



(12) **EUROPEAN PATENT APPLICATION**
published in accordance with Art. 153(4) EPC

(43) Date of publication:
05.02.2014 Bulletin 2014/06

(51) Int Cl.:
B65B 11/12 (2006.01) **B65B 25/14** (2006.01)
B65D 83/08 (2006.01)

(21) Application number: **12764626.3**

(86) International application number:
PCT/JP2012/056467

(22) Date of filing: **13.03.2012**

(87) International publication number:
WO 2012/132885 (04.10.2012 Gazette 2012/40)

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

(72) Inventor: **BANDO, Takeshi**
Kanonji-shi, Kagawa 769-1602 (JP)

(30) Priority: **29.03.2011 JP 2011073664**

(74) Representative: **Knights, Rupert**
Saunders & Dolleymore LLP
9 Rickmansworth Road
Watford WD18 0JU (GB)

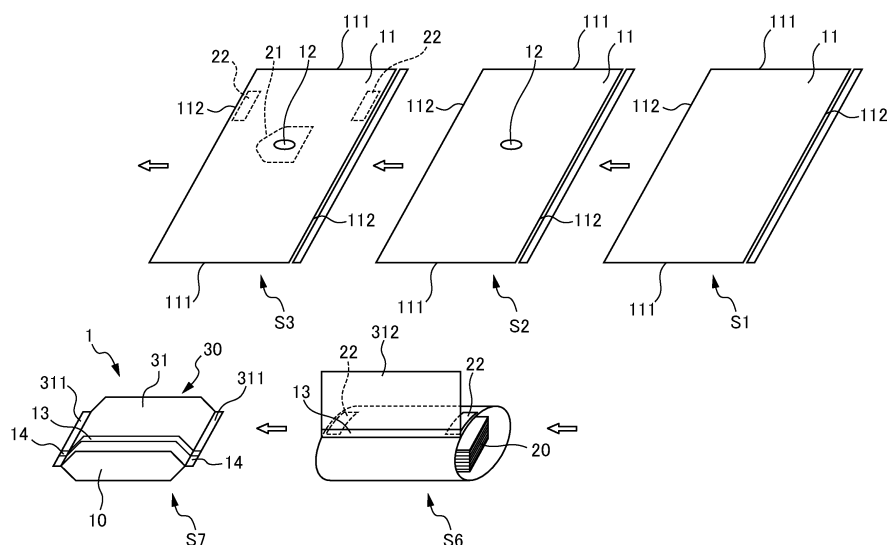
(71) Applicant: **Uni-Charm Corporation**
Ehime 799-0111 (JP)

(54) **METHOD FOR PRODUCING PRE-MOISTENED WIPE PACKAGE**

(57) Provided is a method for producing a wet tissue package by which a storage portion for wet tissues which have been used can be easily produced, and wet tissues stored in a package main body can be prevented from drying. A method for producing a wet tissue package (1) provided with a package main body (10) having an opening portion (12), a lid member (21) to cover the opening portion (12), and a used wet tissue storage portion (30), wherein the method is provided with an opening portion

formation step (S2), an attachment step (S3) for attaching the lid member (21) and an adhesive material (22), a folding back step for wrapping a plurality of wet tissues (20), a first sealing portion formation step (S6) for forming a first sealing portion (13) and a first sealing extension portion (31), and a second sealing portion formation step (S7) for forming a second sealing portion (14) and also forming the used wet tissue storage portion (30) by joining the second sealing portion (14) and the first sealing extension portion (31) by the adhesive material (22).

FIG. 8



Description

TECHNICAL FIELD

[0001] The present invention relates to a method for producing a wet tissue package. More particularly, the present invention relates to a method for producing a wet tissue package including a package main body, and a used wet tissue storage portion that is provided on the outer surface of the package main body.

BACKGROUND ART

[0002] Heretofore, pocket-sized tissue packs in which a plurality of sheets of compactly folded tissue paper is accommodated in a bag, and wet tissue packages in which wet tissues are accommodated in a bag in place of sheets of tissue paper are known of. Such a pocket-sized tissue pack or wet tissue package are carried and used by a user when, for example, the user goes outside.

