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(54) **Packaging**

(57) The invention relates to a packaging (1), for instance for a food product, comprising a receptacle (10) with open upper end and a cover (20) connecting thereto, which cover can be fixed to the receptacle by means of engaging members. The packaging is further provided with release means for removing the cover from the receptacle, wherein the release means comprise a press-in body which is arranged on the peripheral edge of the cover and/or the receptacle and which, when pressed in, can push away a first tongue (14) arranged on the peripheral edge of the receptacle and/or cover.

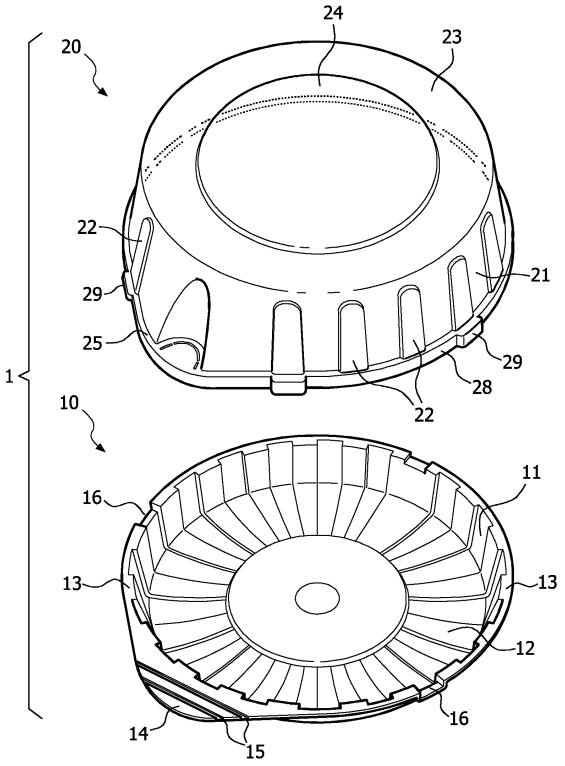

FIG. 1

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Description

[0001] The invention relates to a packaging comprising a container with open upper end and a cover connecting thereto, which cover can be fixed to the receptacle by means of engaging members, which packaging is also provided with release means for removing the cover from the receptacle.

[0002] Such packagings are widely applied as temporary packing for confectionery products such as for instance tarts and cakes, for other food products, such as for instance salads, fast-food, in addition to domestic articles such as for instance cleaning tissues, and for medical requisites, such as for instance gloves, syringes and so forth. It is usual to provide such packagings with release means which can be operated by a user in order to remove and optionally re-place the cover of the receptacle.

[0003] The known packaging comprises release means in the form of pull tabs. Both cover and receptacle are herein provided with a protruding pull tab which in the closed situation of the packaging are generally disposed practically opposite each other. The cover of the known packaging is then removed from the receptacle by grasping each of the tabs of cover and receptacle between thumb and forefinger and subsequently pulling the two tabs apart. The engaging members are hereby released and the cover separates from the receptacle. The known packaging has the drawback, among others, that the force required to separate cover and receptacle is generally considerable, whereby a relatively great muscular force is generated during release of the engaging members. Control of the opening movement is hereby difficult and it regularly occurs that the content of the packaging is thrown out of the package or thrown against the cover wall. In addition, use generally has to be made of both hands to open the known packaging. Furthermore, in order to enable opening of the package, it is generally held at an angle, which can cause displacement of the content.

[0004] The invention has for its object to provide a packaging, for instance for a tart, which does not have the above stated and other drawbacks, or does so to a lesser extent, and which in particular is relatively easy to open.

[0005] The packaging according to the invention has for this purpose the characteristics as described in the characterizing part of claim 1. A packaging which is easy to open compared to the known packaging is obtained by providing a packaging according to the invention with release means in the form of a press-in body which is arranged on the peripheral edge of the cover and/or the receptacle and which, when pressed in, can push away a first tongue arranged on the peripheral edge of the receptacle and/or cover. It is found in practice that the cover can be removed relatively easily from the receptacle without the receptacle having to be grasped. In contrast to the known packaging, opening can therefore take place with one hand. To this end a light pressure is for instance exerted with the forefinger on the press-in body, this being sufficient to cause at least partial release of the cover from the receptacle. The peripheral edges of cover and receptacle are hereby placed some distance from each other. Full opening can then be realized by further increasing this distance, for instance using the thumb.

[0006] Although the package according to the invention is not limited to determined dimensions, the advantages of the invention are most clearly manifest in packages comprising a holder and cover with a characteristic dimension of several decimetres in the plane of the bottom or top surface, and heights of several centimetres to several decimetres.

[0007] A preferred embodiment of the packaging according to the invention is characterized in that the cover is provided with a stop edge which can connect to a flange protruding on the upper edge of the side wall of the receptacle, and that the press-in body comprises an opening formed from the stop edge. Such an embodiment is relatively easy to manufacture, for instance by blow moulding or thermoforming of a plastic and punching out of the opening. The opening provides a well-defined access to the first tongue and also provides for additional ventilation of the content of the packaging. Ventilation is desirable in many cases, for instance in the case of fresh confectionery.

