

FIG. 1

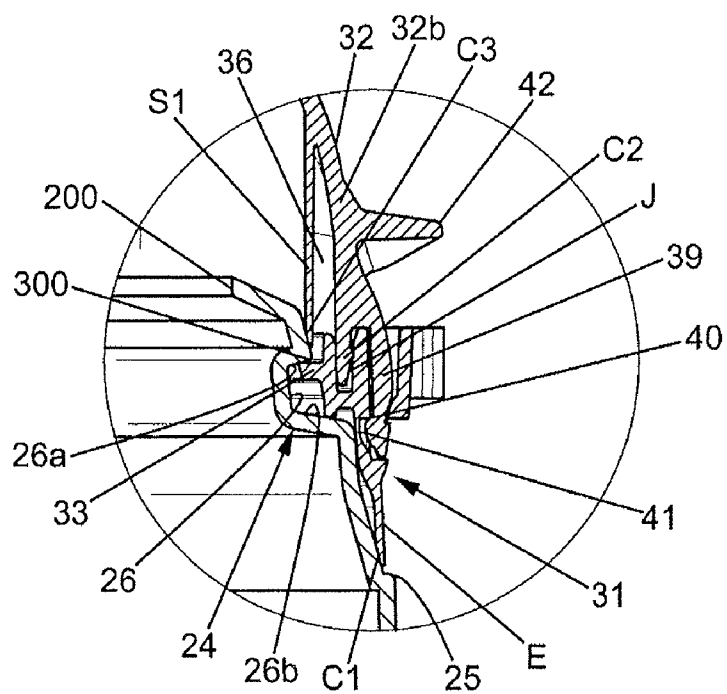
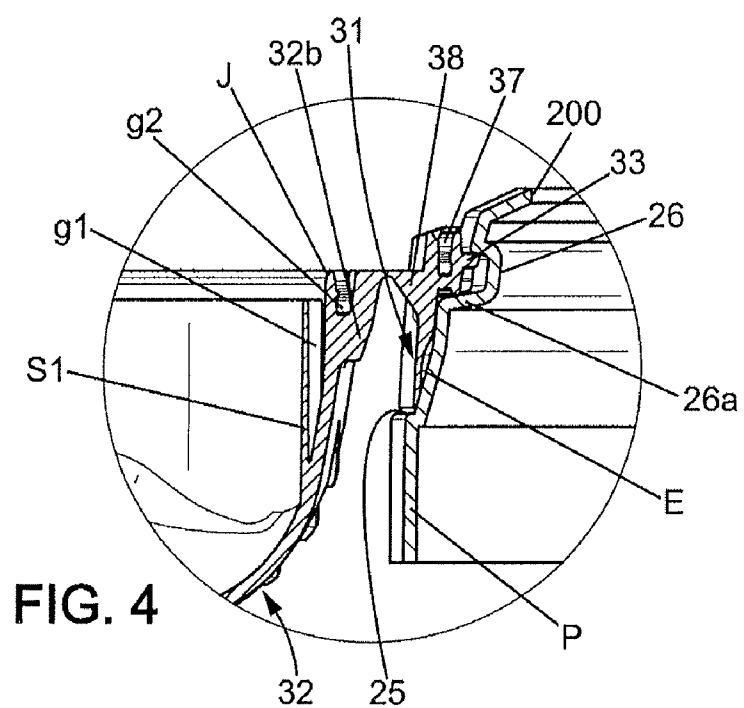