[0003] In a case where the user uses the pocket-sized tissue pack or wet tissue package outside and finds no garbage box or the like into which used tissue paper or wet tissue may be discarded, it is inconvenient for the user to dispose of the used tissue or wet tissue.

[0004] Accordingly, there has been proposed a package that is provided with a used-tissue-paper storage portion in which used tissue paper is stored (e.g., refer to Patent Document 1).

[0005] The package proposed in the Patent Document 1 includes a package main body in which tissue paper is accommodated, and a pocket portion that is provided on the package main body. In the package, the package main body is constructed by wrapping the tissue paper with a strip-shaped sheet material, then by overlapping one end side and the other end side of the sheet material in the width direction, and by bonding openings formed at both ends of the sheet material in the longitudinal direction while the one end side and the other end side of the sheet material in the width direction overlapped. Also, the used tissue storage portion is formed by folding back a portion of the sheet material that is positioned on the outer side in an overlapping state, and by bonding the both ends in the longitudinal direction of the folded sheet material with the package main body.

[0006] [Patent Document 1] Japanese Utility Model Publication No. 3079883

DISCLOSURE OF THE INVENTION

Problems to be Solved by the Invention

[0007] In the package proposed in Patent Document 1, the package main body is formed by bonding the both ends in the longitudinal direction of the sheet material while the one end side and the other end side of the sheet material in the width direction is overlapped, and the one end side and the other end side in the width direction of

the sheet material are not bonded together. Therefore, in the technique disclosed in Patent Document 1, the sealing efficiency inside the package main body is insufficient. If this technique is applied to a wet tissue package, the wet tissues accommodated in the package main body will dry out over time.

[0008] Consequently, it is an object of the present invention to provide a method for producing a wet tissue package that facilitates the production of a used wet tissue storage portion that is provided to a package main body and that is capable of preventing wet tissues accommodated in the package main body from drying out.

Means for Solving the Problems

[0009] The present invention relates to a method for producing a wet tissue package including: a package main body in which a plurality of wet tissues is accommodated; an opening portion that is formed on the package main body; a lid member that is attached to an outer surface of the package main body to cover the opening portion; and a used wet tissue storage portion that is capable of storing a used wet tissue therein. The method includes steps of: forming the opening portion on a strip-shaped sheet member; attaching the lid member to the sheet member in a manner so that the opening portion is covered from a top surface side or a bottom surface side of the sheet member, and attaching an adhesive material to an upstream side and/or a downstream side of a position to which the lid member is attached; disposing the plurality of wet tissues on a surface of the strip-shaped sheet member at a side to which the lid member and the adhesive material are not attached; folding back each of a pair of side edges along a direction of flow of the sheet member with the plurality of wet tissues being disposed, to a side where the plurality of wet tissues is disposed so as to wrap around the plurality of wet tissues; forming a first seal portion that extends in the direction of flow of the sheet member and a first seal extending portion that extends from the first seal portion to a direction crossing a direction in which the pair of side edges extends by bonding the pair of side edges of the folded sheet member with each other; and forming a pair of second seal portions by bonding an upstream side and a downstream side of a position where the plurality of wet tissues is disposed on the sheet member following the step of forming the first seal portion in such a manner as to extend in a width direction of the sheet member, and forming the used wet tissue storage portion by bonding the second seal portions with the first seal extending portion by means of the adhesive material.

[0010] In the step of forming the first seal portion, the first seal portion is preferably formed at a position off a center of the sheet member in the width direction.

[0011] In the step of attaching the lid member, a hot melt adhesive agent is preferably used as the adhesive material.

[0012] Also, it is preferable that an adhesive tape is

used as the adhesive material in the step of attaching the lid member, the adhesive tape including a thermoplastic sheet material, and a tackiness agent that is applied to a surface of the sheet material with which the sheet member is in contact.

Effects of the Invention

[0013] According to the method for producing the wet tissue package of the present invention, it is possible to facilitate the production of a used wet tissue storage portion that is provided to the package main body, and to prevent wet tissues accommodated in the package main body from drying out.