[0008] In a further preferred embodiment of the packaging according to the invention the cover is provided with a stop edge which can connect to a flange protruding on the upper edge of the side wall of the receptacle, and the press-in body comprises a second tongue formed from the stop edge. The second tongue is preferably formed from the stop edge by at least partially punching out a portion from the stop edge. This creates a tongue which, in addition to having a free edge portion, is still partially connected to the stop edge. The second tongue can be moved hingedly relative to the stop edge along this connection.

[0009] There are further advantages in characterizing the packaging according to the invention in that the second tongue is provided along the free edge portion with a number of non-punched portions. Such an embodiment of the second tongue has the advantage of creating a seal. Pressing-in of the tongue for the first time does after all break the non-punched portions, whereby it becomes apparent to the user that the packaging has already been opened and that the content thereof is therefore perhaps no longer fresh.

[0010] When the packaging is opened the second tongue preferably co-acts with a first tongue connected to the receptacle. The receptacle comprises for this purpose a flange which protrudes on the upper edge of the side wall thereof and a part of which forms the first tongue. Such an embodiment has the advantage of being relatively simple to manufacture. Furthermore, a first tongue is thus obtained which can be moved a great number of times by the second tongue without breaking off or oth-

erwise losing its function.

[0011] An advantageous embodiment of the packaging is obtained by providing the first tongue with engaging means for at least a part of the second tongue. A particularly advantageous embodiment herein has engaging means comprising at least one groove in which at least a part of the second tongue can be received when it is pressed in. When the second tongue is pressed in, the upper outer end thereof will be received in the groove. When it is pressed further in, the first tongue is co-displaced with the movement of the second tongue, whereby separation of the cover from the receptacle becomes even easier.

[0012] The packaging according to the invention can in principle take any form. It is thus possible that it has in top view a polygonal form, for instance a square, a rectangle, a hexagon and so forth, if desired with rounded corners.

[0013] The packaging is preferably characterized in that the receptacle and the cover are substantially cylindrical. There are additional advantages here when the receptacle and the cover are provided with at least one projecting portion in which the release means are accommodated. Such an embodiment has the advantage that the packaging thus acquires a direction, so that applying of for instance stickers can take place in automated manner. Handling of the packaging is also enhanced in that the projecting portion can also serve as handgrip. Although a plurality of projecting portions are possible, it is recommended that the receptacle and the cover are provided with one projecting portion in which the release means are accommodated. This allows stacking of the packages in a relatively small space.

[0014] In another preferred embodiment of the packaging according to the invention the cover is provided, for the purpose of fixing to the receptacle, with a peripheral flange with first engaging members which can co-act with second engaging members on an outward protruding receptacle flange on the upper edge of the receptacle side wall. Such a method of closing cover onto receptacle co-acts synergistically with the invented release means. This is particularly the case in an embodiment wherein the first engaging members comprise a number of inward protruding closing ridges and the second engaging members consist of the outer edge of the outward protruding receptacle flange. The outer edge can if desired be bent downward, thereby creating an overhanging edge. It has been found that the combination of such engaging members with a press-in body in the form of a second tongue co-acting with a first tongue connected to the receptacle allows an exceptionally simple opening of the packaging.

[0015] In a further preferred embodiment of the packaging the first engaging members are placed in the peripheral direction of the cover, and then so far from the release means that the cover can be removed from the receptacle without appreciable effort. It will be apparent that the placing of the engaging members can be determined experimentally by the skilled person, wherein this will depend on, among other factors, the stiffness properties of the cover, the receptacle and the first and second tongues.

[0016] A particularly advantageous embodiment of the packaging is obtained when the receptacle and the cover are substantially cylindrical and both are provided with a projecting portion in which the release means are accommodated, and wherein the engaging members, as seen in top view, are placed such that they form a circumferential angle of at least 90 degrees with the projecting portion. The cover is removed from such a packaging by means of a simple pressing movement with one hand, without much force being necessary for this purpose. Due to the placing of the closing ridges the thus created partial opening between cover and receptacle will be sufficiently large to enable the closing ridges to be pulled relatively easily from beneath the edge of the receptacle flange. And even easier opening becomes possible when the circumferential angle amounts to at least 120 degrees.

[0017] Yet another preferred embodiment of the packaging is characterized in that the outward protruding receptacle flange is provided with a number of recessed wall portions. The peripheral flange of the cover is preferably also provided with wall protrusions which are situated at the position of the recessed wall portions of the receptacle flange and which together act as ventilation openings. The wall protrusions herein preferably extend in the height as far as the plane of the stop edge of the cover. In addition to structural advantages, this also provides an advantage in the manufacture of the cover by for instance thermoforming.

