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(54) Packaging with a swivelling handle for locking a lid on a receiver container

(57) The present invention relates to a packaging, comprising - a container (2) having an upper opening (8), - a lid (3), and - a swivelling handle (4), said handle (4) being able to swivel between two terminal resting positions (A, B) around a rotation axis (13).

This packaging (1) comprises means (14, 21) to exert a pushing force on the lid (3) which tends to move it away and to separated it from the container (2), which pushing means (14, 21) are arranged for a first part (21) on the handle (4), and for a second part (14) on the container (2) or on the lid (3), in function that said handle (4) is assembled respectively to the lid (3) or to the container (2), and

wherein said pushing means (14, 21) have two configurations function of the handle position around its rotation axis (13) :

- a non-pushing configuration, in which the handle (4) is arranged in a first range of free (A-D) swivelling which extends from one of said terminal positions (A) up to at least the position (C) of the handle (4) suitable for the transport of the packaging (1), and
- a pushing configuration, in which the handle (4) is moved in a second range of swivelling (D-B) which extends from the end of said first non-pushing range (D) towards its other terminal position (B), in order to generate the pushing force on the lid (3) and to separate it from the container (2).

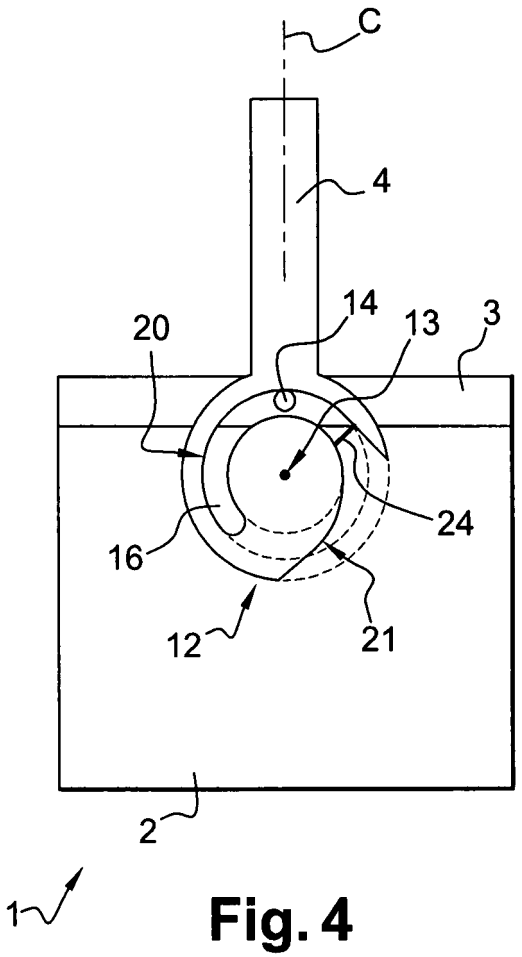

Fig. 4

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Description

[0001] The present invention relates to packagings of the type comprising a receiver container, a lid suitable to close its upper opening and a swivelling handle.

[0002] For the conditioning and the transport of some products, such as some foodstuff or painting, the packaging can be composed of at least a receiver container having an upper access opening, and a lid suitable to be placed over said upper opening in order to close said container.

[0003] These packagings are also typically provided with a swivelling handle, to facilitate their manually transport.

[0004] Due to their assembling and product deposit after use, the lid is usually difficult to separate from the equipped container.

[0005] The final consumer is as a result typically obliged to use a tool, or any suitable object, to manage this opening, with the time lost to achieve this opening, and the risks of injuries.

[0006] In order to resolve these problems, the applicant developed a new structure of packaging composed of a container, a lid and a swivelling handle, which is particularly simple to open or to re-open.

[0007] To that end, the packaging according to the invention comprises a handle which can be used as a lever to exert a pushing or extraction force on the lid which facilitates the opening thereof.

[0008] Then, the said packaging comprises means to exert a pushing force on the lid which tends to move it away and to separated it from the container, which pushing means are arranged for a first part on the handle, and for a second part on the container or on the lid, in function that said handle is assembled respectively to the lid or to the container, wherein said pushing means have two configurations function of the handle position around its rotation axis, between two terminal resting positions :

- a non-pushing configuration, in which the handle is arranged in a first range of free swivelling which extends from one terminal resting position up to, at least, the position of the handle suitable for the transport of the conditioning, and
- a pushing configuration, in which the handle is moved in a second range of swivelling which extends from the end of said first non-pushing range towards the other terminal resting position, in order to generate the pushing force on the lid and to separate it from the container.

[0009] In a preferred embodiment, the packaging comprises also means for locking the lid on the container which are also arranged for a first part on the handle, and for a second part on the container or on the lid in function that said handle is swivelly assembled respectively to the lid or to the container.

[0010] The said locking means have two configurations function of the handle position around its rotation axis :

- a locking configuration, in which the handle is arranged in the first range of free swivelling, corresponding to the non-pushing configuration of the pushing means, and
- an unlocking configuration, in which the handle is moved in the second range of swivelling, corresponding to the pushing configuration of said pushing means.

[0011] According this preferred embodiment, the first part of the pushing means and of the locking means comprises each a surface shaped to cooperate with at least a protruding element, forming the second part of the pushing means and of the locking means, i.e.:

- the "pushing" surface of said pushing means forms a cam, suitable to cooperate with said protruding element when the handle is arranged in the pushing range of swivelling, so as to exert a push force on said protruding element which tends to move away the lid from the container and facilitates its separation, and
- the "locking" surface of the locking means forms a hook, suitable to cooperate with said protruding element when the handle is arranged in the locking range of swivelling, so as to lock the lid on the container.

[0012] In this last case, the first part of the pushing/locking means, formed by the two active surfaces, are arranged on the handle, and the second part of the pushing/locking means, in form of protruding element(s), is arranged on the container, or on the lid, in function that said handle is assembled respectively to the lid or to the container.

[0013] In a particular embodiment, the handle is swivelly assembled to the container or to the lid by its two ends. The surfaces of the pushing/locking means of the handle are then advantageously arranged at, at least, one of said end; said surfaces are then of curved shapes, are arranged one following the other around the rotation axis of the handle and are intended to each come on one side of the associated protruding element : said outer locking surface being of a general arc of circle shape, coaxial with the rotation axis, and said inner pushing surface being shaped so that its space from said rotation axis increases from the locking surface towards its free end. According a characteristic of this last particular embodiment, the end(s) of the handle comprises a curved groove having an inner curved surface and an outer curved surface, wherein said outer surface corresponds to the locking surface, and wherein the said inner surface is prolonged by a curved surface corresponding to the pushing surface.