BRIEF DESCRIPTION OF THE DRAWINGS

[0014]

Fig. 1 is a perspective view illustrating one embodiment of the wet tissue package produced by the method for producing wet tissue package according to the present invention, and the view illustrates the wet tissue package as seen from the bottom surface side;

Fig. 2 is a plan view of the wet tissue package illustrated in Fig. 1;

Fig. 3 is a cross-sectional view taken along line A-A in Fig. 1;

Fig. 4 is a cross-sectional view taken along line B-B in Fig. 1;

Fig. 5 is a cross-sectional view taken along line C-C in Fig. 1;

Fig. 6 is a side view illustrating the use of the wet tissue package illustrated in Fig. 1;

Fig. 7 is a schematic view illustrating production steps of the wet tissue package in a first embodiment;

Fig. 8 is a perspective view illustrating the steps of Fig. 7;

Fig. 9 illustrates steps of a method for producing a wet tissue package of a second embodiment;

Fig. 10 is a view illustrating an example modification to the center seal extending portion;

Fig. 11 is a view illustrating an example modification to the center seal extending portion; and

Fig. 12 is a view illustrating an example modification to the center seal extending portion.

EXPLANATION OF REFERENCE NUMERALS

[0015]

- 1 Wet tissue package
- 10 package main body
- 11 sheet member
- 13 center seal portion (first seal portion)
- 14 end seal portion (second seal portion)
- 15 wet tissue accommodating portion

- 20 wet tissue
- 22 adhesive agent (adhesive material)
- 22A adhesive tape
- 25 used wet tissue
- 5 30 used wet tissue storage portion
- 31 center seal extending portion
- 311 side portion
- S2 opening portion forming step
- S3 attaching step
- 10 S4 wet tissue disposing step
- S5 folding back step
- S6 center seal portion forming step (first seal portion forming step)
- S7 end seal portion forming step (second seal portion forming step)
- 15

PREFERRED MODE FOR CARRYING OUT THE INVENTION

[0016] Hereinafter, some preferred embodiments of the present invention will be described with reference to the drawings.

[0017] First, one embodiment of the wet tissue package produced according to the method for producing the wet tissue package of the present invention will be described with reference to Figs. 1 to 6.

[0018] As illustrated in Figs. 1 to 3, the wet tissue package of the first embodiment includes a package main body 10, a plurality of wet tissues that is accommodated in layers in the package main body 10, a closure flap 21 that is attached on the outer surface of the package main body 10 as a lid member, and a used wet tissue storage portion 30 that is capable of storing used wet tissues therein.

[0019] As illustrated in Figs. 3 to 5, the package main body 10 is constituted of a sheet member 11. More specifically, the package main body 10 is constituted by folding back the sheet member 11 so that the plurality of wet tissues 20 is wrapped around and by bonding a predetermined portion of the folded sheet member 11.

[0020] As illustrated in Figs. 1 and 2, the package main body 10 has a top surface 10a and a bottom surface 10b, and has a substantially rectangular bag-like 3-dimensional shape in a plan (top) view thereof.

[0021] As illustrated in Figs. 1 to 3, the package main body 10 is constructed of an opening portion 12, from which the wet tissues 20 are taken out, a center seal portion 13 as a first seal portion, a pair of end seal portions 14 as a pair of second seal portions, and a wet tissue accommodating portion 15 (refer to Fig. 3) in which the plurality of wet tissues 20 is accommodated.

[0022] As illustrated in Fig. 2, the opening portion 12 is provided at a substantially central position of the top surface 10a of the package main body 10. This opening portion 12 is formed by cutting out a portion of the sheet member 11 constituting the package main body 10 in a substantially circular shape.

[0023] As illustrated in Figs. 1 and 5, the center seal

portion 13 is disposed on the bottom surface 10b of the package main body 10, and extends along the longitudinal direction Ld of the package main body 10. Also, the center seal portion 13 is disposed at a position off the center of the bottom surface 10b in the width direction Wd of the package main body 10.