[0018] The packaging can in principle be manufactured from any material suitable for the purpose. It is thus possible to use materials such as metal, paper, cardboard and so forth. Because of the ease of design and the low density thereof, a plastic will preferably be applied. Suitable plastics include for instance styrene polymers and/or polyolefms, such as for instance polyethylene or polypropylene, polyamide, polycarbonate, poty (meth)acrylate, polyethylene terephthalate and others. At least the cover is preferably manufactured from a transparent plastic. It is also advantageous when at least the cover is provided with a condensation-reducing foil. Such foils are per se known to the skilled person and are preferably applied in the packaging according to the invention for packing food products.

[0019] The invention will now be further elucidated on the basis of the non-limitative preferred embodiment of a packaging according to the invention shown in the figures.

[0020] Herein:

- Figure 1 shows a schematic perspective view of an exemplary embodiment of the packaging according to the invention in open position;
- Figure 2 shows schematically a detail of the press-in body of the release means of the exemplary em-

bodiment of figure 1;

- Figure 3 shows schematically a detail of the first tongue of the release means of the exemplary embodiment of figure 1;
- Figure 4a shows schematically a top view of a receptacle of another exemplary embodiment;
- Figure 4b shows schematically a top view of a cover which fits onto the receptacle of the exemplary embodiment of figure 4a;
- Figure 5 shows schematically a top view of a cover of another exemplary embodiment;
- Figure 6 finally shows a schematic top view of a cover of yet another exemplary embodiment.

[0021] Referring to the figures, a packaging 1 is shown, for instance for a tart, comprising a receptacle 1 with open top end and a cover 20 connecting thereto. Cover 20 is manufactured in the shown embodiment from a transparent plastic so that the content of the package is visible, although this is not essential. Cover 20 comprises a side wall 21 which, if desired, is provided for strengthening purposes with a number of outward protruding wall portions 22. The upper surface 23 of cover 20 can, if desired, also be provided with one or more protruding wall portions 24. As shown in figure 6, the protruding wall portion 24 of upper surface 23 can have a specific form which is for instance adapted for a sticker with printing to be adhered to cover 20. Receptacle 10 comprises a side wall 11 and a bottom 12, the wall of which can if desired also be profiled. Side wall 11 of receptacle 10 comprises on the upper edge thereof a protruding flange 13 which extends along the peripheral edge. Cover 20 is provided with a stop edge 25 which likewise runs in peripheral direction and which substantially fits onto receptacle flange 13 when cover 20 is pressed onto receptacle 10. For fastening to receptacle 10 the cover 20 is provided with first engaging members 30. Although other variants also form part of the invented packaging, the first engaging members generally comprise, as shown schematically in figure 6, a number of inward protruding closing ridges 30 which extend over a distance X in the peripheral direction and which are formed from wall portions of side wall 21. Closing ridges 30 can co-act with second engaging members (not shown) situated on the peripheral edge of receptacle 10. The second engaging members comprise for instance a downward bent outer edge of the receptacle flange. When cover 20 is pressed onto receptacle 10, stop edge 25 will substantially connect onto receptacle flange 13. Closing ridges 30 will herein be pressed over receptacle flange 13 and be clamped behind the downward bent outer edge thereof, so that cover 20 will be fixed on receptacle 10. It will be apparent that the reverse movement wherein closing ridges 30 must be pulled from under the outer edge of receptacle flange 13 cannot be effected without difficulty. Removal of cover 20 from receptacle 10 is therefore problematic. In order to considerably facilitate removal of cover from receptacle the packaging is provided according to the invention with release means 26, 14. In the shown embodiments the release means comprise a press-in body 26 which is arranged on the peripheral edge of cover 20 and which, when pressed in, can push away a first tongue 14 arranged on the peripheral edge of receptacle 10. Although not shown, it is however also possible for press-in body 26 to be arranged on receptacle 10 and the first tongue 14 on cover 20. Although other embodiments are possible within the inventive concept, the press-in body preferably comprises an opening 27 formed out of stop edge 25 (see figure 4b). Cover 20 is removed by exerting pressure on first tongue 14 with an object, and preferably with a finger, through opening 27. Tongue 14 is hereby moved downward, wherein stop edge 25 of cover 20 will be pulled, from the peripheral position of tongue 14, progressively rearward from receptacle flange 13. Surprisingly, hardly any force is necessary for this purpose. Once an opening has thus been created between the edges of cover and receptacle, it requires little effort to pull closing ridges 30 over the edge of receptacle flange 13, whereby cover 20 is wholly separated from receptacle 10. The arranging of an opening 27 in stop edge 25 has the drawback that a portion of this edge has to be removed during the production process of the cover. This can disrupt the production process. This is prevented if the press-in body comprises a second tongue 26 formed out of stop edge 25 as shown in detail in figures 2 and 3. Such a second tongue 26 can be formed from stop edge 25 for instance by at least partially punching a portion out of stop edge 25. A tongue 26 is hereby formed which, in addition to having a free edge 26b, is still partially connected to stop edge 25 via edge 26a. This edge 26a forms a hinge for the second tongue 26. As shown in figure 2, the free edge 26b is preferably provided with a number of portions 26c which are not punched-out. Such an embodiment of second tongue 26 has the advantage that a seal is hereby created. Portions 26e will after all break when tongue 26 is pressed in for the first time. It hereby becomes apparent to the user that the packaging has already been opened, and that the content thereof is therefore perhaps no longer fresh. In the embodiment shown in figure 1, receptacle 10 comprises a flange 13 which protrudes on the upper edge of the side wall 11 thereof and a portion of which forms first tongue 14. This portion preferably forms a projecting part of the peripheral edge. In an embodiment variant in which receptacle 10 and cover 20 are substantially cylindrical the symmetry is hereby broken, whereby cover 20 can only be placed in one way on receptacle 10. This has the advantage that a sticker optionally arranged on the upper wall 23 of cover 20 will always be oriented in the same direction. Such packages can also be easily handled and stacked. It is advantageous if first tongue 14 is provided with engaging means for at least a portion of second tongue 26. In the shown embodiment variants these engaging means comprise at least one groove 15, and preferably at least two grooves 15a and 15b. When second tongue 26 is pressed in, at least a part of the free edge 26b thereof will be received in groove