[0014] In this case, the outer surface of the groove is

advantageously prolonged by a surface whereof the distance to the rotation axis increases up to its free end in order to allow the swivelling of the handle beyond the transport position while maintaining the locking means active and to make easier the re-fastening of the lid on the container. According another characteristic of this last particular embodiment, the handle extends in a main plan; the locking surface starts on a first side of said main plan, and eventually ends on the other side of said plan, and the pushing surface starts on the second side of said main plan, and eventually ends on the other side of said plan.

[0015] According also this last particular embodiment, the protruding element consists in a cylindrical protrusion, extending towards outside.

[0016] According another characteristic of the invention, the locking means comprise tamper evidence means, intended to show the passage of the handle from the locking range to the pushing range of swivelling.

[0017] The said tamper evidence means are advantageously suitable to be broken when the handle is operated in its pushing range of swivelling, from the locking range of swivelling.

[0018] Preferably, the tamper evidence means are formed by a breakable membrane, extending between the free end of the inner and outer surfaces of the groove, suitable to be broken by the protruding element when the handle is swivelled from the locking range to the pushing range of swivelling.

[0019] This type of conditioning is also generally equipped with means for locking the lid placed on the container, in particular to secure the closure of the packaging and to prevent the accidental opening thereof.

[0020] The present invention is illustrated, without being limited, by the following specification and the annexed drawings in which :

- figure 1 is a schematic view of the packaging according to the invention, showing the main positions of the handle and their effects on the lid;
- figure 2 is an enlarged and schematic view of a first embodiment of the handle end, intended to swivel on the container;
- figures 3 to 7 are schematic views of the embodiment in accordance to figure 2, which show the action of the handle on the associated lid due to its swivelling;
- figure 8 is an enlarged and schematic view of a second embodiment of the handle end, intended to swivel on the lid; and
- figures 9 to 13 are schematic views of the embodiment in accordance to figure 8, which show the action of the handle on the associated lid.

[0021] The packaging 1 according to the invention, as shown schematically figure 1, is composed of a receiving container 2, a closing lid 3 and a swivelling handle 4 usable to facilitate the manually transport of this packaging.

[0022] This type of packaging 1 is particularly adapted for the conditioning of products such as foodstuff or painting, but also wood care product, coatings, varnishes or other suitable products presented from liquid to solid form.

[0023] The receiving container 2 is rigid, and can be, for example, in general conical, cylindrical or parallelepiped shape.

[0024] It is composed of a side wall 6 whereof the lower border is prolonged by a bottom wall 7 and whereof the upper border 8 delimits the upper access opening (non visible) to the conditioned product.

[0025] This container 2 is made in any suitable material and by any suitable process of fabrication. For example, it is carried out particularly by operations of cutting, welding and rolling of a metallic sheet (made out of steel for example) of which the thickness can be in the range of 0,15 to 0,40 mm. It can also be made in plastic material.

[0026] The lid 3 is also made in any suitable material and by any suitable process of fabrication. For example, it is carried out particularly by operations of cutting/drawing of metallic sheet or operation of plastic injection.

[0027] This lid 3 is of adapted shape and size, to be placed and fastened, advantageously hermetically (but alternatively, non-hermetically in function of the conditioned product), on the upper border 8 of the container 2.

[0028] It comprises in particular a peripheral border 10 suitable to cooperate with said container upper border 8, by complementary forms fitting together.

[0029] If necessary, the lid 3 is hermetically fastened on the container, for example by mean of foam, plastic/elastic deformation or any other suitable mean known by one skill in the art.

[0030] The handle 4 has a form of an arch, comprising a central handle part 11, intended to be held by a operator, and two end parts 12 swivelly assembled to the packaging 1. The main plan 4' of this handle 4 is defined by said handle part 11 and its rotation axis.

[0031] In accordance to alternative embodiments, the handle 4 can be swivelly assembled to the upper part of the container side wall 6 or to the peripheral border 10 of the lid 3.

[0032] This handle 4 is made of any suitable material, for example - dual material (e.g., metallic handle with plastic extremities), - plastic injection and folding, - plastic thermoforming or - metal drawing.

[0033] It is swivelly assembled to the container or to the lid by means of - welded rivet, - additional part fixed by welding, seaming or gluing, - protrusion drawn on the metal of the lid/container or - protrusion made during the injection of the lid.

[0034] The handle 4 is intended to swivel around a rotation axis 13 (extending through and between the handle end parts 12), between two extreme resting positions termed "A" and "B" (shown schematically by lines A and B on figure 1, respectively).

[0035] In these resting positions A and B, the handle 4 lies in regard of the container side wall 6.

[0036] Between these resting positions A and B, the

handle 4 comes also typically in a vertical position, shown by line C on figure 1. This vertical position C is naturally obtained when the handle 4 is held by the operator during the manually transport of the packaging 1.

[0037] According to the invention, the packaging 1 comprises its own means for making easier the liberation of the lid 3 from the container 2, and advantageously also means for locking the lid 3 on the container 2 to prevent its accidentally opening.

[0038] These locking and pushing means (not shown here on figure 1 and detailed on figures 2 to 13) are shaped and arranged in order to be activated in function of the handle position around its rotation axis 13, between the two extreme positions A and B above-mentioned.

[0039] Indeed, the maximum range of swivelling A-B of the handle 4 (between extreme positions A and B) can be divided into two sub-ranges of swivelling, separated by an intermediary position D of the handle 4, shown schematically by line D on figure 1.

[0040] This intermediary position D extends between the vertical position C and the second extreme position B.

[0041] In a first range of swivelling A-D (between the first extreme position A and the intermediary position D, and which comprises vertical position C), the locking means are activated and the pushing means are inactivated.

[0042] The lid 3 is as a result maintained locked on its container 2; the accidental opening of the lid 4, in particular while transporting the packaging 1, is prevented. The handle 4 is free of rotation around its rotation axis 13 in this range A-D, which allows notably the movement of the handle 4 between the resting position A and the transport position C.