[0024] The center seal portion 13 is formed by bonding the pair of first side edges 111 (refer to Fig. 8 described later) of the sheet member 11 with each other. More specifically, the center seal portion 13 is formed by folding the sheet member 11 to wrap around the layered plurality of wet tissues 20, overlapping the pair of first side edges 111 of the folded sheet member 11, and bonding the overlapping portion together.

[0025] As illustrated in Figs. 1 to 3, the pair of end seal portions 14 constitutes side portions extending along the width direction Wd of the package main body 10. Each of the pair of end seal portions 14 is formed by bonding each pair of second side edges 112 that extends in the direction crossing to the pair of first side edges 111 of the sheet member 11 with the center seal portion 13 being formed.

[0026] As illustrated in Figs. 3 and 5, the wet tissue accommodating portion 15 is constituted of a closed space formed by bonding the sheet member 11 at the center seal portion 13 and the pair of end seal portions 14.

[0027] As illustrated in Figs. 3 to 5, the sheet member 11 constituting the package main body 10 includes a gas-and liquid-impermeable barrier layer 113, and a sealant layer 114 constituted of a thermoplastic resin film.

[0028] Examples of the gas-and liquid-impermeable member constituting the barrier layer 113 include those using a single layer or multiple layers of materials such as an aluminum foil, a polyethylene-terephthalate (PET) film, and film materials formed by depositing aluminum on a PET film.

[0029] The thermoplastic resin film constituting the sealant layer 114 is constituted of a resin that is capable of melting and fusing under given temperature and pressure conditions. Examples of the thermoplastic resin constituting the sealant layer 114 include polyethylene, polypropylene, polymer alloys of polypropylene and polystyrene, polymer alloys of polyethylene, polypropylene and polystyrene, blended resins of polypropylene and polyethylene, and blended resins of polypropylene and elastomer.

[0030] As illustrated in Figs. 3 to 5, in this embodiment the package main body 10 is constituted by disposing the sheet member 11 so that the sealant layer 114 forms the inner surface thereof. Further, in this embodiment, the center seal portion 13 and the pair of end seal portions 14 are formed by bonding each one of the sealant layers 114 forming the inner surface of the package main body 10 through a thermal compression (heat seal) treatment.

[0031] Next, the used wet tissue storage portion 30 will be described.

[0032] As illustrated in Figs. 1 and 3, the used wet tissue storage portion 30 is provided on the outer surface

(bottom surface 10b) side of the package main body 10.

[0033] In the first embodiment, the used wet tissue storage portion 30 is constituted of the center seal portion 13, a center seal extending portion 31 as the first seal extending portion, and the sheet member 11 constituting the bottom surface 10b of the package main body 10.

[0034] As illustrated in Figs. 1, 3 and 5, the center seal extending portion 31 extends along the bottom surface 10b of the package main body 10 and toward the other side in the width direction Wd of the package main body 10 (i.e., the side opposite to the side where the center seal portion 13 is positioned in the width direction Wd of the package main body 10). The position of the edge portion 312 of the center seal extending portion 31 substantially coincides with the position of the side edge of the other side in the width direction Wd of the bottom surface 10b of the package main body 10 in the height direction Hd of the package main body 10. The position of the pair of side portions 311 substantially coincides with the position of the pair of end seal portions 14 in the height direction Hd of the package main body 10.

[0035] As illustrated in Figs. 1 and 5, the center seal extending portion 31 is formed in such a manner that one layer of the double-layered sheet member 11 constituting the center seal portion 13 extends from the center seal portion 13 to the direction crossing the direction in which the first side edge 111 is extending (in the longitudinal direction Ld of the package main body 10).

[0036] As illustrated in Fig. 3, the pair of side portions 311 of the center seal extending portion 31 is adhered to the pair of end seal portions 14 through a hot melt adhesive agent 22 as an adhesive material.

[0037] As illustrated in Figs. 1 and 5, the edge portion 312 of the center seal extending portion 31 can be spaced apart from the bottom surface 10b of the package main body 10 except in the area of the pair of side portions 311.

