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(54) **DISPOSABLE FLEXIBLE CONTAINER WITH RESEALABLE CLOSURE FLAP**

(57) The invention relates to a disposable flexible container with a resealable closure flap, wherein the flexible container (10) is made of polyethylene, the closure flap (21) is connected to a fixing portion (23) through only a hinge line (LB), forming a label of between 150 micron and 450 micron adhered to the outer surface of the flexible container (10) by means of an interposed re-adherable adhesive layer (33); the hinge line is made up of an aligned succession of uncut segments (1) comprised between cutting lines (2) that completely go through the thickness of the label; wherein the label (20) is made of polyethylene, being made entirely or in part of high-density polyethylene; the combined length (L1, L2, L3, L4) of all the uncut segments is between 10% and 25% the maximum length (LM) of the closure flap perpendicular to the hinge line (LB).

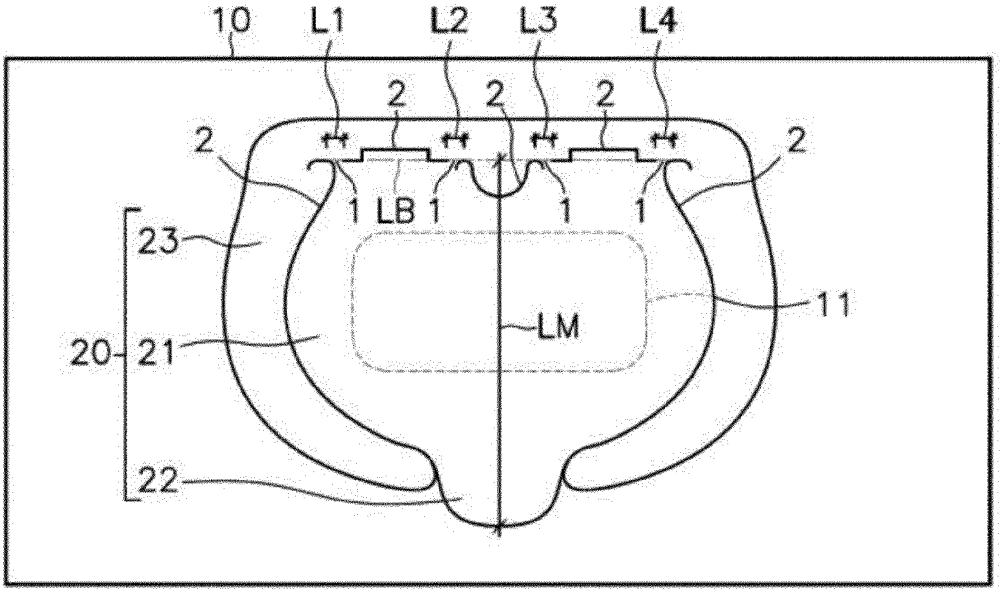

Fig. 1A

EP 3 925 903 A1

Description

Technical Field

[0001] The present invention relates to a disposable flexible container with a resealable closure flap for the repeated opening and closing of an opening of the flexible container.

[0002] The closure flap is integrated in a label adhered to the outer surface of the flexible container, both the container and the label being made entirely of polyethylene, thereby allowing them to be recycled together.

[0003] A configuration of said closure flap which allows it to be kept upright once it is opened despite being made of a non-rigid plastic such as polyethylene is proposed.

State of the Art

[0004] Disposable flexible containers made of polyethylene and provided with a resealable closure flap adhered on its outer surface by means of a pressure-sensitive re-adherable adhesive, allowing an opening of the flexible container to be opened and closed repeatedly, are known, said closure flap being connected to a fixing portion, also adhered to the flexible container, through a hinge line.

[0005] These products are widely used for selling environmental humidity-sensitive consumables used intermittently, such as for example wet cleaning wipes, cookies, etc.

[0006] In products of this type, the closure flap must present certain rigidity so that the hinge line folds and keeps the closure flap in an upright position when opened, preventing it from lowering and closing, allowing the opening of the flexible container to be accessed comfortably.

[0007] An example of products of this type is described in patent document EP3057880B1.

[0008] However, to achieve the necessary rigidity, plastics other than polyethylene are commonly used, given that polyethylene is known for its high flexibility and plasticity and these characteristics are undesired for this use. However, the use of these plastics prevents recycling the flexible container and the label formed by the closure flap and fixing portion assembly together.

[0009] It is not known to replace the material constituting said label with polyethylene, which allows being recycled together with the flexible container, because the elasticity and plasticity of polyethylene makes it a material that is unsuitable for this use.

[0010] The present invention is proposed to find a solution which allows obtaining a label made of polyethylene, which allows being recycled together with the flexible container, but at the same time presents sufficient rigidity to keep the closure flap upright when it is in the open position.