[0043] In the second range of swivelling D-B (between the second extreme position B and the intermediary position D), the pushing means are activated while the locking means are inactivated.

[0044] More precisely, the manually movement of the handle 4 by an operator from the intermediary position D up to the second extreme position B, allows the activation of the pushing means which exert a pushing force on the lid, making easier the opening of the container 2.

[0045] This handle 4 forms then a lever action, which provokes the separation of the lid 3 from the container 2.

[0046] Moreover, in a preferred embodiment, where the operator wishes to re-close the packaging 1, the movement of the handle 4 towards the first resting position A can exert a force on the lid 3 which facilitates its re-fitting on the container 2.

[0047] As a result and in general, the present packaging 1 allows the use of the handle 4 as a lever which facilitates the opening of the lid 3, and also advantageously as locking and/or re-closing means.

[0048] These internal pushing/re-closing means of the packaging 1 prevent to operate tools and the risks of accident thereof, in particular to easily open or re-open the closed container 2 and advantageously to re-close it.

[0049] Here, this combination of locking/re-closing/pushing functions, in relation to the handle position, is really interesting since, with a simple and unique structure, the packaging becomes particularly easier in use.

[0050] A specific embodiment of the handle, in accordance to the present invention, is shown figures 2 to 7.

[0051] This handle 4 is particular due to the specific shape of its two ends 12 (only one is shown figure 2) intended to swivel on the container 2, the said ends 12 comprising a part of the pushing/locking/re-closing means above-described.

[0052] The other part of said means are arranged on the lid 3, here in the form of a roller or a cylindrical protrusion 14, extending outwardly (as shown figures 3 to 7). In general and in a preferred embodiment, at least the part of the protrusions 14, intended to come in contact with the ends 12 of the handle 4, is in form of a roller or a cylinder.

[0053] More precisely, as shown figure 2, the handle end 12 consists here in a terminal body 15, of general circular shape. This ending body 15 is assembled to the container via the rotation axis 13. This rotation axis 13 extends into the main plan 4' of the handle 4.

[0054] The said ending body 15 comprises a curved shape groove 16, here of arc of circle shape on its full length (or a part of its length in an alternative embodiment), arranged around the rotation axis 13 and concentrically thereof. This curved groove 16 extends here also between the rotation axis 13 and the handle part 11.

[0055] One end 17 of this curved groove 16 is closed in this embodiment, and its other end 18 is opened.

[0056] This curved groove 16 is defined by two facing curved surfaces, here of arc of circle shape, i.e. an inner surface 19 (at side of the rotation axis 13 and oriented toward outside) and an outer surface 20 (at distance of the rotation axis 13 and oriented toward inside).

[0057] These two surfaces 19, 20 extend concentrically to the rotation axis 13.

[0058] As shown here-after, the said outer surface 20 of the curved groove 16 has a hook-shape and corresponds to the locking means part of the handle.

[0059] In a particular embodiment, one of the surfaces of the curved groove 16, here the said inner surface 19, may also be equipped with two one-piece small protrusions 19a, arranged next to the plan 4' of the handle 4 and on each side thereof.

[0060] As shown schematically on this figure 2 and as disclosed here-after, the protrusion element 14 of the lid 3 intends to come and to be maintained between these two small protrusions 19a, when the handle 4 is moved in its vertical position C.

[0061] This particularity tends to maintain the handle 4 is this vertical position C, to make easier its handling by the operator.

[0062] The inner surface 19 of the groove 16 is prolonged by an active surface 21 forming the pushing means of the handle 4.

[0063] To this end, this pushing surface 21 has a curved shape, whereof the distance to the rotation axis

13 increase from its end 21a, at the junction with the curved groove 16, to its free end 21b.

[0064] This pushing surface 21 extends here nearly at the opposite side of the rotation axis 13, compare to the handle part 11.

[0065] The outer surface 20 of the curved groove 16 is here also prolonged by the inner surface 22 of a lateral extension 23, which corresponds advantageously to the re-closing means as described here-under.

[0066] To that end, the distance of this surface 22, compared to the rotation axis 13, increases from its junction with the outer surface 20 of the groove 16 toward its free end. The open end 18 of the curved groove 16 is thus of slightly divergent shape.

[0067] This shape allows in particular, as disclosed here-after, to make easier the re-fastening of the lid on the container by a simple suitable swivelling of the handle. It cans thus act as a re-closing lever.

[0068] To be complete, the outer locking surface 20 and the pushing surface 21 extends, approximately, one after the other around the rotation axis 13.

[0069] The groove outer surface 20 extends mainly at one of the sides of the plan 4' of the handle 4 and finishes on the other side of this plan 4', to allow a possible movement of the handle 4 beyond the vertical position C if necessary, while maintaining the lid 3 closed (as disclosed here-under).

[0070] The handle end 12 is also equipped advantageously with tamper evidence means in the form of a breakable membrane 24, made here in one-piece with said handle end.

[0071] This membrane 24 extends in particular through the open end 18 of the curved groove 16, between the end of the inner surface 19 of the groove 16 and the facing lateral extension 23.

[0072] In alternative embodiments, the membrane is suitable - to be broken by the protruding element 14 when the handle 4 is swivelled for the first time in its pushing range (D-B), or - to be cut with a tool for security reasons (in particular in case of "Chid Resistant Closure", termed also "CRC").

[0073] In practice, as shown figure 3, the handle 4 is typically arranged in a first resting position A (described before in relation with figure 1).

[0074] The packaging 1 can be stacked with others, for its transport in a vehicle or its storage.

[0075] In this position, the locking surface 20 of the handle end 12 lies above the protruding element 14 of the lid 3 arranged into the curved groove 16 (the pushing surface 21 is totally free from said protruding element 14).

[0076] The lid 3 is thus locked on the container 2.

[0077] When an operator wishes or needs to manually move the packaging 1, he can hold it by its handle 4 which then comes in the vertical position C, as shown figure 4.

[0078] The protruding element 14 is here always arranged into the curved groove 16, which allows maintaining the lid 3 closed and preventing accidental spilling out (the locking surface 20 is always in contact with, or at least faces, the upper part of the protruding element 14).

[0079] The two protrusions 19a of the curved groove 16, if present, aim at maintaining this vertical position C of the handle 4.