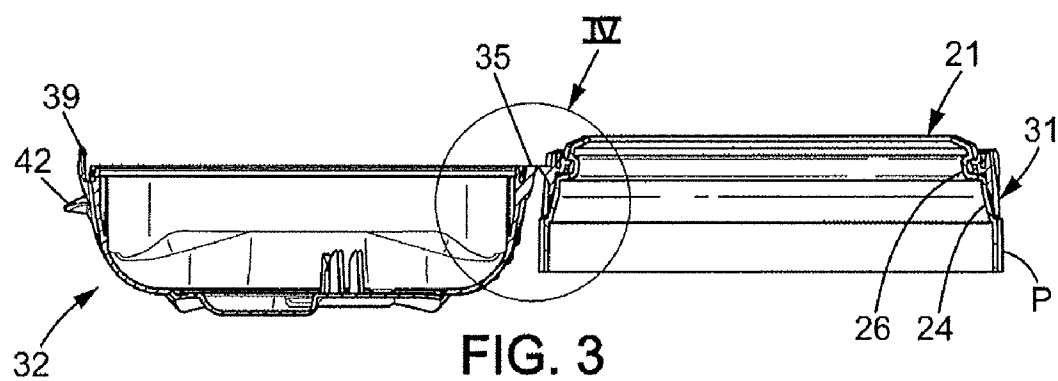
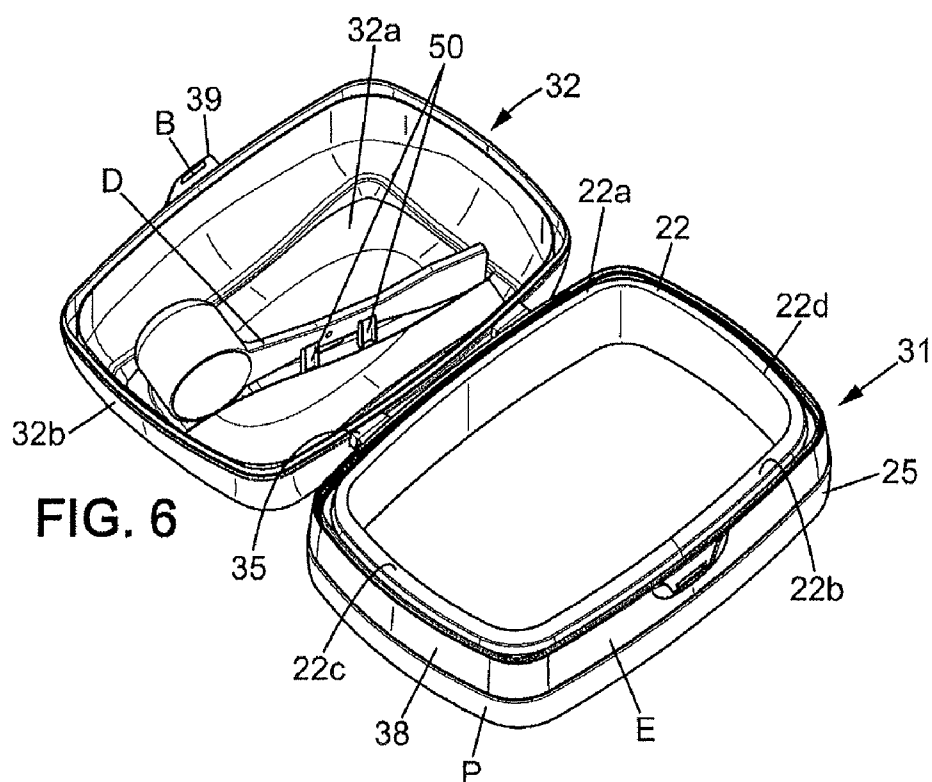
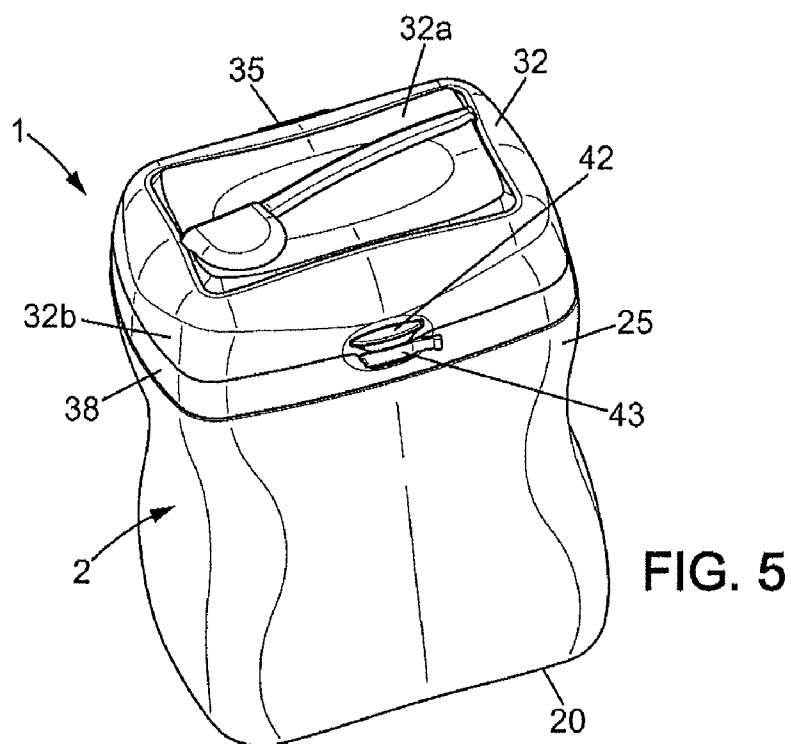