Brief Description of the Invention

[0011] The present invention relates, in a manner that is known in the state of the art, to a disposable flexible container with a resealable closure flap for the repeated opening and closing of an opening of the flexible container.

[0012] The expression resealable will be understood to mean that the closure flap provides, in the closed position, a fitted or even tight sealing of the opening of the container that can be opened and closed repeatedly, achieving said fitted or tight sealing of the opening of the container every time.

[0013] The flexible container is made of polyethylene, typically by means of one or more suitably folded and heat-welded sheets. Said flexible container includes an outer surface and a hollow interior accessible through an opening.

[0014] Polyethylene will be understood to comprise any polymer of the polyethylene family, regardless of its density or the shape of its branched structure, and to also comprise other recyclable thermoplastics with a melting temperature similar to that of polyethylene.

[0015] A closure flap, provided for closing said opening of the flexible container, is connected to a fixing portion through only a hinge line, and includes a gripping tab at one end of the closure flap spaced apart from said hinge line, the hinge line and the gripping tab being located at opposite ends of the closure flap.

[0016] The closure flap and fixing portion assembly forms a label adhered to the outer surface of the flexible container by means of an interposed re-adherable adhesive layer between the label and the flexible container. Said re-adherable adhesive, is a pressure-sensitive adhesive, i.e., it adheres every time it is subjected to pressure, and it can be released without leaving any residue on the adhered surface.

[0017] The bordering hinge line between the closure flap and the fixing portion of the label is made up of an aligned succession of uncut segments which are comprised between cut segments. Each cut segment is defined by a cutting line that completely goes through the label, separating the closure flap from the fixing portion.

[0018] In other words, the label includes several discontinuous cutting lines between which uncut segments successively aligned along a hinge line are defined.

[0019] Said hinge line will preferably be a straight line, although it is contemplated that it is a slightly arched curved line, for example, an arched line with a deflection of less than 10% its length. Said curvature may cause the closure flap to be curved in the open position when it is separated from the flexible container, increasing its rigidity.

[0020] With the configuration of the label described up until now, the closure flap is movable between a closed position, adhered to the outer surface of the flexible container covering and sealing the opening, and an open position in which it is separated from the outer surface

of the flexible container, but remaining connected to the rest of the label through the hinge line.

[0021] The present invention furthermore proposes the following features which are unknown in the existing state of the art:

- the label is made of polyethylene, being made entirely or in part of high-density polyethylene;
- the thickness of the label is comprised between 150 micron and 450 micron;
- the combined length of all the uncut segments, measured in the direction of the hinge line, is between 10% and 25% the maximum length of the closure flap measured in a direction perpendicular to the hinge line.

[0022] In other words, the invention proposes manufacturing the label entirely from polyethylene, like the flexible container, so as to allow both elements to be recycled together.

[0023] Polyethylene is a very ductile material with low rigidity, so said label with a maximum thickness made of polyethylene does not present sufficient rigidity for remaining, upon lifting the closure flap, rigid enough to transmit stresses to the uncut segments of the hinge line to cause them to fold, no does it present sufficient rigidity for said uncut segments to keep the closure flap upright once they are folded when the open position is reached.

[0024] If the label presents insufficient rigidity, when the closure flap is lifted it will bend without transmitting stresses to the uncut segments, which will not be able to be correctly folded at a sufficient angle so as to keep the closure flap completely upright upon reaching the open position, typically approximately perpendicular to the outer surface of the flexible container, and furthermore said uncut segments cannot hold the weight of the entire closure flap in said upright position as they lack sufficient rigidity.

[0025] Conversely, if the label presents a high rigidity, when the closure flap is lifted it may transmit stresses to the uncut segments, although there is a risk that, because of the high rigidity of the label, said uncut segments will also present excessive rigidity preventing them from folding completely, and therefore not holding the closure flap in a completely open position.

[0026] Therefore, a label that is rigid enough so as to enable transmitting stresses to the hinge line upon lifting the closure flap is necessary, but said hinge line must be correctly configured in order to achieve correct folding of the uncut segments, without causing, however, an excessive weakening of said uncut segments, which could prevent keeping the closure flap upright under its own weight.

[0027] The rigidity necessary for the closure flap to transmit stresses to the uncut segments of the hinge line is obtained by making the label of polyethylene, being made at least in part or entirely of high-density polyethylene, and making the label with a total thickness greater than 150 micron. To avoid excessive rigidity, the total thickness of the resulting label is limited to a maximum of 450 micron.

[0028] High-density polyethylene can be recycled together with normal polyethylene, so said characteristic of the label does not represent any recycling impediment.