[0038] Between the surface facing the bottom surface 10b side of the package main body 10 in the center seal portion 13 and the center seal extending portion 31, and the bottom surface 10b of the package main body 10, the used wet tissue storage portion 30 is formed which is capable of storing used wet tissues.

[0039] The wet tissues are formed in a substantially rectangular shape. Each of the plurality of wet tissues 20 is layered in a state of being folded into a predetermined shape and accommodated in the package main body 10 (refer to Figs. 3 and 5).

[0040] As illustrated in Fig. 2, the closure flap 21 has a shape in which one end edge in the longitudinal direction of the substantially rectangular shape is formed in an arc shape. This closure flap 21 is peelably adhered to a peripheral edge of the opening portion 12 at the top surface 10a of the package main body 10.

[0041] The closure flap 21 is constituted of those materials which are obtained by applying a re-adhesive resin, such as an acrylic resin, to the surface that is in contact with the package main body 10 of a synthetic resin film such as polyethylene, polypropylene, polyester, poly-

mide, polyvinyl chloride, or the like. Also, the closure flap 21 may have a multiple layered structure, in which two or more layers of the aforesaid synthetic resin films are layered.

[0042] Fig. 6 is a side view illustrating the use of the wet tissue package 1 according to the first embodiment.

[0043] In the wet tissue package 1 of the first embodiment, in a state where a used wet tissue 25 is not stored in the used wet tissue storage portion 30, as illustrated in Fig. 1, the center seal extending portion 31 is positioned along the bottom surface 10b of the package main body 10. In other words, the used wet tissue storage portion 30 is in the closed state.

[0044] After a user uses the wet tissue 20, the used wet tissue 25 is stored in the used wet tissue storage portion 30. To store the used wet tissue 25 in the used wet tissue storage portion 30, the user pushes the used wet tissue 25 into the space between the bottom surface 10b of the package main body 10 and the center seal extending portion 31, from the side of the edge portion 312 of the center seal extending portion 31. Then, the edge portion 312 of the center seal extending portion 31 and the bottom surface 10b of the package main body 10 are spaced from each other, which allows the used wet tissue 25 to be stored in the used wet tissue storage portion 30.

[0045] Next, with reference to Figs. 7 and 8, a description will be made of the first embodiment, which is one preferred embodiment of the method for producing the wet tissue package 1 according to the present invention. Fig. 7 is a schematic view illustrating the method for producing the wet tissue package 1 according to the first embodiment. Fig. 8 is a perspective view illustrating steps of the method for producing the wet tissue package according to the first embodiment. It should be noted that a reversed-pillow wrapping machine is taken as an example in the first embodiment, and when a normal-pillow wrapping machine is used, the inside and the outside will be reversed in all the steps.

[0046] As illustrated in Figs. 7 and 8, the method for producing the wet tissue package 1 of the first embodiment includes a feeding step S1, an opening portion forming step S2, a (closure flap) attaching step S3, a wet tissue disposing step S4, a folding back step S5, a center seal portion forming step S6 that is a first seal portion forming step, and an end seal portion forming step S7 that is a second seal portion forming step.

[0047] In the feeding step S1, the strip-shaped sheet member 11 is fed out from a feeding unit 41. Here, the strip-shaped sheet member 11 is fed out so that the sealant layer 114 thereof faces up.

[0048] In the opening portion forming step S2, in a first cutting unit 42, the opening portion 12 is formed on the strip-shaped sheet member 11.

[0049] In the attaching step S3, the hot melt adhesive agent 22 as the closure flap 21 and the adhesive material are attached from the bottom surface side of the strip-shaped sheet member 11, on which the opening portion

12 is formed. The closure flap 21 is attached by using a closure flap attaching device (not illustrated), so that the opening portion 12 is covered over. The hot melt adhesive agent 22 is intermittently discharged from a hot melt gun 46 and applied to the predetermined position at the upstream side and the downstream side of the position of the strip-shaped sheet member 11, to which the closure flap 21 is attached (i.e., the position overlapping the pair of side portions 311 of the center seal extending portion 31, described later).