[0080] Moreover, the extension 23 allows a possible movement of the handle 4 beyond the vertical position C if necessary, while maintaining the lid 3 closed (figure 5).

[0081] When the operator wishes to open the packaging 1, he just has here to operate the handle 4, to use the pushing means as above-described.

[0082] To that end, he just needs to swivel the handle 4 around its rotation axis 13, beyond the vertical position C and towards the other resting position B.

[0083] More precisely, the handle 4 is operated up to the intermediary position D. The protruding element 14 moves along the curved groove 16; the said protruding element 14 is then here transferred from the curved groove 16 to the pushing surface 21 (figure 6).

[0084] Then, the handle 4 is operated beyond this intermediary position D, towards the second resting position B (figure 7).

[0085] For the first time, this operation provokes the breaking of the tamper evidence membrane 24, by the action of the protruding element 14.

[0086] The protruding element 14 moves along the pushing surface 21, from its first end 21 a to its free end 21 b, while being liberated from the locking surfaces 20 and 22 ; the pushing surface 21 comes in contact with the lower part of the protruding element 14 and operates as a cam or a lever, which provokes here an upwardly pushing force (shown by arrow 25 on figure 7), and makes easier the separation of the lid 3 from the container 2.

[0087] It is thus particularly easy to separate the lid from the container, by the simple operation of the handle and without using any complementary tool.

[0088] If the operator wishes to re-close or re-fasten the lid 3 on the container 2, he just has to move the handle 4 in an opposite way, from the intermediary position D (figure 6) toward the first resting position A (figure 3).

[0089] Indeed, the inner surface 22 of the extension 23 comes to interact with the protruding element 14 of the lid 2, and exerts a pulling force on it (in opposite of pushing force 25 above-mentioned); this inner surface 22 thus acts as a king of re-closing lever. The lid 3 is then easily fitted on the container 2, and is maintained closed by the presence of the protruding element 14 in the curved groove 16.

[0090] The same interactions happen at the other end of the handle (not shown) with the protruding element 14.

[0091] In another embodiment according to the invention, shown figures 8 to 13, the handle 4 is swivelly fixed to the lid 3, and the protruding element 14 is arranged on the container 2.

[0092] The corresponding handle 4 is similar as the one disclosed above according to figures 2 to 7. One of the ends 12 of this handle 4 is shown in detail figure 8.

[0093] This end 12 is similar as the one above-dis-

closed according to figures 2 to 7, i.e. it comprises terminal body 15, having a curve shape groove 16, of arc of circle shape on its length (or a part of its length in an alternative embodiment), arranged around the rotation axis 13 and concentrically thereof.

[0094] This curved groove 16 extends here mainly on the side of the rotation axis 13, which is opposite to the handle part 11 of the handle 4.

[0095] This curved groove 16 is here also defined by two facing curved surfaces, i.e. the inner surface 19 (at side of the rotation axis 13) and the outer surface 20 (at distance of the rotation axis 13). These two surfaces 19, 20 extend concentrically to the rotation axis 13, and said outer surface 20 corresponds to the locking surface. The inner surface 19 of the groove 16 is prolonged by the active surface 21 forming the handle part of the pushing means; this pushing surface 21 is here arranged approximately at side of the handle part 11.

[0096] In a particular embodiment, the said inner surface 19 may also be equipped with two one-piece small protrusions 19a, arranged next to the plan 4' of the handle 4 and on each side thereof (as shown schematically on this figure 8). The protrusion element 14 of the lid 3 intends to come and to be maintained between these two small protrusions 19a, when the handle 4 is moved in its vertical position C.

[0097] The outer surface 20 of the groove 16 is here also prolonged by the inner surface 26 of an extension 27 which corresponds advantageously to the re-closing means.

[0098] In practice, in a same way as disclosed above according to figures 3 to 7, the swivelling of the handle 4 around its axis 13 allows the movement of the lid 3 compared to the container 2, in particular its unlocking.

[0099] Indeed, when the operator wishes or needs to manually move the packaging 1, he just has to hold it by its handle 4 which comes in the vertical position C, as shown figure 10. If present, the two protrusions 19a of the curved groove 16 aim at maintaining this vertical position C of the handle 4.

[0100] The protruding element 14 of the container 2 is here always covered by the locking surface 20, which allows maintaining the lid 3 closed (the said locking surface 20 extends above the protruding element 14).

[0101] Here also, the lateral projection 27 allows a movement of the handle 4 beyond the vertical position C, while maintaining the lid 3 locked (figure 11).

[0102] When the operator wishes to open the packaging 1, he just has here to operate the handle 4, in order to use the pushing means as above-described.

[0103] To that end, he just needs to swivel the handle 4 around its rotation axis 13, beyond the vertical position C and towards the other resting position B (figures 12 and 13). Then, this movement of the handle 4, beyond this intermediary position D and towards the second resting position B (figure 13), provokes the interaction of the pushing surface 21 with the upper part of the protruding element 14 and forces the assembly lid 3/handle 4 upwardly (shown by arrow 25 on figure 13).

[0104] If the operator wishes to re-close the lid 3 on the container 2, he just has to move the handle 4 in an inverse way.

[0105] The packaging according to the invention allows the easy and efficient separation of the lid from the associated container, that by a simple suitable swivelly operation of the handle. As above-mentioned, the packaging according to the invention does not need any more tools or difficult operations, to be opened.

[0106] According a supplementary and advantageous embodiment, the handle permits also the locking of the lid on the container when it is not necessary to separate them, and moreover the re-locking of the lid when the operator wishes to re-close the previously opened container.

Claims

1. Packaging in particular for conditioning foodstuff or painting, comprising - a receiver container (2) having an upper access opening (8),

   - a lid (3) suitable to be fastened over said upper opening (8) in order to close said container (2), and - a swivelling handle (4) to facilitate the transport of said packaging (1) by a consumer, said handle (4) being able to swivel between two terminal resting positions (A, B) around a rotation axis (13),

   characterized in that said packaging (1) comprises means (14, 21) to exert a pushing force on the lid (3), which tends to move it away and to separated it from the container (2), which pushing means (14, 21) are arranged for a first part (21) on the handle, and for a second part (14) on the container (2) or on the lid (3) in function that said handle (4) is assembled respectively to the lid (3) or to the container (2), and
   wherein said pushing means (14, 21) have two configurations function of the handle position around its rotation axis (13) :

   - a non-pushing configuration, in which the handle (4) is arranged in a first range (A-D) of free swivelling which extends from one of said terminal positions (A) up to at least the position (C) of the handle (4) suitable for the transport of the packaging (1), and
   - a pushing configuration, in which the handle (4) is moved in a second range of swivelling (D-B) which extends from the end of said first non-pushing range (D) towards its other terminal position (B), in order to generate the pushing force on the lid (3) and to separate it from the container (2).