[0029] For the purpose of achieving correct and complete folding of the uncut segments of the hinge line, made with said first and second layers, upon lifting the closure flap, it is surprisingly been found that the combined length of said uncut segments must be limited to a maximum of 25% the maximum length of the closure flap, measured in a direction perpendicular to the hinge line.

[0030] Typically, said maximum length of the closure flap corresponds to the region that includes the gripping tab, which is usually a projection of the closure flap positioned at the end most spaced apart from the hinge line.

[0031] In the direction perpendicular to the hinge line, the closure flap acts like a lever arm on the uncut segments of the hinge line. Therefore, the longer the closure flap, the higher the stresses transmitted to the uncut segments when opening the closure flap, allowing a longer combined length of the uncut segments.

[0032] With this dimensional relationship, the stresses transmitted by the closure flap are concentrated in the uncut segments in a manner that is sufficient so as to cause a correct folding of said uncut segments.

[0033] The total length of the hinge line will be understood to be the length separating the two most spaced apart ends of the most spaced apart uncut segments constituting said hinge line. The length of each uncut segment will also be understood to be the length in the direction of the hinge line.

[0034] For the purpose of ensuring that the closure flap is kept upright under its own weight, it has been found that it is necessary for the combined length of the uncut segments, measured in the direction of the hinge line, to represent at least 10% the maximum length of the closure flap, measured in a direction perpendicular to the hinge line.

[0035] As mentioned above, the closure flap also acts like a lever arm when, due to the effect of gravity, it applies force on the uncut segments so as to close itself. Therefore, the combined length of the uncut segments needed to keep the closure flap upright will also depend on said length of the closure flap measured in the direction perpendicular to the hinge line. The greater the length of the closure flap, the greater the combined length of the uncut segments will be needed to keep the closure flap upright.

[0036] According to an envisaged embodiment of the invention, the label is proposed to be formed by a first layer of sheet material and a second layer of sheet material adhered to one another by means of an interposed adhesive layer by means of lamination or by means of a heat-welding operation.

[0037] With the label being made of two attached layers instead of just one layer, it provides a higher rigidity with the same label thickness, provided that none of the layers is 10 micron thick or less.

[0038] Commercially available polyethylene sheets have a maximum thickness of 220 micron, and there are very few or none available that are thicker, with the prices also being less competitive. Therefore, increasing the thickness of the label by means of superimposing a first layer and a second layer allows greatly increasing the rigidity while at the same time maintaining competitive costs, because commercially available polyethylene sheets can be used. This solution allows obtaining, for example, a label with a maximum thickness of up to 450 micron by attaching the two layers by means of an interposed adhesive layer of up to 10 micron for example.

[0039] Given that the mentioned label is made of polyethylene, being made entirely or in part of high-density polyethylene, it is concluded that one or both layers are made of high-density polyethylene. Preferably, at least the first layer will be made of high-density polyethylene.

[0040] According to another envisaged embodiment, the length of each of the uncut segments of the hinge line will be comprised between 1.5 mm and 4 mm. Additionally or alternatively, the number of uncut segments of the hinge line will preferably be comprised between two and six. It has been found that if the total length of the uncut segments is the same, different combinations of individual length and number of said uncut segments can produce an improved performance of the label, with the values mentioned being those preferred.

[0041] It is also proposed that the maximum length of the closure flap, in the direction perpendicular to the hinge line, is comprised between 40 mm and 100 mm. The performance of the label provided with the claimed features is optimal within said range of values.

[0042] It is also proposed that the label and the adhesives it incorporates are transparent to visible light, with a haze value equal to or greater than 60.

[0043] The higher the haze value is, the better the clarity of the images visible through the object is.

[0044] In this case, a material with a percentage of light transmission greater than 70 is understood to be transparent.

[0045] Light transmission and haze values can be measured, for example, by means of a device called a hazemeter by means of known methods and standards for measuring the transparency of plastics (for example ASTM D1746, ASTM D1003, or BS EN ISO 13468).

[0046] High-density polyethylene typically has a limited transparency due to a high scattering of light going through it, typically with a haze value of less than 50, which hinders the clear viewing of what is behind it. With the use of high-density polyethylene sheets with a haze value greater than 60, total transparency of the label is greatly improved since said scattering is reduced.

[0047] This allows using transparent labels on flexible containers with the outer surface incorporating print, simplifying the manufacturing process because only one element has to incorporate print.

[0048] It is also proposed that the hinge line, at one or both ends of at least some of the uncut segments, is approximately tangent to a curved portion of a cut segment. In other words, it is proposed that some cut segments may include a curved portion tangent to the hinge line adjacent to an uncut segment, such that said tangency with the curved portion constitutes the end of the uncut segment. This configuration prevents the force of opening the closure flap from also lifting the fixing portion, which also prevents the label from tearing.