[0050] As for the hot melt adhesive agent 22, it is preferable to use those which are solidified and lose adhesive property (tack property) in a short period of time after they are applied to the sheet member 11. Specifically, the hot melt adhesive agent 22 can preferably employ those having thermoplasticity, such as olefin-based or rubber-based adhesives.

[0051] In the wet tissue disposing step S4, the plurality of folded and layered wet tissues 20 are disposed on the top surface side of the strip-shaped sheet member 11, the opening portion 12 of which is covered by the closure flap 21.

[0052] In the folding back step S5, the strip-shaped sheet member 11, in a state where the wet tissues 20 are disposed on the top surface side thereof, is folded back so that the wet tissues are wrapped around with the sheet member 11. More specifically, each of the pair of first side edges 111 which is along the direction of flow of the strip-shaped sheet member 11 is folded back to a side where the wet tissues 20 are disposed (the top surface side) so that the wet tissues 20 are wrapped around.

[0053] Then, in the center seal portion forming step S6, the center seal portion 13 and the center seal extending portion 31 are formed in a first heat sealing unit 43. More specifically, in the center seal portion forming step S6, a thermal compression treatment by the first heat sealing unit 43 is applied to the strip-shaped sheet member 11 that is folded back and overlapping so that one first side edge 111 of the pair of first side edges 111 extends. With this arrangement, at the portion where the sheet member 11 is overlapping, the sheet member 11 is bonded together, in which the sealant layers 114 are fused to and overlap each other. Then, the center seal portion 13 that extends in the direction of flow of the sheet member 11 is formed at the overlapping portion of sheet member 11. Also, the center seal extending portion 31 is formed with a layer of the sheet member 11 extending from the center seal portion 13.

[0054] Here, as illustrated in Fig. 8, the center seal portion 13 is formed at a position off the center in the direction crossing the direction of flow of the strip-shaped sheet member 11 (width direction). Also, in a state where the center seal portion 13 and the center seal extending portion 31 are formed through the center seal portion forming step S6, the upstream side and the downstream side in the direction of flow of the sheet member 11 are open (refer to Fig. 8).

[0055] In the end seal portion forming step S7, the pair

of end seal portions 14 and the used wet tissue storage portion 30 are formed in a second heat sealing unit 44. More specifically, in the end seal portion forming step S7, a thermal compression treatment is applied by the second heat sealing unit 44 to the strip-shaped sheet member 11 where the center seal portion 13 and the center seal extending portion 31 are formed, at the upstream side and the downstream side of the portion where the wet tissues 20 are disposed so that the treatment to each side extends in the width direction of sheet member 11. Here, as illustrated in Fig. 8, the hot melt adhesive agent 22 is applied to the position of the sheet member 11, to which the thermal compression treatment is to be applied by the second heat sealing unit 44 (the position overlapping the pair of side portions 311, described later).

[0056] With this arrangement, open portions in the upstream side and the downstream side in the direction of flow of the sheet member 11 are bonded to form the pair of end seal portions 14, and thereby forming the package main body 10. Furthermore, the hot melt adhesive agent 22 that is applied to the pair of side portions 311 is molten by the thermal compression treatment in the second heat sealing unit 44. With this molten hot melt adhesive agent 22, the pair of side portions 311 of the center seal extending portion 31 is adhered to the pair of end seal portions 14 (refer to Fig. 4).

[0057] As a result, the center seal extending portion 31 is sloped towards the other side in the width direction of the sheet member 11 (i.e., the side opposite to the side where the center seal portion 13 is formed) and disposed along the bottom surface 10b of the package main body 10.

[0058] In this way, the center seal portion 13, the center seal extending portion 31, and the bottom surface 10b of the package main body 10 configure the used wet tissue storage portion 30.

[0059] Also, in the end seal portion forming step S7, a series of wet tissue packages 1, each of which has the pair of end seal portion 14 and the used wet tissue storage portion 30, is cut in a second cutting unit 45, and a wet tissue package 1 is produced. More specifically, the series of wet tissue packages 1 is cut in the width direction at the portion where the end seal portion 14 is formed.