2. Packaging according to claim 1, **characterized in that** it comprises also means (14, 20) for locking the lid (3) on the container (2) which are arranged for a first part (20) on the handle (4), and for a second part (14) on the container (2) or on the lid (3) in function that said handle (4) is swivelly assembled respectively to the lid (3) or to the container (2),
wherein said locking means (14, 20) have two configurations function of the handle position around its rotation axis (13) :

- a locking configuration, in which the handle (4) is arranged in the first range of free swivelling (A-D), corresponding to the non-pushing configuration of the pushing means (14, 21), and
- an unlocking configuration, in which the handle (4) is moved in the second range of swivelling (D-B) corresponding to the pushing configuration of said pushing means (14, 21).

3. Packaging according to claim 2, **characterized in that** a part of the pushing means and of the locking means comprises each a surface (21, 20) shaped to cooperate with at least a protruding element (14), forming the second part of said pushing means and locking means, i.e:

- the pushing surface (21) of the pushing means forms a cam, suitable to cooperate with said protruding element (14) when the handle (4) is arranged in the pushing range of swivelling (D-B), so as to exert a push force on said protruding element (14) which tends to move away the lid (3) from the container (2) and facilitates its separation, and
- the locking surface (20) of the locking means forms a hook, suitable to cooperate with said protruding element (14) when the handle (4) is arranged in the locking range of swivelling (A-D), so as to lock the lid (3) on the container (2).

4. Packaging according to claim 3, **characterized in that** the first part of the pushing/locking means, formed by the two active surfaces (21, 20), are arranged on the handle (4), and **in that** the second part of the pushing/locking means, in form of protruding element(s) (14), is arranged on the container (2) or on the lid (3) in function that said handle (4) is assembled respectively to the lid (3) or to the container (2).

5. Packaging according to claim 4, **characterized in that** the handle (4) is swivelly assembled to the container (2) or to the lid (3) by its two ends (12), and **in that** the pushing/locking surfaces (21, 20) of the handle (4) are arranged in at least one of said end (12), wherein said surfaces (20, 21) are of curved shapes, are arranged one following the other around the rotation axis (13) of the handle (4) and are intended to each come on one side of the protruding element (14), said outer locking surface (20) being of a general arc of circle shape, coaxial with the rotation axis (13), and said inner pushing surface (21) being shaped so that its space from said rotation axis (13) increases from the locking surface (20) towards its free end (21 b).

6. Packaging according to claim 5, **characterized in that** the ends (12) of the handle (4) comprise a curved groove (16) having an inner curved surface (19) and an outer curved surface (20), wherein said outer surface (20) corresponds to the said locking surface, and wherein the said inner surface (19) is prolonged by a curved surface (21) which corresponds to the said pushing surface.

7. Packaging according to claim 6, **characterized in that** the outer surface (20) of the groove (16) is prolonged by a curved surface (23, 26) whereof the distance to the rotation axis (13) increases up to its free end, in order to allow the swivelling of the handle (4) beyond the transport position (C) while maintaining the locking means (14, 20) active and to make easier the re-fastening of the lid (3) on the container (2).

8. Packaging according to any of the claims 3 to 7, **characterized in that** the handle (4) extends in a main plan (4'), wherein the locking surface (20) starts on a first side of said main plan (4'), and eventually ends on the other side of said plan (4'), and wherein the pushing surface (21) starts on the second side of said main plan (4'), and eventually ends on the other side of said plan (4').

9. Packaging according to any of the claims 3 to 8, **characterized in that** the protruding element (14) consists in a cylindrical protrusion, extending towards outside.

10. Packaging according to any of the claims 2 to 9, **characterized in that** the locking means (14, 20) comprise tamper evidence means (24), intended to show the first passage of the handle (4) from the locking range (A-D) to the pushing range (D-B) of swivelling.

11. Packaging according to claim 10, **characterized in that** the tamper evidence means (24) are suitable to be broken when the handle (4) is operated for the first time in its pushing range of swivelling (D-B), from the locking range of swivelling (A-D).

12. Packaging according to claim 11 together with any of the claims 6 to 8, **characterized in that** the tamper evidence means (24) are formed by a breakable membrane, extending at the open end (18) of the

curved groove (16), suitable to be broken by the protruding element (14) when the handle (4) is swivelled from the locking range (A-D) to the pushing range (D-B) of swivelling or to be cut with a tool for security reasons.