[0049] It is also proposed that one or both ends of at least some of the cutting lines of the cut segments are parallel to and coinciding with the hinge line. In other words, the end portion of a cutting line is aligned with the hinge line at this point and superimposed thereon. This configuration concentrates the stresses along the hinge line, inducing a precise fold of the uncut segment adjacent to said cutting line coinciding with the hinge line.

[0050] Each uncut segment will preferably have one end approximately tangent to a curved portion of a cut segment and another end adjacent to an end of a cutting line parallel to and coinciding with the hinge line.

[0051] It is also proposed that at least one cut segment, comprised between two uncut segments, defines a tab of the fixing portion of the label positioned entirely on one side of the hinge line and surrounded by the closure flap. This configuration will improve the fixing of the fixing portion to the flexible container, preventing it from being separated from same when the user pulls on the closure flap.

[0052] It is also contemplated that at least one cut segment, comprised between two uncut segments, defines a tab of the closure flap positioned entirely on one side of the hinge line and surrounded by the fixing portion. Upon lifting the closure flap, said tab will be separated from the outer surface of the flexible container and will move downward, since it is on one side of the hinge line opposite the side occupied by the rest of the closure flap, interfering with the outer surface of the flexible container and offering additional support for keeping the closure flap upright in the open position.

[0053] Said tab of the closure flap will preferably have a maximum length, perpendicular to the hinge line, equal to or less than 3 mm.

[0054] According to a preferred embodiment, the first layer may have a thickness of at least 150 micron, and the second layer may have a thickness of at least 60 micron.

[0055] Preferably, neither of said first layer nor second layer will have a thickness greater than 220 micron.

[0056] References to geometric positions, such as parallel, perpendicular, tangent, etc., will be understood to allow for deviations of up to $\pm 5º$ with respect to the theoretical position defined by said nomenclature.

[0057] It will also be understood that any range of values provided may not be optimal in regard to their extreme values and may require adaptations of the inven-

tion for said extreme values to be applicable, with said adaptations being within reach of one skilled in the art.

[0058] Other features of the invention will become apparent in the following detailed description of an embodiment.

Brief Description of Figures

[0059] The foregoing and other advantages and features will be more fully understood based on the following detailed description of an embodiment in reference to the attached drawings, which must be interpreted in an illustrative and non-limiting manner, in which:

Figure 1A shows a plan view of the flexible container with the label adhered to the outer surface thereof, with the closure flap in the closed position, according to a preferred embodiment of the invention;

Figure 1B shows an enlarged view of the hinge line of the label shown in Figure 1A.

Figure 2A shows a cross-section with respect to a cutting line of the hinge line shown in

Figure 1B, with the label formed by a first layer and a second layer adhered to one another and the closure flap in the closed position;

Figure 2B shows the cross-section shown in Figure 2A but with the closure flap in the open position.

Figure 3A shows a cross-section with respect to an uncut segment of the hinge line shown in

Figure 1B, with the closure flap in the closed position;

Figure 3B shows the cross-section shown in Figure 3A but with the closure flap in the open position.

Detailed Description of an Embodiment

[0060] The attached figures show an illustrative and non-limiting embodiment of the present invention.

[0061] In the embodiment in the attached figures, a flexible container 10 is shown, said container being formed from a folded polyethylene sheet forming a tube and with its two longitudinal edges welded to one another, two opposite ends of said tube being closed by means of transverse welds, defining a hollow interior of the flexible container 10 on the intrados and an outer surface on the extrados.

[0062] Said flexible container 10 includes an opening 11 in the form of a hole made in the sheet forming the flexible container 10 and providing access to the hollow interior.

[0063] A label 20 is adhered on the outer surface of the flexible container 10 by means of a pressure-sensitive re-adherable adhesive layer 33, allowing the separation and re-adhesion of the label 20, or of parts thereof.

[0064] Said label 10 has cut segments defined by cutting lines 2, each one going through the entire thickness of the label 10. Uncut segments 1 are defined between the cutting lines 2.

[0065] The set of cutting lines 2 divide the label 20 into two regions connected to one another through only the uncut segments 1, said two regions corresponding to a closure flap 21, which is superimposed on the opening 11 of the flexible container 10, covering and sealing it, and to a fixing portion 23.

[0066] The closure flap 21 is larger than the opening 11, such that a perimetral region of the closure flap 21 is adhered to the outer surface of the flexible container 10 around the opening 11.

[0067] The uncut segments 1 of the label 20, comprised between the cutting lines 2, are successively aligned along a hinge line LB.