FIG. 2





FOOD PACKING WITH A CLOSING LID

[0001] This invention relates to a packaging with a resalable closure lid intended for a food product. More specifically, the invention relates to a packaging comprising:

[0002] a container extending about a central axis from a base to an upper face having an opening, the container having a peripheral outer surface near the opening;

[0003] a closure system comprising a frame fixed to the peripheral outer surface of the container and a lid hinged to the frame to allow movement between an open position and a closed position, in which latter it closes the opening of the container; and, in the closed position:

[0004] at least one container/frame sealing region formed by an annular contact between the frame and the peripheral outer surface of the container; and

[0005] at least one frame/lid sealing region formed by an annular contact between the lid and the frame.

[0006] This type of packaging has a user-friendly closure system and can be employed for food purposes, such as holding food products in the form of powder, granules or flakes. In the example of infants' powdered milk, a membrane seal completely isolates the powder from the exterior and must be removed on first use, the powder then being kept in the container which is closed by its lid.

[0007] Document FR 2 747 107 A1 discloses an example of a food packaging of this kind with the lid hinged by an elastic hinge to a frame covering the top of the container. Document US 2006/0219652 A1 discloses another example of a food packaging with a fold-down lid which has in diametrically opposite positions a hinge interrupting the contacts of the lid with the container and the frame, and a lock element under which the thumb can be inserted.

[0008] However, it is not always possible to close the lid hermetically, at least not with a seal comparable to that provided by the membrane. Consequently when the packaging is put away after the first use, incomplete closure with even very slight gaps between the lid and the frame allows fine particles—or even small insects in the case of extreme climatic conditions, such as tropical conditions—to come into contact with the contents.

[0009] It is therefore an object of the present invention to provide a reclosable packaging which gives the contents of the packaging better protection every time the lid is closed.

[0010] To this end, the invention provides a packaging of the type indicated above, characterized in that at least one container/lid additional sealing region is formed in said closed position by an annular contact between the lid and the peripheral outer surface of the container, the additional sealing region being situated between the opening of the container and said container/frame and frame/lid sealing regions.

[0011] By this means it is possible to create a packaging which protects the contents completely when the lid is reclosed following its first opening. The barrier formed by the contact of the lid with the outer surface of the container near the opening is an advantageous addition to both the barrier created by the lid/frame sealing contact and the barrier created by the frame/container sealing contact. Also, since the seal created by the contact of the lid with the outside of the container corresponds to the closest barrier before the contents, the frame is protected from contact with the contents of the container when the lid is closed. Naturally, each annular contact is provided by a continuous region around the circum-

ference of the packaging (an uninterrupted region) and the term “sealing” should be understood as referring to the integrity of what is contained in the container. In the present case the sealing regions of the packaging make it impossible for minuscule insects to get between the container and the closed lid, this barrier action applying to insects having a characteristic apparent dimension of around 75-100 microns (such as the insect *liposcelis* *corrodens* in the larval stage).

[0012] In accordance with another feature, when the lid is in the closed position, each of the sealing regions has in cross section a plano-convex meeting of surfaces, which makes it possible to prevent the ingress into the container of particles or insects having a size exceeding 50 microns. This type of contact of very limited, if not point-like, extent between the surfaces avoids the formation of a statically indeterminate seal and reduces the effort required of the user to operate the lid.

[0013] In accordance with another feature, the frame has an inside face with at least two annular surfaces for contacting the peripheral outer surface of the container, the two contacting surfaces facing in different directions and defining two separate sealing regions. The frame is thus easily fitted to the container and certain tolerances are permissible in the manufacture of the container and frame.

[0014] In accordance with another feature, the lid has at least one connection element that has two annular surfaces for contacting the frame, these two surfaces facing in different directions to define two separate sealing regions. This makes it easy to close the lid onto the frame and makes certain tolerances possible in the manufacture of the frame and lid assembly.

[0015] In accordance with another feature, the peripheral outer surface of the container has a projecting edge which is situated, when the lid is in said closed position, between the frame and said additional sealing region. The contact regions of the container with the frame and with the lid therefore occur on either side of such a projecting edge, preferably on surface portions having different slopes, and in particular the frame can be retained on the container when the lid is raised.