[0060] In the end seal portion forming step S7, the thermal compression treatment by the second heat sealing unit 44 and the cutting by the second cutting unit 45 are substantially simultaneously executed. Furthermore, it is desirable that the cutting by the second cutting unit 45 is executed in the portions of the pair of end seal portions 14 to which the hot melt adhesive agent 22 is not applied.

[0061] According to the above described method for producing the wet tissue package 1, the following advantages are achieved.

(1) Through the center seal portion forming step S6, the center seal portion 13 and the center seal extending portion 31 are formed. Through the end seal

portion forming step S7, the end seal portion 14 is formed and the used wet tissue storage portion 30 is formed by the center seal portion 13, the center seal extending portion 31, and the bottom surface 10b of the package main body 10. Therefore, with no separate step of forming the used wet tissue storage portion 30, it is possible to produce the wet tissue package 1 having the used wet tissue storage portion 30, which improves the production efficiency of the wet tissue package 1. Further, since the used wet tissue storage portion 30 can be sealed with the center seal portion 13 and the pair of end seal portions 14, it is possible to prevent wet tissues 20 accommodated in the package main body 10 from drying out.

(2) The hot melt adhesive agent 22 that is used for adhering the pair of end seal portions 14 to the center seal extending portion 31 in the end seal portion forming step S7 is attached to the sheet member 11 with the hot melt gun 46 in the attaching step S3, in which the closure flap 21 is attached. With this arrangement, the hot melt adhesive agent 22 can be applied to the sheet member 11 utilizing the step of attaching the closure flap 21. Therefore, with no separate step of attaching the hot melt adhesive agent 22 to the sheet member 11, it is possible to form the used wet tissue storage portion 30, in which the pair of end seal portions 14 and the pair of side portions 311 of the center seal extending portion 31 are adhered together.

(3) As an adhesive material, the hot melt adhesive agent 22 is used. With this arrangement, in the attaching step S3, it is possible to cause the adhesive material that is applied to the sheet member 11 to become solid and lose the tackiness in a short period of time. Therefore, in the steps from the attaching step S3 to the end seal portion forming step S7, it is possible to prevent adhering of the adhesive material to the processing equipment, which further improves the production efficiency of the wet tissue package 1.

(4) The center seal portion 13 is disposed at a position off the center of the bottom surface 10b of the package main body 10. With this arrangement, the volume of the used wet tissue storage portion 30 including the center seal extending portion 31 can be increased, and thus a larger volume of used wet tissues can be accommodated.

(5) The sheet member 11 is constituted of two layers, i.e., the barrier layer 113 and the sealant layer 114, and the sealant layer 114 constitutes the package main body 10 as an inner surface. With this arrangement, it is possible to facilitate the formation of the center seal portion 13 and the end seal portion 14 by a thermal compression treatment. Therefore, with no separate use of tackiness agents, adhesives, or the like, the center seal portion 13 and the end seal portion 14 can be formed, and an effective production of the wet tissue package 1 is thus achieved.

[0062] Next, with reference to Fig. 9, a description will be made of a second embodiment of the method for producing the wet tissue package according to the present invention. Fig. 9 is a perspective view illustrating the steps of the method for producing the wet tissue package according to the second embodiment. It should be noted that in the description of the second embodiment, the same reference numbers are link to the same construction requisites and so explanations thereof are omitted or simplified.

[0063] In the method for producing the wet tissue package according to the second embodiment, the adhesive material used in the attaching step S3 differs from the first embodiment.

[0064] In the second embodiment, in the attaching step S3, an adhesive tape 22A is used as the adhesive material. The adhesive tape 22A includes a sheet material and a tackiness agent applied to the surface that is in contact with the sheet member 11 of the sheet material. Since the sheet material is required to have thermal adhesive properties, the resin used for the sealant layer will be used. Further, the tackiness agent that is applied is not necessarily to be re-peelable, and it is preferable to use an acrylic-based or rubber-based tackiness agent.

[0065] The adhesive tape 22A is attached to the sheet member 11 by the closure flap attaching device for attaching the closure flap 21 to the sheet member 11 simultaneously with the closure flap 21.