[0068] The closure flap 21 furthermore includes a gripping tab 22 at one end of the closure flap 21, opposite the end in contact with the hinge line LB. Said gripping tab 22 consists of a prolongation of the closure flap 21, preferably devoid of any re-adherable adhesive 33 or with a re-adherable adhesive 33 treated so as to inhibit its adhesive capacity. Said gripping tab 22 is provided so that a user may comfortably grip the closure flap 21 by an end opposite the hinge line LB through said gripping tab 22, and pull on the closure flap 21 so as to separate it from the outer surface of the flexible container 10, transitioning from a closed position to a open position, freeing the access to the opening 11 of the flexible container 10.

[0069] In this embodiment, the hinge line LB is a straight line defined by four aligned uncut segments 1, the four uncut segments 1 being comprised between two end cutting lines 2 and three intermediate cutting lines 2, with all the cutting lines 2 including parts that coincide with or are tangent to the hinge line LB.

[0070] The end cutting lines are prolonged, also demarcating part of the perimeter of the closure flap 21, with parts of the fixing portion 23 being positioned on both sides of the closure flap 21.

[0071] In this embodiment shown in detail in Figure 1B, it can be seen that an intermediate cutting line 2 has two end portions tangent to the hinge line LB, and a central portion surrounding a piece of the fixing portion 23 positioned entirely on one side of the hinge line, where most or all of the closure flap 21 is positioned, with said piece, which constitutes a tab of the fixing portion 41, being completely surrounded by the closure flap 21. In other words, said cutting line 2 cuts out part of the closure flap 21 adjacent to the hinge line LB, with that part being integrated in the support portion 23, constituting a tab of the support portion 41. Since this tab of the support portion 41 is positioned on the same side of the hinge line LB as the closure flap 21, when the closure flap 21 is pulled to the detachment thereof from the flexible container 10, it prevents the fixing portion 23 from becoming

detached as well.

[0072] Said Figure 1B also shows two other cutting lines 2, each of which has two ends aligned and coinciding with the hinge line LB and a central portion surrounding a piece of the closure flap 21 positioned entirely on one side of the hinge line LB opposite the side containing most of the closure flap 21, and serving to increase the support that keeps the closure flap in the upright position.

[0073] Between said cutting lines 2 there are four uncut segments 1 aligned with the hinge line LB; each of these uncut segments 1 has a length L1, L2, L3, and L4, measured in the direction of the hinge line LB, comprised between 1.5 mm and 4 mm. In this example, said length is 2.5 mm.

[0074] The sum of said lengths L1, L2, L3, and L4 determines a combined length.

[0075] The maximum length LM of the closure flap 21, measured in a direction perpendicular to the hinge line LB, is preferably comprised between 40 mm and 100 mm. This maximum length LM determines the length of the lever arm which the closure flap 21 applies on the uncut segments 1.

[0076] In this example, the maximum length LM measures 60 mm, being in the center of the closure flap 21 and covering from the hinge line LB to the most distal end of the gripping tab 22 integrated in the closure flap 21.

[0077] Said combined length L1, L2, L3, and L4 of the uncut segments 1 represents between 10% and 25% the maximum length LM of the closure flap 21. In this example, it represents about 17%. This provides an optimal rigidity to said uncut segments 1 so that the closure flap 1 can be kept upright when it is manufactured from polyethylene.

[0078] Figures 2A, 2B, 3A, and 3B show an enlarged section of the label 20 in the region of the hinge line LB, but according to one embodiment in which the label 20 is formed by a first layer 31 and a second layer 32 adhered to one another by means of an interposed adhesive layer 34, typically having a thickness equal to or less than 10 micron.

[0079] The label 20 assembly furthermore includes a re-adherable adhesive layer 33 on its face opposite the outer face of the flexible container 10.

[0080] This re-adherable adhesive layer 33 is what keeps the fixing portion 23 of the label 20 attached to the outer surface of the flexible container 10, which allows the sealing of the opening 11 by adhering a perimetral region of the closure flap 21 to the outer surface of the flexible container 10 around the opening 11.

[0081] Furthermore, in this embodiment a piece of the sheet forming the flexible container 10, corresponding to the opening 11, is adhered to the closure flap 21 by means of said re-adherable adhesive 33, such that upon lifting the closure flap 21, said piece of the sheet corresponding to the opening is lifted together with the closure flap 21, leaving the opening 11 accessible.

[0082] In this example, the first layer 31 is thicker than the second layer 32, their thicknesses being 200 micron and 110 micron, respectively.

[0083] The cutting lines 2 completely go through the thickness of the label 20, therefore in this example they completely go through the first layer 31, the second layer 32, and also the adhesive layers 33 and 34.

[0084] At least the first layer 31 is made of high-density polyethylene, and the second layer is made of polyethylene, which may also be high-density polyethylene.