[0016] In accordance with another feature, the peripheral outer surface of the container has an annular depression near the opening, the frame covering said depression and having, pointing away from the lid, a lower extension which is at a distance from the peripheral outer surface of the container with the exception of an extreme portion in sealing annular contact with the container. The extreme portion of the lower extension may be of reduced thickness and makes, when the lid is in said closed position, sealing annular contact with the container outside of said depression. The limiting of the sealing contact between the frame and the container facilitates the process of assembling the frame/lid assembly to the container, the latter preferably being made by a different process (such as extrusion blow moulding) from the method of manufacture of the frame/lid assembly (such as injection moulding).

[0017] In accordance with another feature, the lower extension of the frame has an outer face, the lid having a side wall continuous with said outer face when in the closed position. There is therefore nothing on the frame/lid assembly to catch on the user's hand at the connection of the lid. A smooth external profile for the frame/lid assembly can be created by a butt join between the outer skirt formed by the side wall and the outer face of the frame. The lid also advantageously

provides extra volume (especially height) relative to the frame, so that one or more objects can be housed in the volume defined by the lid.

[0018] In accordance with another feature, the lid comprises an inner skirt and an outer skirt, the inner skirt having a free extremity which presses, when the lid is in said closed position, on the peripheral outer surface of the container to form said additional sealing region. The inner skirt may for example have a free extremity which is bevelled on its inside. The extremity of the inner skirt can thus slide down smoothly over the peripheral outer surface of the container when the lid is pushed down into its closed position. This arrangement also has a centring effect, making the seal around the opening precise when the lid is closed.

[0019] In accordance with another feature, the lid has a first annular groove formed between the inner skirt and the outer skirt, and a second annular groove separated from the first groove by an outward annular projection, a frame/lid sealing region being formed by the contact of the outward annular projection on the frame when the lid is in its closed position. This arrangement ensures that a space is maintained between two sealing regions while minimising the amount of plastic material required to produce the lid.

[0020] In accordance with another feature, the container is made by extrusion blow moulding and its transverse cross section near the opening is an S, the lower extremity of the S corresponding to a region of contact with a lower abutment of the frame. The frame consequently rests on the container via an abutment surface which is separate from the sealing surface regions used to ensure impenetrability. Additionally, a wiping surface is formed at the edge of the container opening, at the upper extremity of the S.

[0021] In accordance with another feature, the lid comprises, opposite the hinge, a retention member, the frame having a radially outward-facing cavity in which the retention member engages when the lid is in its closed position, to allow the lid to be locked in said closed position. The maintenance of a sealing contact with the frame at the connection between these two elements can thus be achieved separately from the function of locking the lid which is thus localised to the outside of this connection.

[0022] In accordance with another feature, a detachable membrane is used to seal said opening, the membrane being covered by the lid when the latter is closed and having at least one edge remote from the frame and from the lid when the lid is closed. The membrane can thus be removed without difficulty. The membrane is advantageously not pinched by the frame and/or the lid. A measuring utensil can also be wielded more easily because of the distance of the frame and lid from the edges of the opening. In particular, the frame is at a lower level than the opening.

[0023] Other features and advantages of the invention will become apparent in the course of the following description, which is given by way of non-restrictive example with reference to the figures, in which:

[0024] FIG. 1 is a cross section through the upper part of a packaging according to the invention, showing the lid in the closed position;

[0025] FIG. 2 is a view, in the same section plane as FIG. 1, showing in more detail the interlocking shaping of the container, the frame and the lid;

[0026] FIG. 3 is a cross section through a packaging according to the invention, with the lid shown in a fully open position;

[0027] FIG. 4 is a view, in the same section plane as FIG. 3, showing in more detail the interlocking shaping of the container, the frame and the lid;

[0028] FIG. 5 is a complete perspective view of the packaging shown in FIG. 1; and

[0029] FIG. 6 is a perspective view of the upper part of a packaging according to the invention.

[0030] Identical reference signs in the various figures denote identical or similar elements.

[0031] Referring to FIGS. 1 and 5, the packaging 1 comprises a container 2 and a closure system 3. The container 2 is open on one side opposite its base or bottom 20 and may be of any shape such as cylindrical, tapering, parallelepiped-shaped, waisted and so forth, as those skilled in the art will understand. An annular side wall P of the container 2 extends about a vertical central axis Z to a top defining an upper rim 200. A wide opening 21 enclosed by a perimeter 22 is defined by this rim 200. The perimeter 22 may be on a shallow slope descending away from the opening 21 as can be seen in the non-restrictive example shown in FIG. 1, or may be in a horizontal plane coinciding with the plane of the opening 21.