15b. When pressed in, second tongue 26 will herein also exert a pulling force on tongue 14, which further facilitates opening. Groove 15a also has the advantage of reducing the stiffness of tongue 14, at least in a part thereof, whereby it will bend more easily. It will be apparent that the appropriate stiffness of tongue 14 depends on many variables, such as for instance the form and the material used for cover and receptacle, the manner in which engaging means 30, 13 for cover and receptacle are embodied, and so forth, and that this can be readily determined experimentally by the skilled person. The placing of the first engaging members 30 in the peripheral direction of cover 20 can also be important here. The first engaging members 30 are preferably placed so far from release means 26, 14 that cover 20 can be removed from receptacle 10 without appreciable effort. In an embodiment variant wherein receptacle 10 and cover 20 are substantially cylindrical and both are provided with a projecting portion in which the first tongue 26 and second tongue 14 are accommodated, engaging members 30 are placed, as seen in top view, such that they form a circumferential angle ∀ of at least 90 degrees, and preferably at least 120 degrees, with the projecting portion as shown in figure 6. There are further advantages in providing the outward protruding receptacle flange 13 with a number of recessed wall portions 16. These recessed wall portions 16 provide for an improved ventilation of the content of packaging 1, optionally in co-action with wall protrusions 29 provided on the peripheral flange 28 of cover 20 at the position of the recessed wall portions 16 of receptacle flange 13. In addition to a cylindrical form, receptacle and cover can in principle take any form, such as for instance shown in figures 4a and 4b for an almost square receptacle 10 (figure 4a) and a corresponding, almost square cover 20 (figure 4b). An alternative form of a cover 20 is shown in figure 5.

Claims

1. Packaging, for instance for a food product, comprising a receptacle with open upper end and a cover connecting thereto, which cover can be fixed to the receptacle by means of engaging members, which packaging is also provided with release means for removing the cover from the receptacle, **characterized in that** the release means comprise a press-in body which is arranged on the peripheral edge of the cover and/or the receptacle and which, when pressed in, can push away a first tongue arranged on the peripheral edge of the receptacle and/or cover.

2. Packaging as claimed in claim 1, **characterized in that** the cover is provided with a stop edge which can connect to a flange protruding on the upper edge of the side wall of the receptacle, and that the press-in body comprises an opening formed from the stop edge.

3. Packaging as claimed in claim 1, **characterized in that** the cover is provided with a stop edge which can connect to a flange protruding on the upper edge of the side wall of the receptacle, and that the press-in body comprises a second tongue formed from the stop edge.

4. Packaging as claimed in claim 2 or 3, **characterized in that** the second tongue is formed from the stop edge by at least partially punching out a portion from the stop edge, thus forming a hinged tongue.

5. Packaging as claimed in any of the foregoing claims, **characterized in that** the receptacle comprises a flange which protrudes on the upper edge of the side wall thereof and a part of which forms the first tongue.

6. Packaging as claimed in any of the foregoing claims, **characterized in that** the first tongue is provided with engaging means for at least a part of the second tongue.

7. Packaging as claimed in claim 6, **characterized in that** the engaging means comprise at least one groove in which at least a part of the second tongue can be received when it is pressed in.

8. Packaging as claimed in any of the foregoing claims, **characterized in that** the receptacle and the cover are substantially cylindrical.

9. Packaging as claimed in claim 8, **characterized in that** the receptacle and the cover are provided with at least one projecting portion in which the release means are accommodated.

10. Packaging as claimed in claim 9, **characterized in that** the receptacle and the cover are provided with one projecting portion in which the release means are accommodated.

11. Packaging as claimed in any of the foregoing claims, **characterized in that** the cover is provided, for the purpose of fixing to the receptacle, with a peripheral flange with first engaging members which can co-act with second engaging members on an outward protruding receptacle flange on the upper edge of the receptacle side wall.