[0085] The label is preferably transparent, i.e., it allows visible light to pass therethrough, which allows images and text positioned behind it to be identified.

[0086] Most commercialized high-density polyethylene has a somewhat deficient transparency and is off-white, causing the light going through it to be considerably scattered, which produces an effect similar to that caused by haze. This parameter is measurable and is known as the haze value. Ordinary high-density polyethylene has a haze value that is equal to or less than 50.

[0087] The use of high-density polyethylene with a transparency greater than what is normally employed for this use, i.e., with a haze value equal to or greater than 60, is proposed, thereby improving the transparency of the resulting label 20.

[0088] Furthermore, the use of two superimposed layers 31 and 32 produces the so-called window effect, providing a better perceived transparency than with a single layer.

[0089] It will be understood that the different parts constituting the invention described in one embodiment may be freely combined with the parts described in other different embodiments, even though said combination has not been explicitly described, provided that such combination does not imply any detriment thereto.

Claims

1. A disposable flexible container with a resealable closure flap for the repeated opening and closing of an opening of the flexible container; wherein

   - the flexible container (10) is made of polyethylene and defines an outer surface and a hollow interior accessible through said opening (11);
   - the closure flap (21) is connected to a fixing portion (23) through only a hinge line (LB), and includes a gripping tab (22) at one end of the closure flap (21) spaced apart from said hinge line (LB);
   - the closure flap (21) and fixing portion (23) assembly forms a label (20) adhered to the outer surface of the flexible container (10) by means of an interposed re-adherable adhesive layer (33); and
   - the hinge line (LB) is made up of an aligned succession of uncut segments (1) which are comprised between cut segments, each cut segment being defined by a cutting line (2) that com-

pletely goes through the thickness of the label (20), separating the closure flap (21) from the fixing portion (23);

such that the closure flap (21) is movable between a closed position, adhered to the outer surface of the flexible container (10) covering and sealing the opening, and an open position in which it is separated from the outer surface of the flexible container (10), connected to the rest of the label (20) through the hinge line (LB);
characterized in that

- the label (20) is made of polyethylene, being made entirely or in part of high-density polyethylene;
- the thickness of the label (20) is comprised between 150 micron and 450 micron;
- the combined length (L1, L2, L3, L4) of all the uncut segments (1), measured in the direction of the hinge line (LB), is between 10% and 25% the maximum length (LM) of the closure flap (21) measured in a direction perpendicular to the hinge line (LB).

2. The disposable flexible container according to claim 1, wherein the label is formed by a first layer (31) of sheet material and a second layer (32) of sheet material adhered to one another, the first layer (31) being of the same thickness as or thicker than the second layer (32) and the second layer (32) having a thickness greater than 10 micron.

3. The disposable flexible container according to claim 1 or 2, wherein the label (20) and the adhesives (33, 34) it incorporates are transparent to visible light, the haze value of the label (20) being equal to or greater than 60.

4. The disposable flexible container according to claim 1, 2, or 3, wherein the length of the uncut segments (1) of the hinge line (LB) is comprised between 1.5 mm and 4 mm.

5. The disposable flexible container according to claim 1, 2, 3, or 4, wherein the number of uncut segments (1) of the hinge line (LB) is comprised between two and six.

6. The disposable flexible container according to any one of the preceding claims, wherein the maximum length (LM) of the closure flap (21), in the direction perpendicular to the hinge line (LB), will be comprised between 40 mm and 100 mm.

7. The disposable flexible container according to any one of the preceding claims, wherein the hinge line (LB), at one or both ends of at least some of the uncut segments (1), is approximately tangent to a curved portion of a cut segment.

8. The disposable flexible container according to any one of the preceding claims, wherein at one or both ends of at least some of the cutting lines (2) the cut segments are parallel to and coinciding with the hinge line (LB).

9. The disposable flexible container according to any one of preceding claims 1 to 6, wherein each uncut segment (1) has an end approximately tangent to a curved portion of a cut segment and another end adjacent to an end of a cutting line (2) parallel to and coinciding with the hinge line (LB).

10. The disposable flexible container according to any one of the preceding claims, wherein at least one cut segment, comprised between two uncut segments (1), defines a tab of the fixing portion (41) of the label positioned entirely on one side of the hinge line (LB) and surrounded by the closure flap (21).

11. The disposable flexible container according to any one of the preceding claims, wherein at least one cut segment, comprised between two uncut segments (1), defines a tab of the closure flap (42) of the label (20) positioned entirely on one side of the hinge line (LB) and surrounded by the fixing portion (23).

12. The disposable flexible container according to claim 9, wherein the tab of the closure flap (42) has a maximum length (LM), perpendicular to the hinge line (LB), equal to or less than 3 mm.