[0032] The cross section perpendicular to the central axis Z of the container 2 may be basically rectangular with rounded corners. In the example shown in FIG. 5, this section varies somewhat along the central axis Z to form a waist for easier handling, but these variations remain limited to ensure the vertical strength of the packagings when stacked. For reasons of convenient handling, again, the cross section is preferably inscribed in a rectangle measuring 150 to 130 mm by 105 to 125 mm. The height from the base to the top face is preferably between 130 and 170 mm to provide the normal volume for boxes intended to contain infant powdered milk. It is therefore a relatively deep container whose opening 21 must be made as wide as possible to avoid difficulty with extracting powder from close to the base 20 of the container 2. In addition, this wide opening 21 allows a measuring utensil D to be used to pick up the powder.

[0033] Because of this basically rectangular cross section, shown in FIG. 6, the perimeter 22 of the opening of the container 2 may be considered to have a first long side 22a, an opposite second long side 22b, and first and second short sides 22c, 22d connecting the long sides.

[0034] Without implying any restriction, the container 2 may be made as a single thermally blow-moulded plastic component. The plastic is preferably a multilayer composite forming a highly effective oxygen barrier where used for a product such as powdered milk, but the container could of course be produced in some other material, especially metal or a multilayer cartonboard.

[0035] In the case of powdered milk, the opening 21 of the container 2 is closed by a membrane 23, shown in FIG. 1, which is sealing around the perimeter 22. The powdered milk is thus preserved under excellent conditions inside the container 2 until the first time it is used, when the membrane 23 is torn away.

[0036] As can be seen more clearly in FIG. 2, the container 2 has a neck 24 between the upper rim 200 of its annular wall 22 and the intermediate top 25. An annular depression 26 is formed in this neck 24 and the annular wall 22 is thus S-shaped in cross section in the region of the opening 21. As will be explained later, the presence of this neck 24 allows the fitting of a frame which is part of the closure system 3.

[0037] Referring to FIGS. 1 and 2, the closure system 3 comprises, first a frame 31 and a generally domed lid 32. The

frame 31 is mounted tightly around the neck 24 of the container 2. The frame 31 is fixed non-detachably to this part of the container 2, as by snap fastening, but it could also be fixed in place by adhesive bonding or welding. In the non-restrictive example shown in FIGS. 1 and 2, the frame 31 is snap fastened into the annular depression 26 of the neck 24. Snap fastening is made possible here by the radially inward engagement of an annular projection 33 of the frame 31 against the peripheral surface of the neck 24, on a downward-facing surface 26a, underneath an annular projecting edge 300. Once mounted on the neck 24, the frame 31 is now fixed at least in terms of translation along the Z axis, relative to the container 2, by the upper and lower abutments formed by the surface 26a and the opposing surface 26b, respectively, of the container 2.

[0038] In the cross section shown in FIG. 2, the surface 26b is at the lower end of the "S" of the annular wall 22. To avoid creating a statically indeterminate system between the surface 26b of the container 2 and the frame 31, the contact created is preferably not sealing. To limit the area of this contact, the frame 31 may have a lip 34 whose free extremity defines the only surface in contact with the surface 26b.

[0039] In the embodiment depicted, and without implying any limitation, the annular container/frame contact between the surface 26a and the free extremity of the annular projection 33 is of the plano-convex type and can define a sealing region. The annular depression 26 is covered by the frame 31 whose upper part includes a configuration allowing a sealing connection to the lid 32.

[0040] Away from the connection to the lid 32, the frame 31 has a lower extension E separated by a gap from the bottom part of the neck 24, with the exception of an end portion in sealing annular contact C1 with the container 2. This annular contact C1 is that of a convex surface belonging to the frame 31 on an essentially planar surface of the container 2, as can be seen in FIG. 2. The two narrow annular contact surfaces of the frame 31, which define sealing container/frame regions, are in different orientations in the example illustrated. The extreme portion of the lower extension E may be of reduced thickness and makes, when the lid 32 is in said closed position, sealing annular contact C1 with the container 2 outside of said depression 26 and near the intermediate top 25.

[0041] The provision of one or more sealing container/frame regions at the neck 24 and at least one sealing frame/lid region at the connection between the elements 31, 32 of the closure system means that, when the lid 32 is in the sealing position on the frame 31, fine particles or minute insects cannot get through the opening 21. The sealing annular contact C2 is formed at a distance from the container 2, as for example at a male or female portion of the lid 32 in contact with a corresponding portion of the frame 31.

