limiting hole 42 for accommodating the limiting member 41. The limiting hole 42 may be alternatively a concave groove, an opening, a hook portion or the like.

[0101] By such improvement, when removing the lid body 20 from the jar body 10, the lid body 20 may be pushed towards or pushed away from one side of the buckling structure 30, and the buckling structure 30 is then operated to complete the removal, so that the required travel distance of the buckling structure 30 can be reduced, which in turn reduces the deformation of the buckling structure 30 and the possible damage of the storage jar during opening and closing, and thus increases the reliability of the storage jar. In another aspect, by arrangement of fewer buckling structures 30 on the storage jar, it reduces the difficulty to manufacture the storage jar and thus reduces the manufacturing costs. In addition, the foregoing structure is also applicable to containers such as food containers and crispers, which achieves the same effect and can be widely applied and popularized.

[0102] As shown in FIG. 2 and FIG. 3, in some embodiments, the lid body 20 is provided with a flange within the accommodating cavity, a sealing ring 50 is sleeved on an outer side of the flange, and the sealing ring 50 and the accommodating cavity fit together to form a seal.

[0103] Because the buckling structure 30 and the limiting structure 40 fixedly connect the lid body 20 to the jar body 10, the direction of a force experienced by the buckling structure 30 and the limiting structure 40 is the direction of a connecting line between the lid body 20 and the jar body 10, and the direction of a force experienced by the sealing ring 50 on the flange is perpendicular to a side wall of the accommodating cavity. Therefore, the directions of the two forces are approximately perpendicular. That is, the force experienced by the sealing ring 50 and the force experienced by the buckling structure 30 and the limiting structure 40 affect each other slightly or do not affect each other. The sealing performance of the storage jar is only related to the sealing ring 50 and is insusceptible to the opening and closing of the structure. Moreover, the opening and closing of the structure is not affected by the sealing ring 50, so that it is less difficult to open or close the storage jar. In addition, the sealing ring 50 is sleeved on the outer side of the flange, and the sealing ring 50 and the lid body 20 can be securely fixed without any glue, so that the storage jar is sanitary and environmentally friendly.

[0104] In some embodiments, the lid body 20 is provided with a first annular groove, and the flange is arranged on an inner side of the first annular groove. The first annular groove may have the same features as the second annular groove 23 or may be additionally arranged.

[0105] Similarly, the first annular groove increases the strength of the lid body 20 which is therefore less susceptible to deformation during assembly, so that it is ensured that the lid body 20 can tightly cover the jar body 10.

[0106] In some embodiments, the jar body 10 is provided with an end surface abutting the lid body 20, and a sealing ring 50 is provided between the end surface and the lid body 20. The arrangement of the sealing ring 50 on the end surface enables that the space of the accommodating cavity is not occupied. In addition, it is convenient to replace the sealing ring, and suitable resilience of a sealing gasket further keeps the buckling structure 30 and the limiting structure 40 from loosening easily.

[0107] In some embodiments, the buckling structure 30 and/or the limiting structure 40 is arranged at the first turnup 11, so that the formation of the accommodating cavity is not affected and the volume of the accommodating cavity is not reduced. The first turnup 11 may further deform to increase the elasticity of the buckling structure 30 and the limiting structure 40, and the buckling structure 30 and the limiting structure 40 are less susceptible to partial deformation and thus less likely to fracture. In addition, the entire storage jar has a simple and elegant appearance.

[0108] The buckling structure 30 and/or the limiting structure 40 being arranged at the first turnup 11 means that the buckling structure 30 and limiting structure 40 may be separately arranged on the first turnup 11 or may be both arranged on the first turnup 11.

[0109] The foregoing embodiments are not limited to the technical solutions in the embodiments, and the embodiments may be combined with each other to form a new embodiment. The foregoing embodiments are only intended to describe the technical solutions of the invention rather than to limit the technical solutions. Any modification or equivalent replacement made without departing from the principle and scope of the invention shall fall within the scope of the technical solutions of the invention as defined by the appended claims.

Claims

1. A storage jar, comprising:

- a jar body (10) with an accommodating cavity for accommodating stored substances;
- a lid body (20) for covering the accommodating cavity;
- a buckling structure (30) for detachably connecting the jar body (10) to the lid body (20); and
- a limiting structure (40) arranged offset from the buckling structure (30) in a circumferential direction of the jar body (10) and cooperating with the buckling structure (30) to fix the lid body (20) on the jar body (10).