13. The disposable flexible container according to claim 2, wherein the first layer (31) has a thickness of at least 150 micron.

14. The disposable flexible container according to claim 2 or 13, wherein the second layer (32) has a thickness of at least 60 micron.

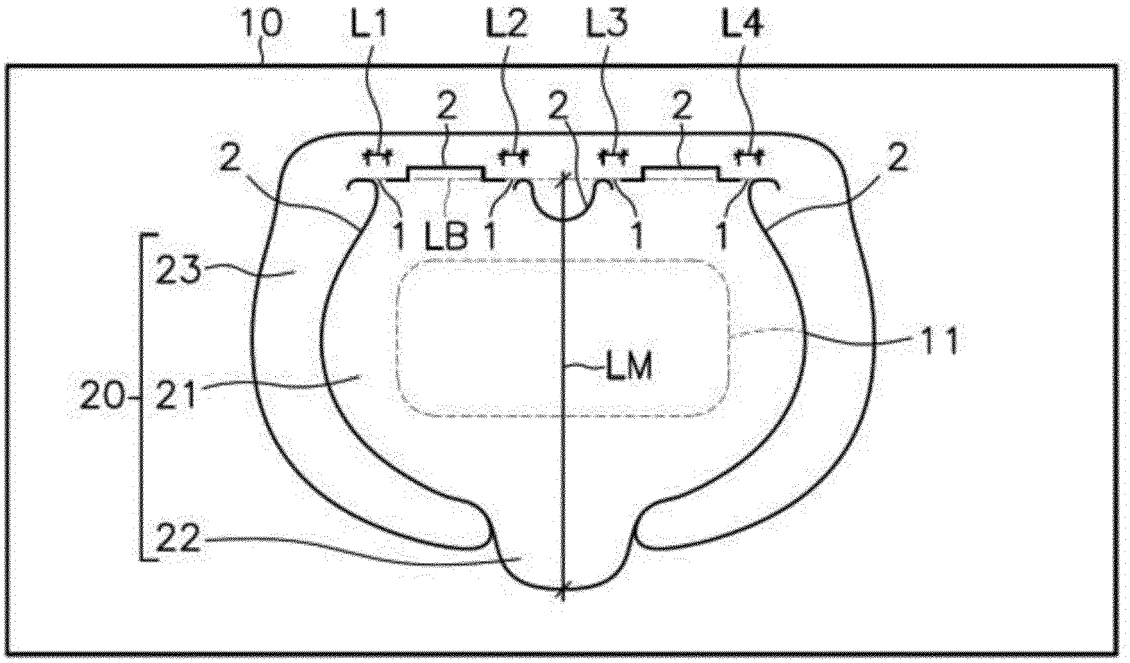
10
L1
L2
L3
L4
2
2
2
2
2
1
LB
1
1
1
23
11
LM
20
21
22