[0042] As shown in FIGS. 5 and 6, the lower extension E of the frame 31 has a visible outer face. The lid 32 has a side wall 32b that is essentially continuous with this outer face in the closed position. Without implying any restriction, at least one sealing frame/lid region can be placed at a distance from the lower extension E. A locking device 4 as shown particularly in FIGS. 2 and 6 can be fitted to the closure system 3. As an example, this device may be positioned on the outside of the frame 31, adjacent to the lower extension E.

[0043] There is also a supplementary sealing region between the opening of the container 2 and the abovementioned sealing regions. The lid 32 may thus have an annular element, such as an inner skirt S1 or an O-ring attached to the

lid 32 and coming directly into contact C3 with the outer surface of the neck 24, between the rim 200 and the frame 31. The resulting sealing barrier as close as possible to the opening of the container 2 gives better protection of the contents by usefully supplementing the sealing regions directly exposed with the exterior of the packaging 1. The free extremity of the inner skirt S1 may for example be rounded or bevelled for more gradual contact between the inner skirt S1 and the outer surface of the neck 24 when the lid 32 is lowered. In a preferred but in no way restrictive embodiment, when the lid 32 is in the closed position, each of the sealing regions presents in cross section a plano-convex meeting of surfaces. As FIGS. 1-4 show, the regions making the sealing contacts C1, C2, C3 are elastically flexible. Each annular sealing region is created without diminishing the ease with which the lid 32 can be operated.

[0044] Most of these sealing regions, and preferably all of them, are created by applying a force having an essentially radial component.

[0045] In the embodiment shown, the frame 31 and the lid 32 are hinged to each other by a connection which allows the lid 32 to move relative to the frame 31 and relative to the container 2 between an open position, shown in FIGS. 3-4 and 6, in which the opening 21 is easily accessible, and a closed position, shown in FIGS. 1-2 and 5, in which the lid 32 covers this opening 21. The result is thus a reclosable packaging whose lid 32 is manipulated every time the packaging is used, as for example when preparing drinks.

[0046] The connection here is a hinge connection 35 in which the pivot axis is perpendicular to the central axis Z. This axis is close to the first long side 22a of the perimeter 22 in the example shown in FIG. 6. The locking device 4 can be positioned opposite the hinge 35, next to the long side 22b. In the embodiment depicted, it is a plastic hinge 35 formed by a fold line, so the lid 32 and the frame 31 can be made in one piece. These elements of the closure system 3 may thus for example be produced in one piece by injection moulding a plastic, such as polypropylene, in a mould. However, the hinge connection 35 can of course be produced in the form of two separate assembled pieces, and it is also possible to use any suitable type of joint between the frame 31 and the lid 32. In less preferred embodiments the frame/lid connection may be omitted.

[0047] The connection between the frame 31 and the lid 32, and the associated lock, will now be described in more detail with reference to FIGS. 2, 4 and 6.

[0048] As can be seen in FIG. 2, the frame 31 has, adjacent to and essentially perpendicular to the annular projection 33, an annular projection 36 of the frame 31 directed towards a first groove g1 defined in the lid 32 between the inner skirt S1 and the side wall 32b. This groove g1 is annular and narrow, with an average radial opening of less than 3 or 4 mm. A recess 37 separates the annular projection 33 from the side wall 38 of the frame 31. This side wall 38 defines, in the vicinity of the connection with the lid 32, an outer perimeter of the frame 31 which may for example be less than or equal to the outer perimeter defined by the lower extension E of the frame 31. One or more connection elements J of the lid 32 fit into this recess 37 in the closed position.

[0049] Referring to FIG. 2, the connection element J is annular and parallel to the inner skirt S1. It has here two annular bearing surfaces (Jint, Jext) which contact the frame 31 facing in different directions to define two separate sealing regions between the frame and the lid. At least one of the

bearing surfaces Jext may for example be formed by an annular bead projecting out radially in the embodiment shown in FIGS. 2 and 4. The other bearing surface Jint, which faces radially inwards, is defined by the lateral contact of a convex surface formed near the extremity of the connection element J with an essentially planar wall defining the recess 37. In the embodiment shown in FIGS. 2 and 4, this is an essentially planar wall adjacent to the annular projection 36.

[0050] A second groove g2 is defined in the lid 32 between the connection element J and the side wall 32b of the lid 32. This second groove g2 engages with the side wall 38 of the frame 31. The upper extremity of the side wall 38 may meet the transverse wall of the groove g2.