2. The storage jar according to claim 1, wherein the

limiting structure (40) comprises a limiting member (41) and a limiting hole (42) for accommodating the limiting member (41), and the limiting hole (42) has an axis extending in a radial direction of the jar body (10).

3. The storage jar according to claim 2, wherein the limiting member (41) has a plate form, and the limiting hole (42) extends in the circumferential direction of the jar body (10) and is strip-shaped. 5
4. The storage jar according to claim 2 or claim 3, wherein the limiting member (41) has a plate form, and the cross sectional shape of the limiting member (41) is set to be curved and/or bent. 10
5. The storage jar according to any one of claims 1 to 4, wherein the buckling structure (30) comprises a buckling arm (31) and a buckling portion (32) engaged with each other, and the buckling arm (31) is provided with a hand-held portion (33). 20
6. The storage jar according to claim 5, wherein the buckling arm (31) is provided with a first hole portion (35) for accommodating the buckling portion (32). 25
7. The storage jar according to claim 5 or claim 6, wherein the buckling portion (32) is provided with an anti-disengaging convex portion (34) or an anti-disengaging concave portion. 30
8. The storage jar according to any one of claims 5 to 7, wherein the buckling portion (32) has a plate form, and the cross sectional shape of the buckling portion (32) is set to be curved and/or bent. 35
9. The storage jar according to any one of claims 1 to 8, wherein the lid body (20) is provided with a flange within the accommodating cavity, a sealing ring (50) is sleeved on an outer side of the flange, and the sealing ring (50) and the accommodating cavity fit together to form a seal. 40
10. The storage jar according to any one of claims 1 to 9, wherein the jar body (10) is provided with an end surface abutting the lid body (20), and a sealing ring (50) is provided between the end surface and the lid body (20). 45
11. The storage jar according to any one of claims 1 to 10, wherein the jar body (10) is provided with an end surface abutting the lid body (20), a first turnup (11) is provided at an edge of the end surface, and the lid body (20) is accommodated on an inner side of the first turnup (11). 50
12. The storage jar according to claim 11, wherein the buckling structure (30) and/or the limiting structure

(40) are/is arranged at the first turnup (11).

13. The storage jar according to claim 11 or claim 12, wherein the lid body (20) is provided with a second turnup (22) covering an end portion of the first turnup (11). 5
14. The storage jar according to any one of claims 1 to 13, wherein the lid body (20) is provided with a raised portion (21), and the raised portion (21) is arranged at a side of the lid body (20) facing away from the jar body (10). 10
15. The storage jar according to any one of claims 1 to 14, wherein the jar body (10) is made of a transparent plastic material. 15