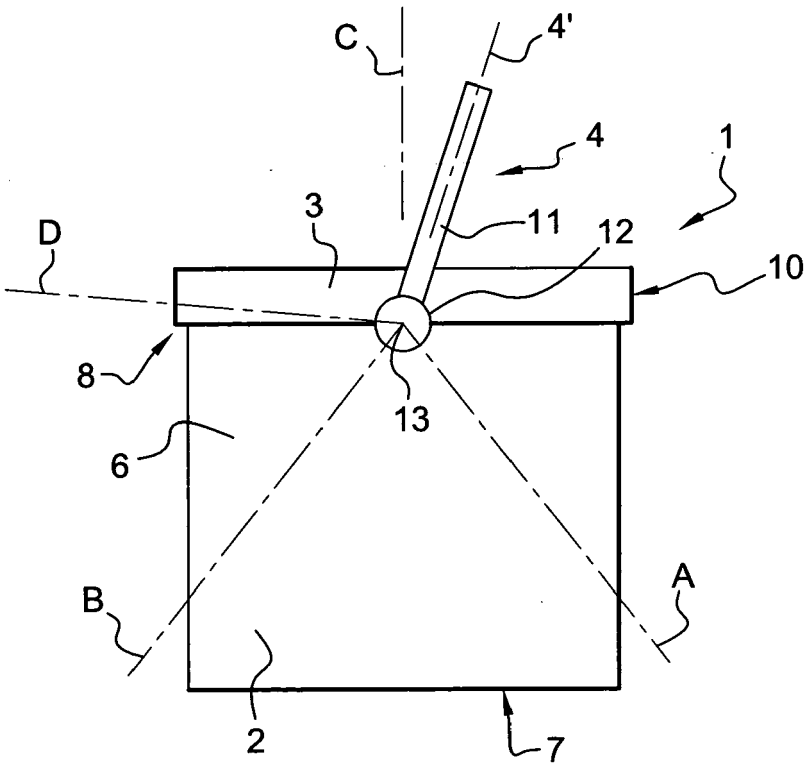

Fig. 1

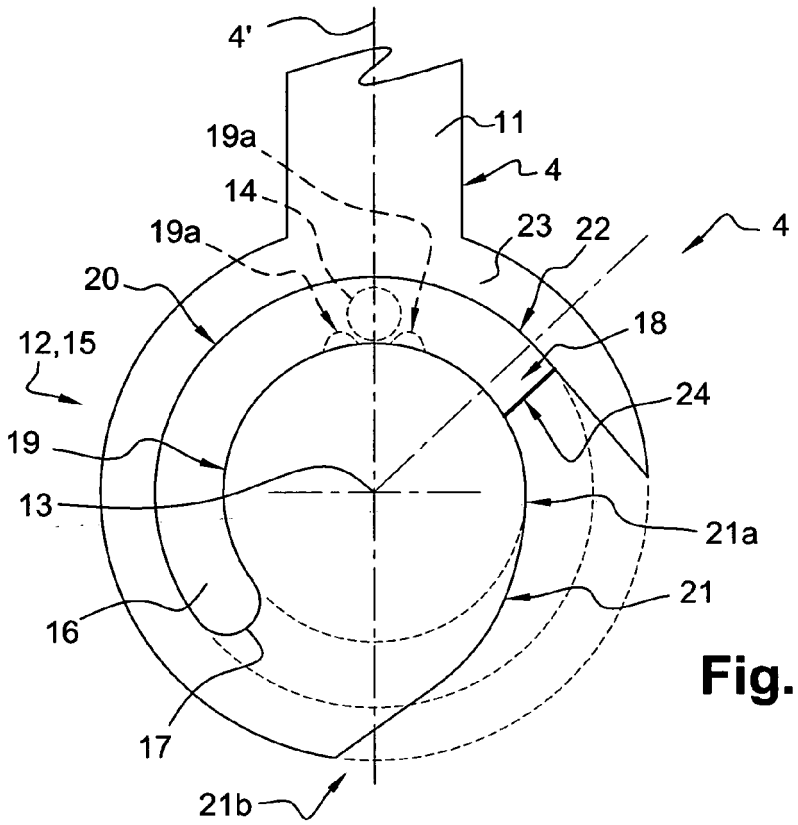
4'
11
19a
4
14
19a
23
22
4
20
18
12,15
24
19
13
21a
21
16
17
21b

Fig. 2

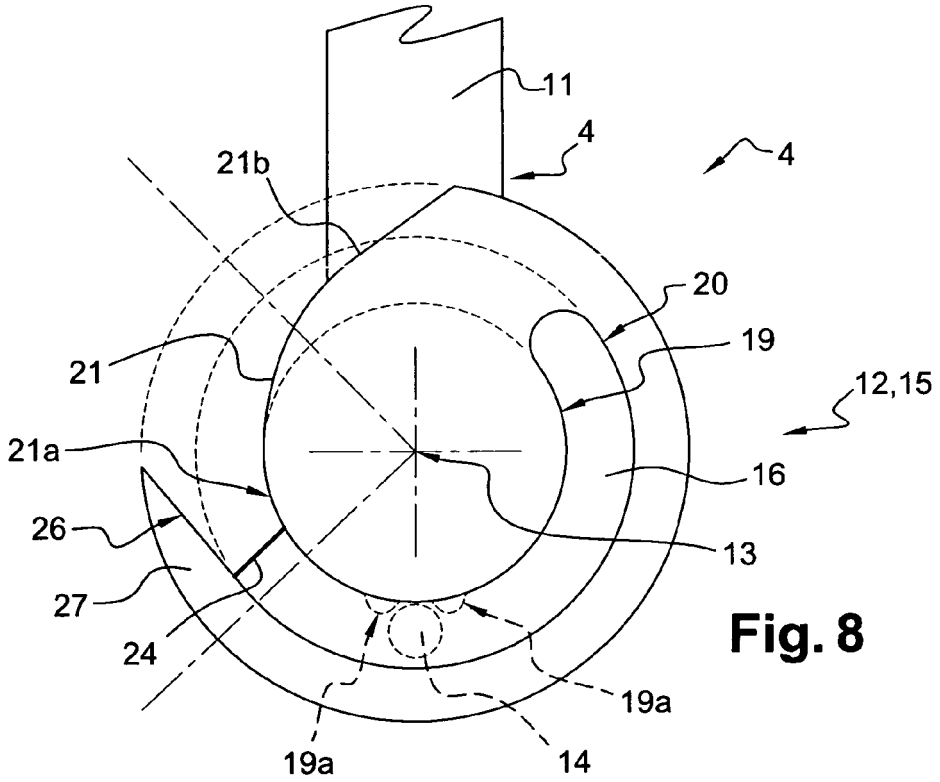
11
4
4
21b
20
19
21
12,15
21a
16
26
13
27
24
19a
19a
14