12. Packaging as claimed in claim 11, **characterized in that** the first engaging members comprise a number of inward protruding closing ridges and that the second engaging members consist of the outer edge of the outward protruding receptacle flange.

13. Packaging as claimed in claim 11 or 12, **character-**

ized in that the first engaging members are placed in the peripheral direction of the cover, and then so far from the release means that the cover can be removed from the receptacle without appreciable effort.

14. Packaging as claimed in claim 13, **characterized in that** the receptacle and the cover are substantially cylindrical and both are provided with a projecting portion in which the release means are accommodated, and that the engaging members, as seen in top view, are placed such that they form a circumferential angle of at least 90 degrees with the projecting portion.

15. Packaging as claimed in claim 14, **characterized in that** the circumferential angle amounts to at least 120 degrees.

16. Packaging as claimed in any of the foregoing claims, **characterized in that** the outward protruding receptacle flange is provided with a number of recessed wall portions.

17. Packaging as claimed in any of the foregoing claims, **characterized in that** the peripheral flange of the cover is provided with wall protrusions at the position of the recessed wall portions of the receptacle flange.

18. Packaging as claimed in any of the foregoing claims, **characterized in that** at least the cover is manufactured from a transparent plastic.

19. Packaging as claimed in claim 18, **characterized in that** at least the cover is provided with a condensation-reducing foil.