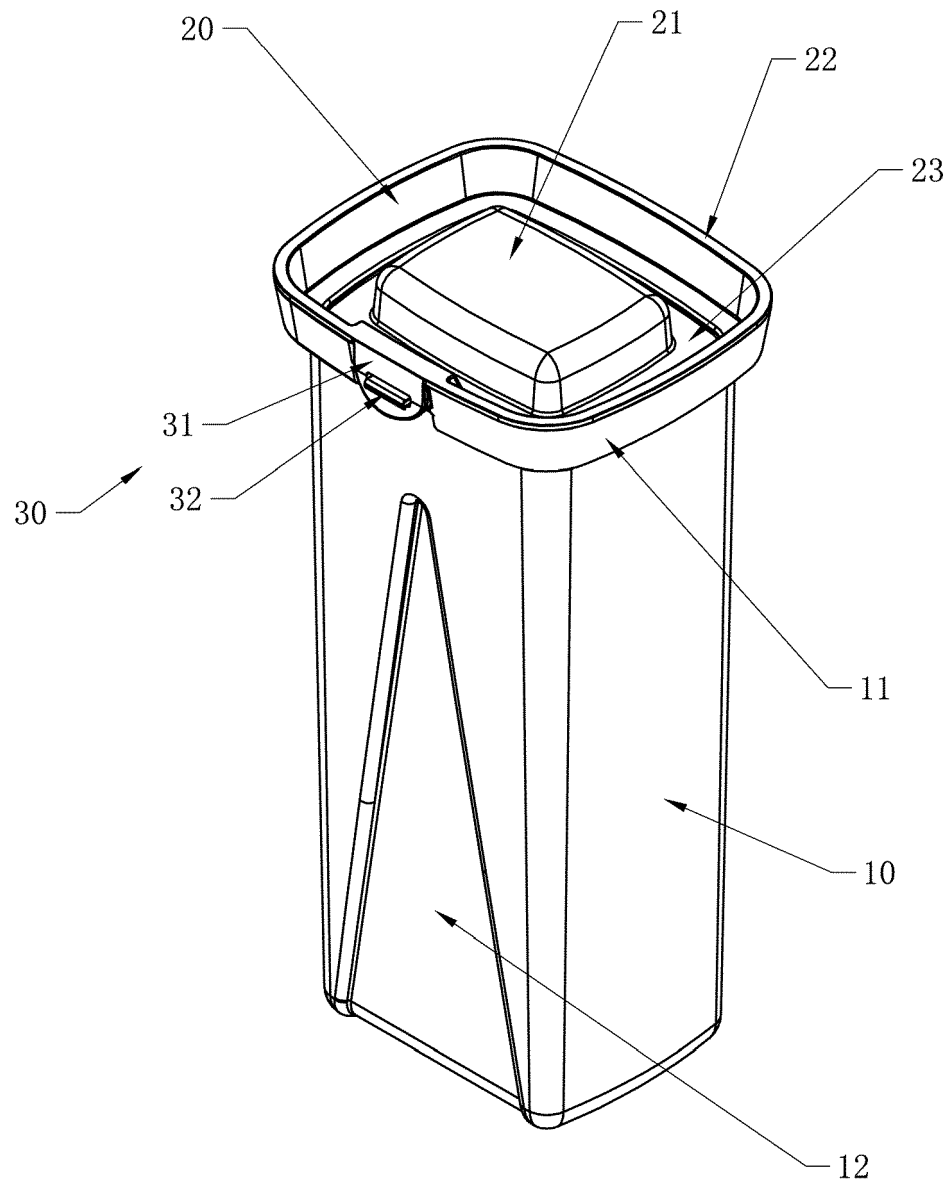


Fig.1

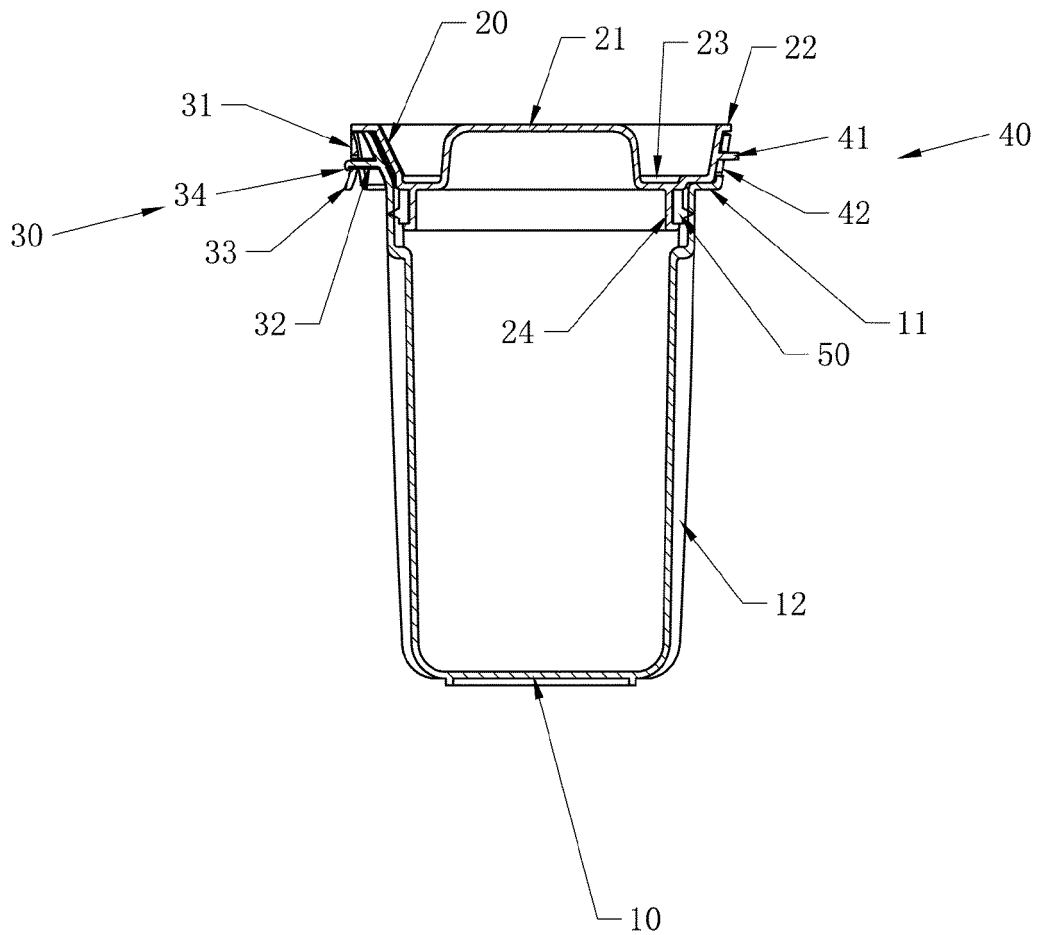


Fig.2

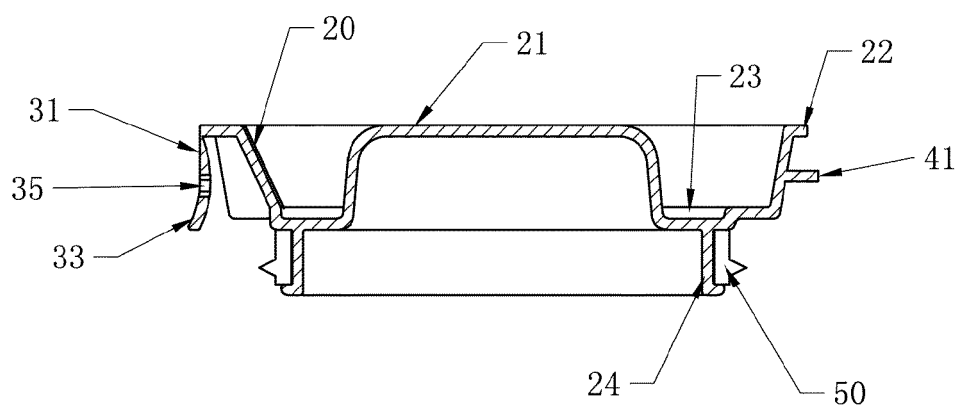


Fig.3

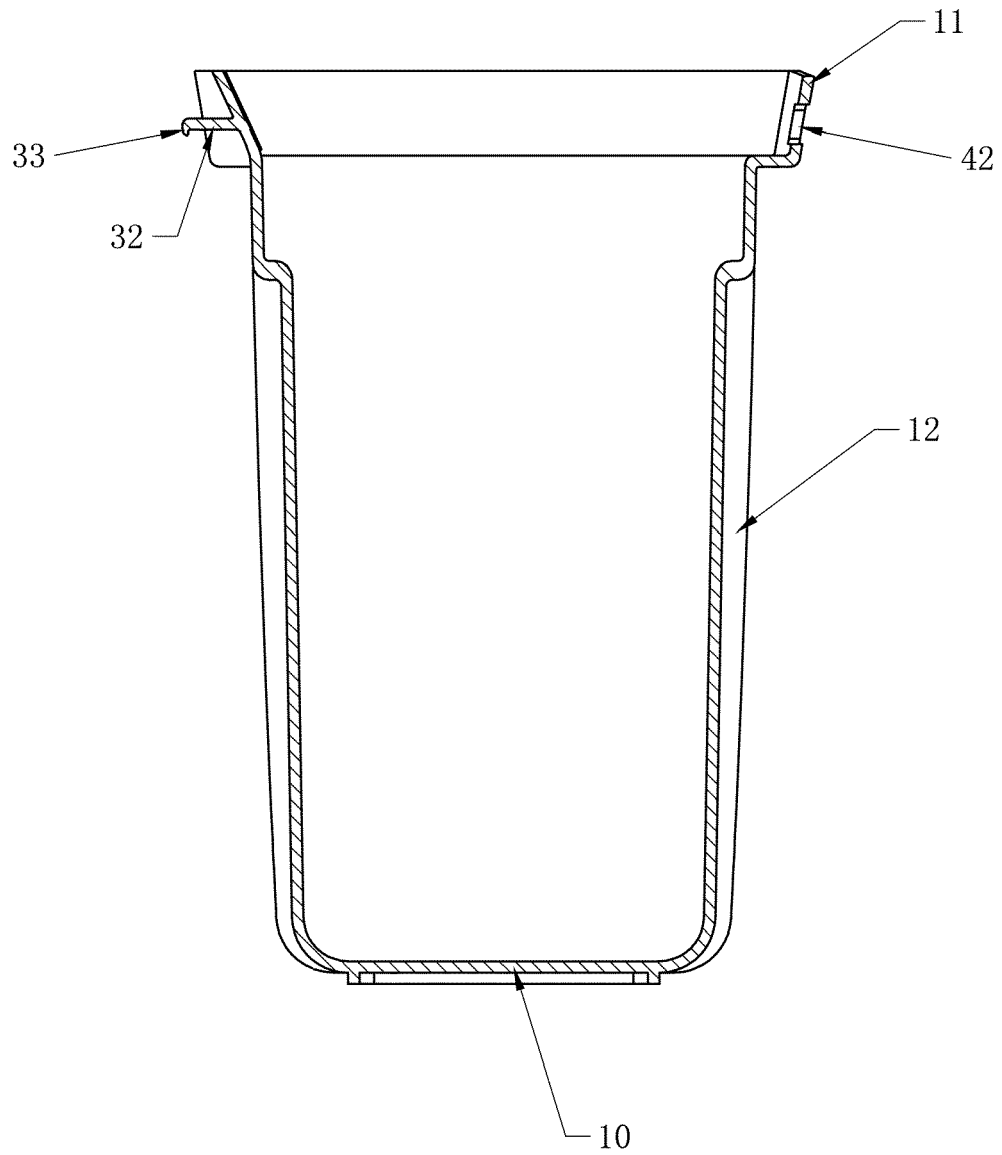


Fig.4



EUROPEAN SEARCH REPORT

Application Number
EP 19 16 9081

5

10

15

20

25

30

35

40

45

50

55

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	WO 2013/043219 A1 (PBM NUTRITIONALS LLC [US]) 28 March 2013 (2013-03-28)	1,5,6,14,15	INV. B65D43/02
Y	* figures 1, 2, 4 *	7-10	
Y	EP 1 495 987 A2 (KOREA ALPHALINE CO LTD [KR]) 12 January 2005 (2005-01-12) * figure 2 *	7,8	
Y	WO 90/11229 A2 (REED PACKAGING LTD [GB]) 4 October 1990 (1990-10-04) * figure 3 *	9	