Fig. 1A

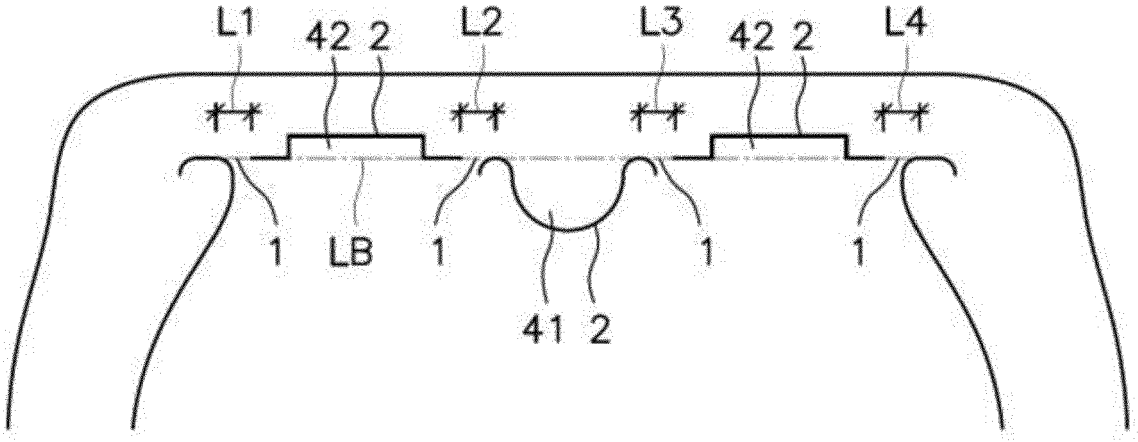
L1
42
2
L2
L3
42
2
L4
1
LB
1
1
1
41
2

Fig. 1B

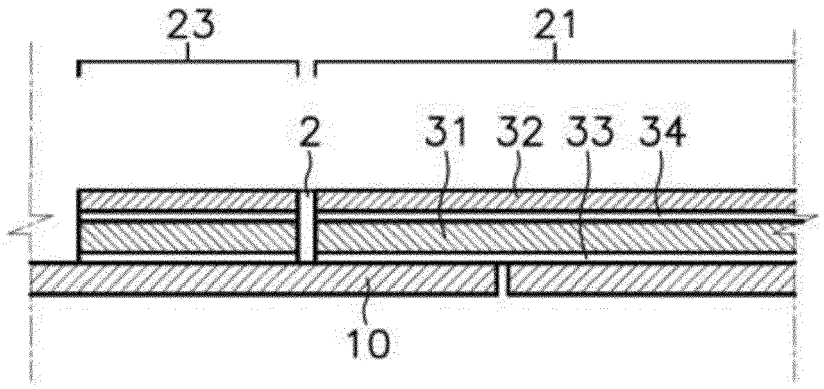

Fig.2A

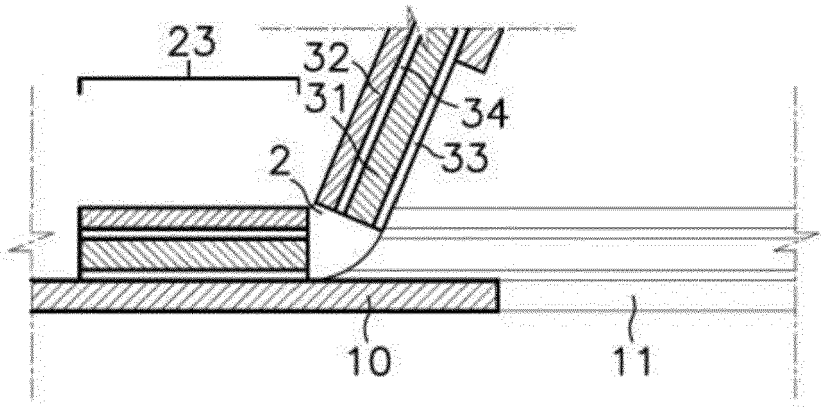

Fig.2B

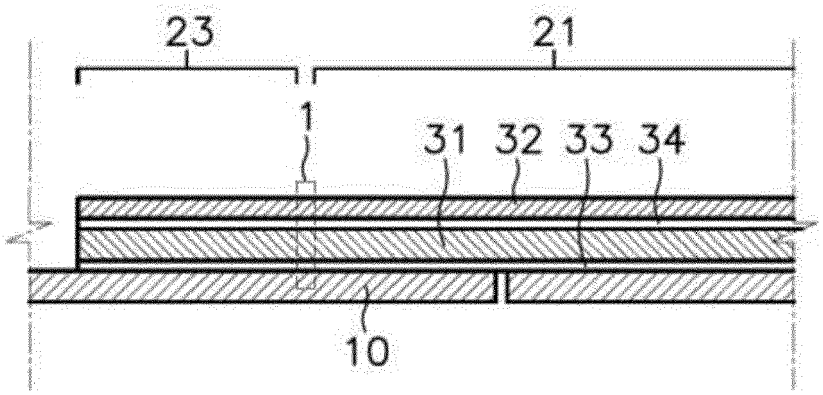

Fig.3A

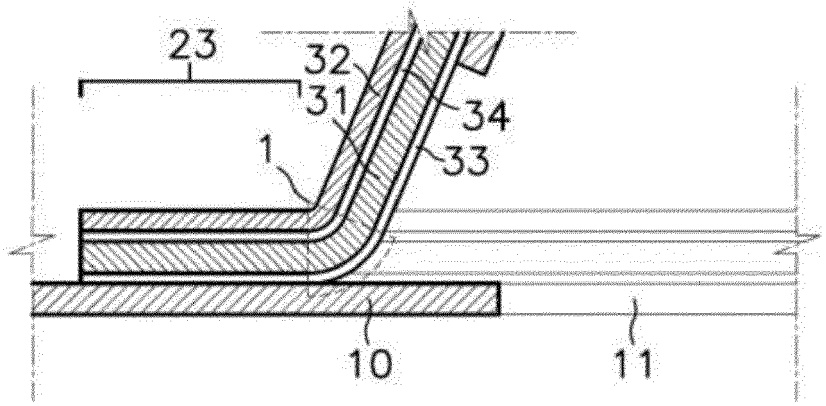

Fig.3B

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EUROPEAN SEARCH REPORT

Application Number
EP 20 38 2529

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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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The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
Munich	10 November 2020	Fitterer, Johann

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