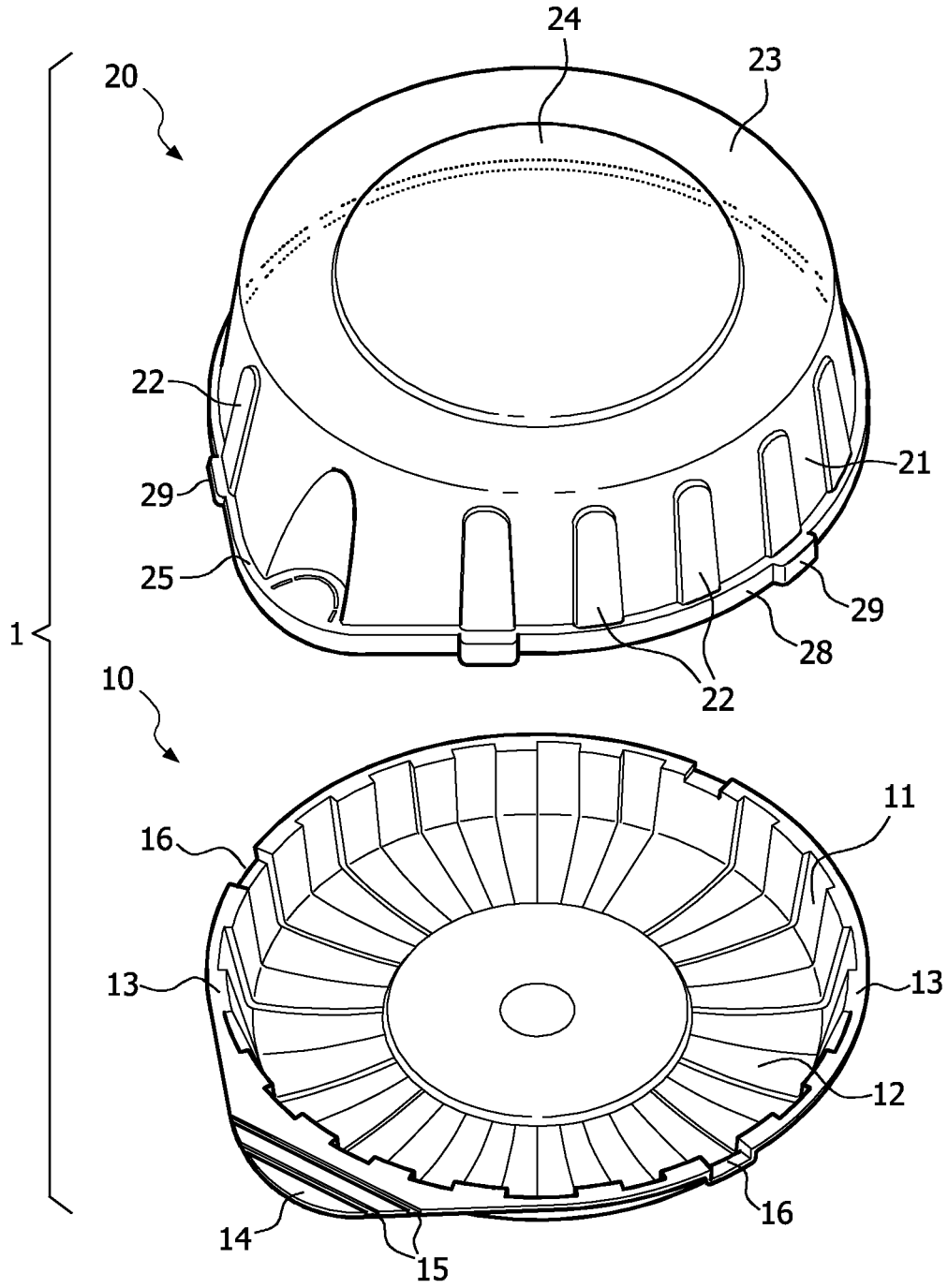

FIG. 1

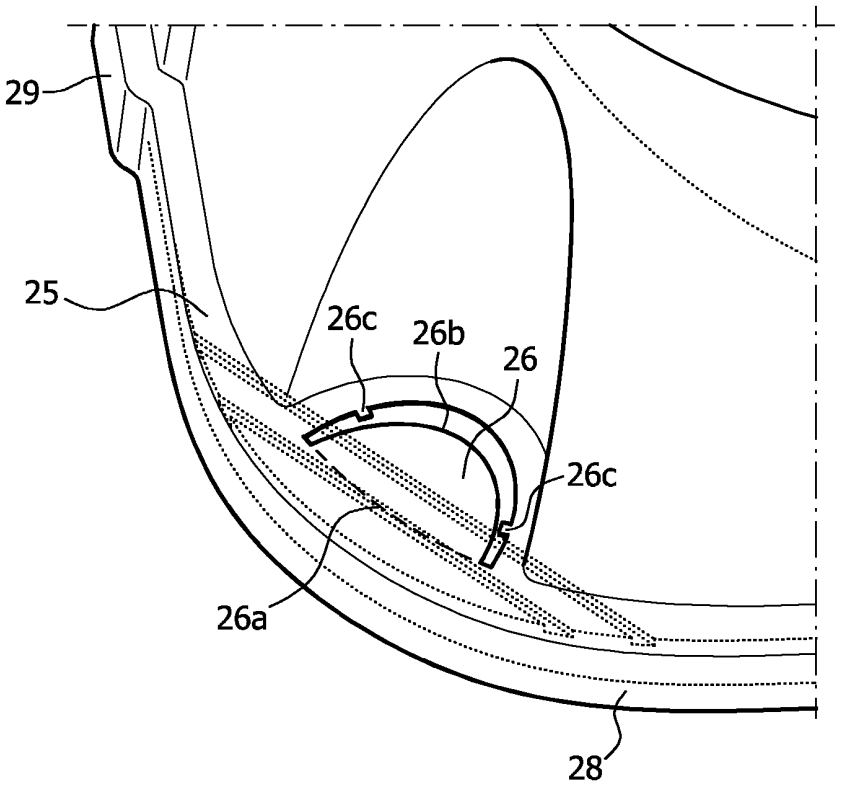

FIG. 2

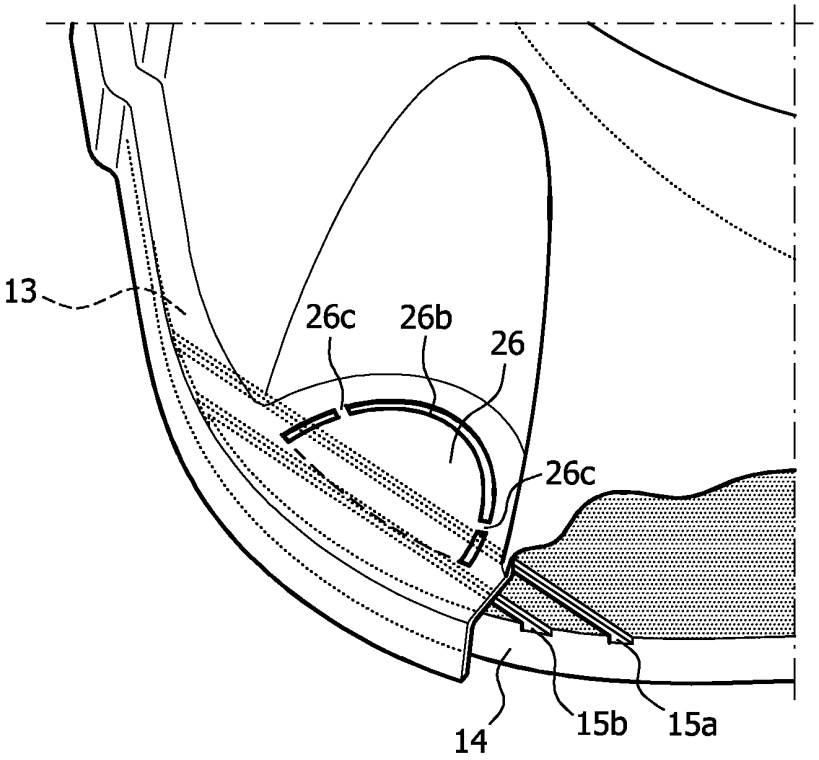

FIG. 3

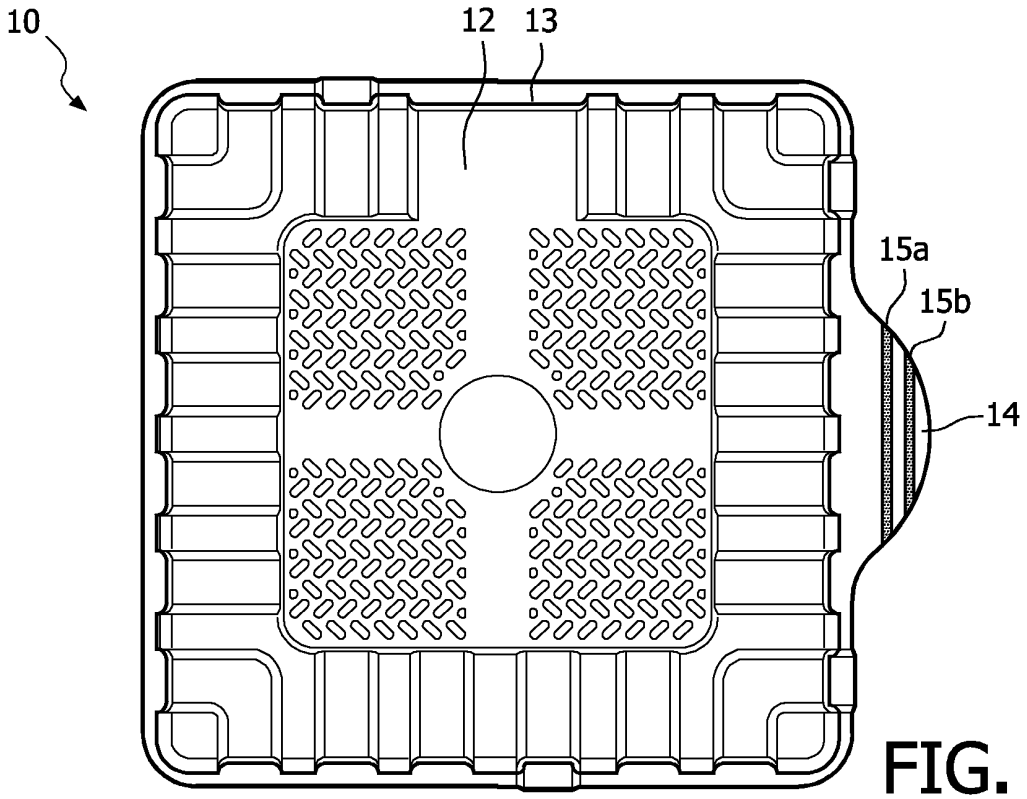

FIG. 4a

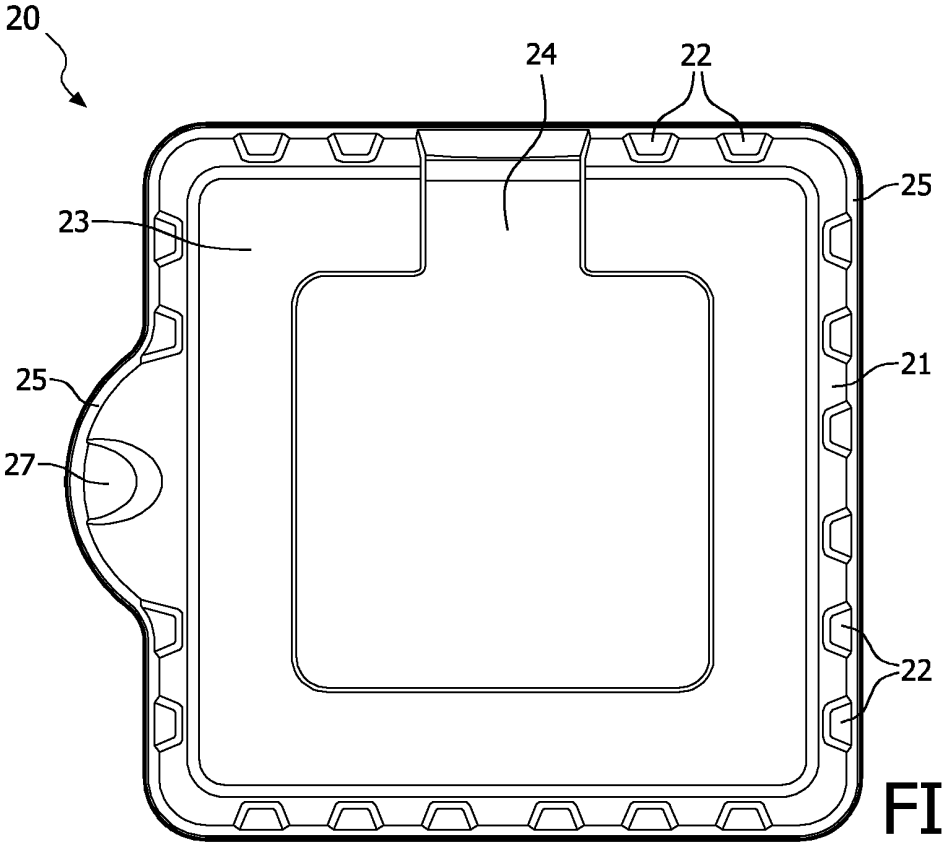

FIG. 4b

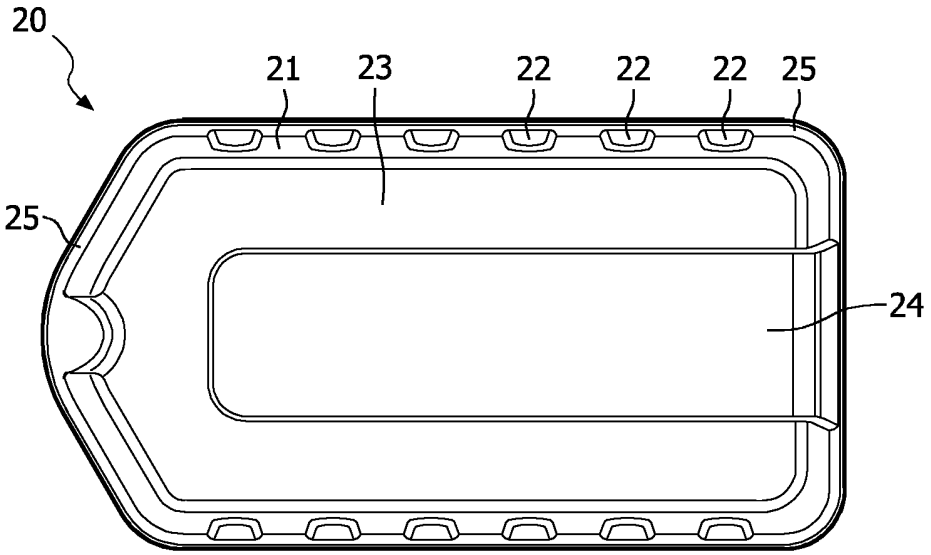