Y	CH 255 852 A (BLOECHLINGER PAUL [CH]) 15 July 1948 (1948-07-15) * figure *	10	
			TECHNICAL FIELDS SEARCHED (IPC)
			B65D
The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 17 September 2019	Examiner Bridault, Alain
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 19 16 9081

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
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

17-09-2019

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 2013043219 A1	28-03-2013	US 2014097183 A1	10-04-2014
		WO 2013043219 A1	28-03-2013
EP 1495987 A2	12-01-2005	AR 046496 A1	14-12-2005
		AU 2004203032 A1	27-01-2005
		BR PI0402936 A	24-05-2005
		CA 2472978 A1	09-01-2005
		CL 2004001714 A1	29-04-2005
		CN 1603211 A	06-04-2005
		EP 1495987 A2	12-01-2005
		HK 1073095 A1	03-08-2007
		JP 4165886 B2	15-10-2008
		JP 2005029269 A	03-02-2005
		KR 20050006666 A	17-01-2005
		MX PA04006610 A	08-06-2005
		MY 137343 A	30-01-2009
		RU 2286294 C2	27-10-2006
		US 2005006390 A1	13-01-2005
WO 9011229 A2	04-10-1990	AU 648021 B2	14-04-1994
		CA 2049317 A1	22-09-1990
		CN 1045741 A	03-10-1990
		DE 69017014 D1	23-03-1995
		EP 0464097 A1	08-01-1992
		NZ 233004 A	27-04-1994
		PT 93511 A	07-11-1990
		WO 9011229 A2	04-10-1990
		ZA 9002138 B	27-02-1991
CH 255852 A	15-07-1948	NONE	