Fig. 8

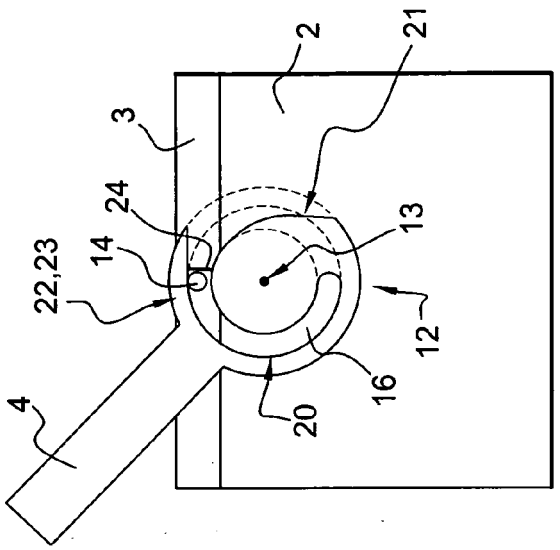

Fig. 5

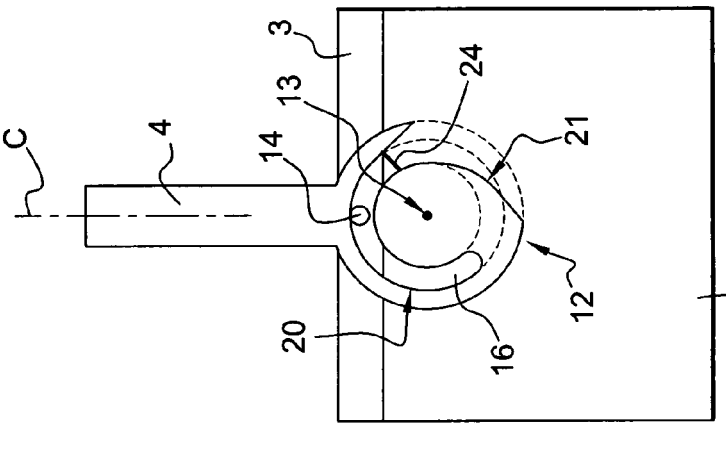

Fig. 4

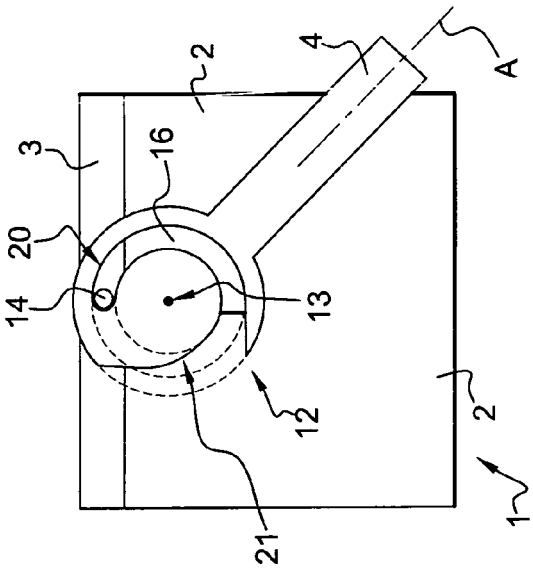

Fig. 3

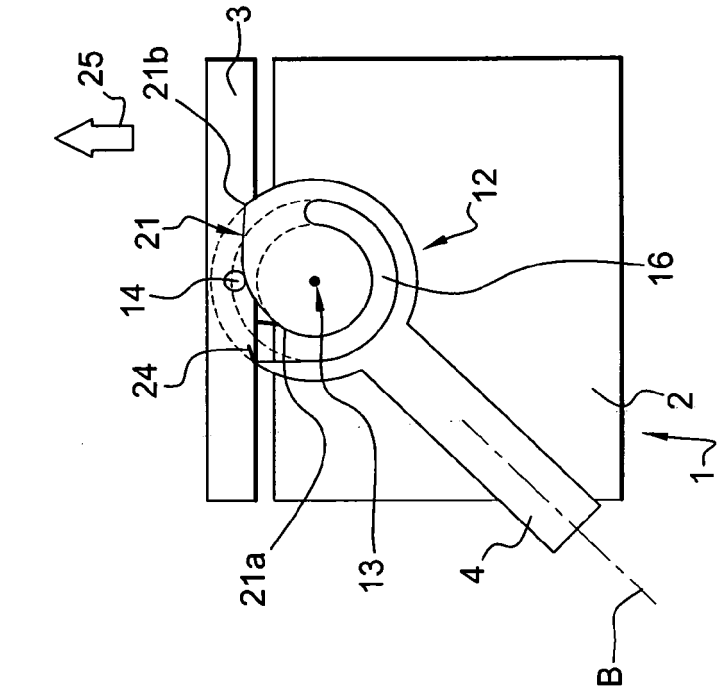

Fig. 7

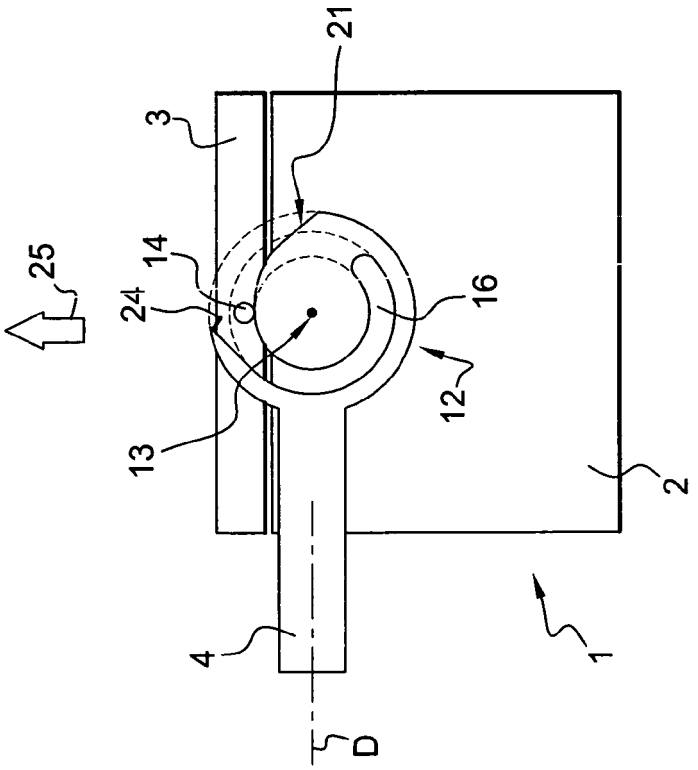

Fig. 6

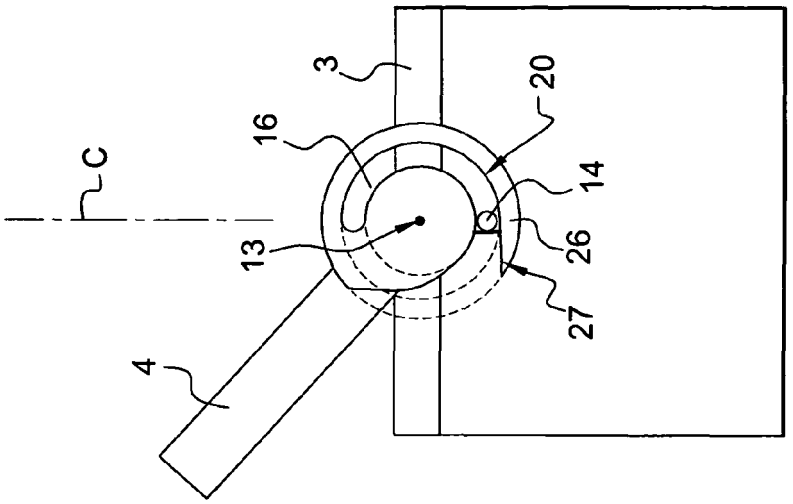

Fig. 11

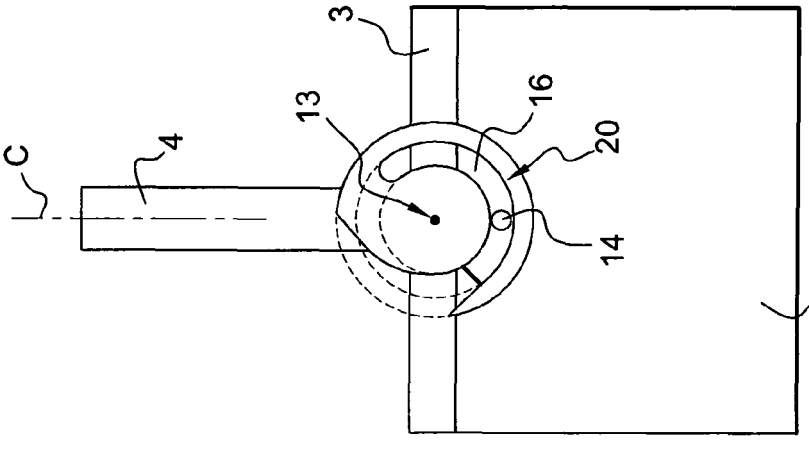

Fig. 10

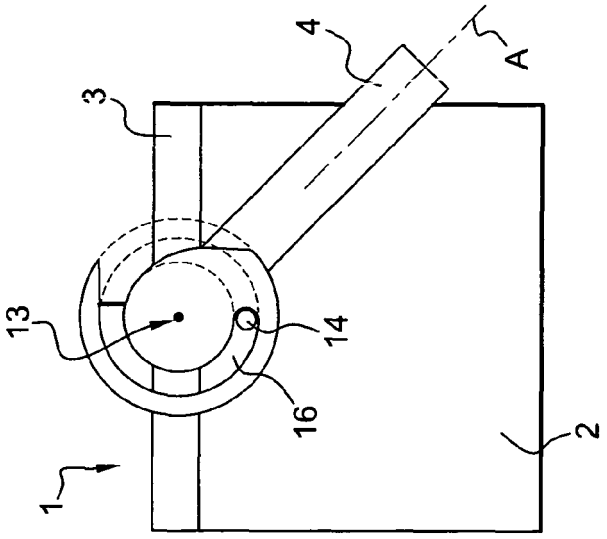

Fig. 9

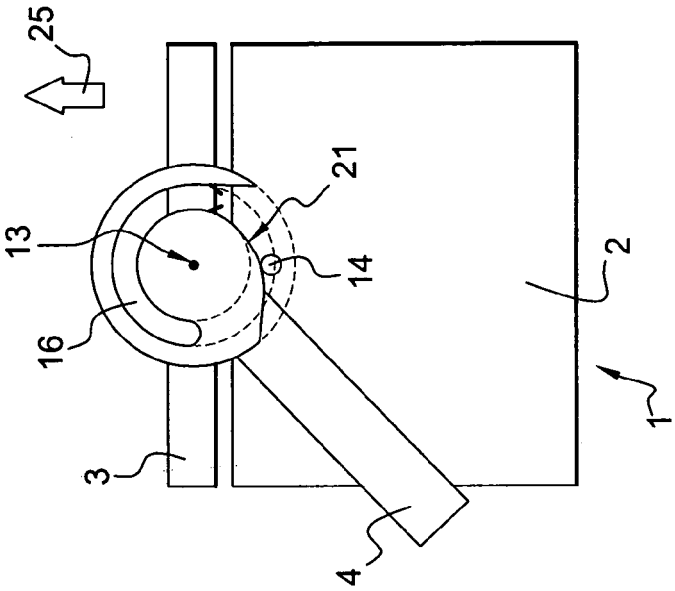

Fig. 13

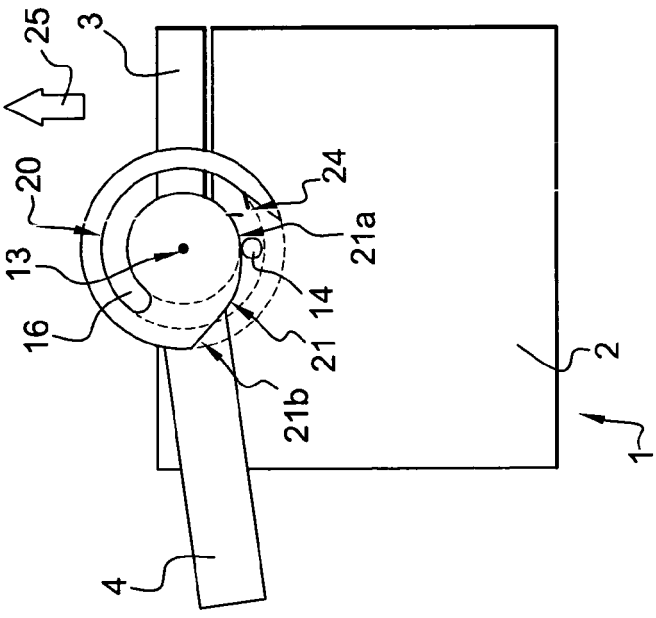

Fig. 12

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EUROPEAN SEARCH REPORT

Application Number
EP 08 30 5270

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
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The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
Munich	27 October 2008	Dick, Birgit

CATEGORY OF CITED DOCUMENTS

X : particularly relevant if taken alone
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L : document cited for other reasons

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EPO FORM 1503 03.82 (P04C01)

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27-10-2008

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For more details about this annex : see Official Journal of the European Patent Office, No. 12/82