FIG. 5

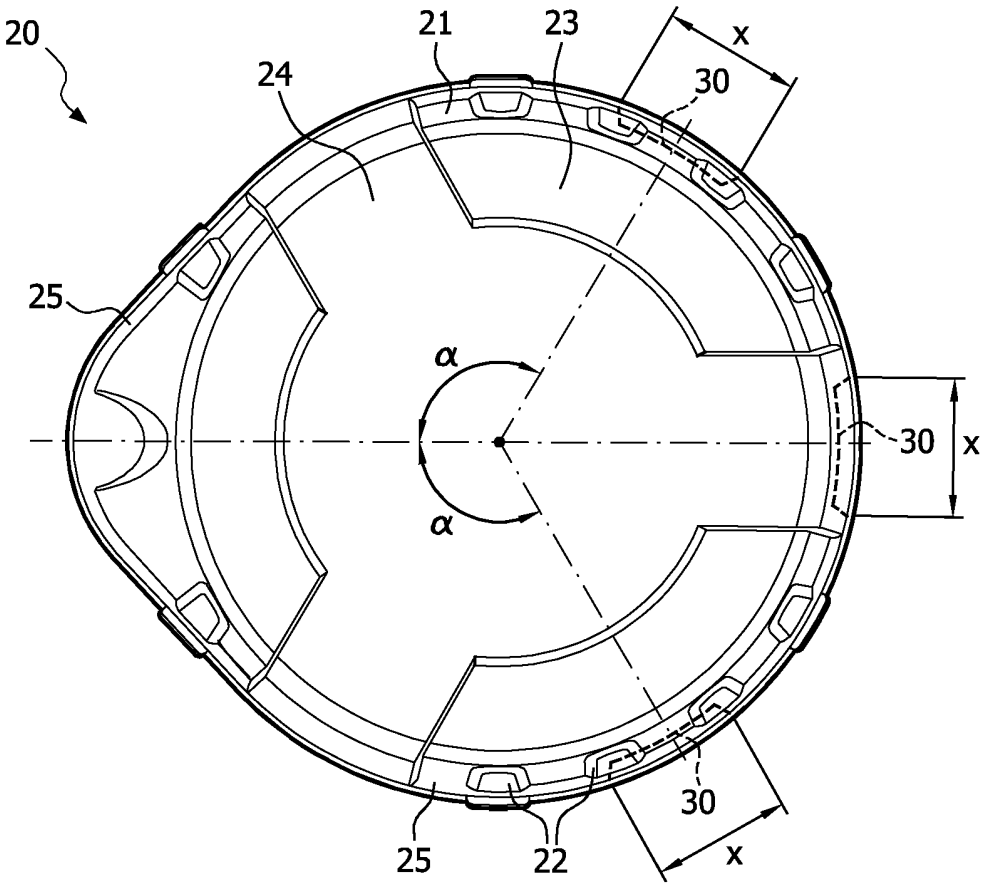

FIG. 6

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EUROPEAN SEARCH REPORT

Application Number
EP 06 12 5130

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Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
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TECHNICAL FIELDS SEARCHED (IPC)

B65D

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
The Hague	15 March 2007	MANS-KAMERBEEK, M

CATEGORY OF CITED DOCUMENTS

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