[0051] As can be seen in FIGS. 1 and 2, the side wall 32b and the inner skirt S1 meet at a distance from the transverse wall 32a, at a level above the opening 21, and form in vertical section the arms of a Y.

[0052] To enable the lid 32 to be locked closed, retention means 39, such as a plate with a tooth or teeth or at least one hook are provided on the opposite side from the hinge 35. These retention means 39 may project downwards, for example parallel to the connection element J, and may cover a small angular region of the side wall 38 of the frame 31 to the point of engaging with a catch lip 40 formed externally on the frame 31.

[0053] As FIG. 6 shows, the frame 31 at this location has a radially outward-facing cavity 41 in which the retention means 39 engage when the lid 32 is in its closed position. The cavity 41 may correspond to a localised recess in the side wall 38 of the lower extension E and define a receiving window for a bead of corresponding shape. The rectangular window illustrated in FIG. 6 thus makes it possible to accommodate a bead B of generally rectangular shape formed on the inside of a retention plate. The lid is locked once the bead B is snap-fastened in the cavity. The locking and unlocking action is facilitated by a lift-up edge 42 formed integrally with the lid above the retention means 39 in a region adjacent to the first groove g1. To unlock, the user pulls on this lift-up edge 42 by hand, thereby pulling the bead B out of its engaged position.

[0054] Referring to FIGS. 1, 5 and 6, the lid 32 retention means 39 can be given a tamper-resistance system until the first use. This may be a detachable strip 43 with one end for the fingers to grasp. This strip must be removed to be able to remove the bead B from its position of engagement with the catch lip 40. It will be understood that the lid 32 cannot therefore be separated from the frame 31 as long as the strip 43 is held in the site where the retention means 39 are located.

[0055] The cycle of use of the packaging 1 can take place as follows: after injection moulding the complete closure system 3 with the locking and tamper-resistant devices (39, 43), the result is a single component which can be configured in the closed position with the lid 32 shut down on the frame 31. The locking and tamper-resistant devices (39, 43) hold it in this configuration.

[0056] The resulting closure system 3 can then easily be mounted on the container 2 (which has first been filled and sealed with a membrane seal) by snap-fastening for example. The packaging 1 is then ready for sale. Any attempt to open it by hand will break at least one of the breakable connections, and will therefore generally easily be detectable by the consumer.

[0057] On first use, the user will detach the strip 43 from the lid 32 and manipulate the edge 42 to unlock it. When the packaging 1 is closed again after use, that is by shutting the lid

32 down on the container, it locks automatically by the retention means 39 snap-fastening on the catch lip 40. Later, on a subsequent use, the user simply exerts upward pressure again on the underside of the lift-up edge 42 to move the retention means 39 out of the way.

[0058] Referring to FIGS. 1, 5 and 6, the measuring utensil 100 is housed in the internal volume of the lid 32, which may be domed and has a significant height (e.g. between 2 and 5 cm). The transverse wall 32a is thus higher than the internal skirt S1. One or more objects, particularly the measuring utensil D if the packaging contains powdered milk, can thus be stored in this internal volume after securing it to one or more attachment members 50. In the embodiment shown, the internal volume for storing the measuring utensil D is located between the opening 21 of the container 2 and the transverse wall 32a of the lid 32 when the lid is closed.

[0059] The measuring utensil D may initially be packaged in a bag and placed between the membrane seal 23 and the lid 32 inside the packaging 1 ready for sale. Neither the walls of the frame 31 nor the walls of the lid 32 intrude into the internal volume of the container 2 defined below the opening 21, so there is no pressure from the frame 31 or lid 32 on the membrane 23 covering this opening 21.

[0060] The measuring utensil D comprises a cup attached to a handle. The dimensions, and in particular the length, of the utensil are such that the latter sits within the footprint of the frame 31. For a circular container 2, the length of the measuring utensil D must of course be less than the inside diameter of the frame 31.

[0061] To avoid contacts that would tend to spoil the food, there is on the transverse wall 32a of the lid 32 a single catch region centred towards the middle to hold the utensil D between the cup and the far end of the handle.

[0062] Referring to FIGS. 1 and 5, the lid 32 may have a plane of symmetry that corresponds to the section plane used in FIG. 1. This plane of symmetry may include the central axis Z, and it passes through the centre of the hinge 35 and through the centre of the edge 42. Such a plane may also separate two attachment members 50 for attaching the measuring utensil, as illustrated in FIG. 6.

[0063] Clearly, the embodiment described above is not restrictive in any way, and numerous variants as to the geometry of the parts making up the closure systems 3 and the locking and tamper-resistance systems, or the retention member(s) 50 for the cup D are possible without departing from the scope of the invention as claimed.

1. Packaging for a food product comprising:

- a container extending about a central axis from a base to an upper face having an opening, the container having a peripheral outer surface near the opening;

- a closure system comprising a frame fixed to the peripheral outer surface of the container and a lid hinged to the frame to allow movement between an open position and a closed position, in which said lid closes the opening of the container; and, in the closed position:

- at least one container/frame sealing region surrounding the container and formed by an annular contact between the frame and the peripheral outer surface of the container; and

- at least one frame/lid sealing region surrounding the frame and formed by an annular contact between the lid and the frame;

wherein at least one container/lid sealing additional region surrounding the container is formed in said closed position by

an annular contact between the lid and the peripheral outer surface of the container, and wherein the additional sealing region is situated between the opening of the container and said container/frame and frame/lid sealing regions.

2. Packaging according to claim 1, in which, when the lid is in said closed position, each of the sealing regions has in cross section a plano-convex meeting of surfaces.

3. Packaging according to claim 1, in which the frame has an inside face with at least two annular surfaces for contacting the peripheral outer surface of the container, the two contacting surfaces facing in different directions and defining two separate sealing regions.

4. Packaging according to claim 1, in which the lid has at least one connection element that has two annular surfaces for contacting the frame, the two annular surfaces facing in different directions to define two separate sealing regions.

5. Packaging according to claim 1, in which the peripheral outer surface of the container has a projecting edge which is situated, when the lid is in said closed position, between the frame and said additional sealing region.

6. Packaging according to claim 1, in which the peripheral outer surface of the container has an annular depression near the opening, the frame covering said depression and having, pointing away from the lid, a lower extension which is at a distance from the peripheral outer surface of the container with the exception of an extreme portion in sealing annular contact with the container.

7. Packaging according to claim 6, in which the extreme portion of the lower extension is of reduced thickness and makes, when the lid is in said closed position, sealing annular contact with the container outside of said depression.

8. Packaging according to claim 6, in which the lower extension of the frame has an outer face, the lid having a side wall continuous with said outer face when in the closed position.

9. Packaging according to claim 1, in which the lid comprises an inner skirt and an outer skirt, the inner skirt having a free extremity which presses, when the lid is in said closed position, on the peripheral outer surface of the container to form said additional sealing region.

10. Packaging according to claim 9, in which the lid has a first annular groove formed between the inner skirt and the outer skirt, and a second annular groove separated from the first groove by an outward annular projection, a frame/lid

sealing region being formed by the contact of the outward annular projection on the frame when the lid is in said closed position.

11. Packaging according to claim 8, in which the inner skirt has a free extremity that is beveled.

12. Packaging according to claim 1, in which the container is made by extrusion blow moulding and the transverse cross section of the container near the opening is an S, the lower extremity of the S corresponding to a region of contact with a lower abutment of the frame.

13. Packaging according to claim 1, in which the lid comprises, opposite a hinge, a retention member, the frame having a radially outward-facing cavity in which the retention member engages when the lid is in its closed position, to allow the lid to be locked in said closed position.

14. Packaging according to claim 1, comprising a detachable membrane which seals said opening, the membrane being covered by the lid when the latter is closed and having at least one edge remote from the frame and from the lid when the lid is closed.

15. Packaging for a food product comprising:

a plastic container having an opening, the container having a peripheral outer surface near the opening;

a closure system comprising a frame fixed to the peripheral outer surface of the container and a lid hinged to the frame to allow movement between an open position and a closed position, in which the lid closes the opening of the container; and

in the closed position:

at least one container/frame sealing region formed by an annular contact between the frame and the peripheral outer surface of the container; and

at least one frame/lid sealing region formed by an annular contact between the lid and the frame;

wherein the lid comprises an outer skirt and a circumferentially continuous inner skirt, a sealing region being formed in said closed position by an annular contact between said inner skirt and said peripheral outer surface of the container.

16. Packaging of claim 15, further comprising locking and tamper-resistant devices, the locking device comprising a retention member that protruded from the outer skirt and is engaged with the frame in said closed position, the tamper-resistant device comprising a detachable strip interfering with the retention member to indicate that the closure system has been tampered with prior to first opening.

* * * * *