[0066] According to the method for producing the wet tissue package of the second embodiment, in addition to the above described advantages (1), (2), (3), (4), and (5), the following advantages are achieved.

(6) The adhesive tape 22A is used as an adhesive material. With this arrangement, the adhesive tape 22A can be attached to the sheet member 11 simultaneously with the closure flap 21 by the closure flap attaching device. Therefore, the adhesive tape 22A can be attached to the sheet member 11 utilizing an existing closure flap attaching device, which further improves the production efficiency of the wet tissue package 1.

Furthermore, by using the adhesive tape 22A that is formed in a uniform thickness as the adhesive material, it is possible to make the thickness of the adhesive material to be attached to the sheet member 11 uniform. Therefore, the sheet member 11 can be stably adhered at the pair of end seal portions, which further enhances the quality of the wet tissue package.

(7) The adhesive tape 22A includes a sheet material having thermal adhesive properties. With this arrangement, in the attaching step S3, it is possible to be in a state where an outer surface side of the adhesive tape 22A that is attached to the sheet member 11 has no adhesive properties in an unheated state. Therefore, in the steps from the attaching step S3 to the end seal portion forming step S7, it is possible

to prevent adhering of the adhesive tape 22A to the processing equipment, which further improves the production efficiency of the wet tissue package 1.

[0067] Although the preferred embodiments of the method for producing the wet tissue package of the present invention have been described above, the present invention is not limited thereto and can be implemented in various modes.

[0068] For example, in the first embodiment and the second embodiment, the center seal portion 13 is disposed at a position off the center in the width direction Wd of the package main body 10. However, the present invention is not limited thereto. In other words, as illustrated in Fig. 10, the center seal portion 13 may be formed at a position close to the side edge of the package main body 10. Also, as illustrated in Fig. 11, the center seal portion 13 may be formed on a side surface of the package main body 10.

[0069] Furthermore, although in the first embodiment and the second embodiment, the center seal extending portion 31 is constituted by extending a single layer of the sheet member 11 from the center seal portion 13, the present invention is not limited thereto. In other words, as illustrated in Fig. 12, the center seal extending portion 31 may be constituted by extending double layers of the sheet member 11 from the center seal portion 13.

[0070] Furthermore, in the first embodiment and the second embodiment, the present invention is applied to the wet tissue package having a rectangular plan view shape. However, the present invention is not limited thereto. In other words, the present invention may be applied to the wet tissue package having a square plan view shape.

[0071] Furthermore, in the first embodiment and the second embodiment, in the center seal portion forming step S6, the center seal portion 13 is formed at a position off the center in the width direction of the sheet member 11. However, this invention is not limited thereto. In other words, the center seal portion may be formed at the central portion in the width direction of the sheet member.

[0072] Furthermore, in the first embodiment and the second embodiment, in the attaching step S3, the adhesive material is attached to the upstream side and the downstream side of the position in the sheet member 11, to which the closure flap 21 is attached (the both sides of the pair of side portions 311 of the center seal extending portion 31). However, the present invention is not limited thereto. In other words, in the attaching step S3, the adhesive material may only be attached to either the upstream side or to the downstream side of the position on the sheet member 11 to which the closure flap 21 is attached.

Claims

1. A method for producing a wet tissue including: a

package main body in which a plurality of wet tissues is accommodated, an opening portion that is formed on the package main body, a lid member that is attached to an outer surface of the package main body to cover the opening portion, and a used wet tissue storage portion that is capable of storing a used wet tissue therein, 5
the method comprising steps of:

forming the opening portion on a strip-shaped sheet member; 10
attaching the lid member to the sheet member in a manner so that the opening portion is covered from a top surface side or a bottom surface side of the sheet member, and attaching an adhesive material to an upstream side and/or a downstream side of a position to which the lid member is attached; 15
disposing the plurality of wet tissues on a surface of the strip-shaped sheet member at a side to which the lid member and the adhesive material are not attached; 20
folding back each of a pair of side edges along a direction of flow of the sheet member with the plurality of wet tissues being disposed, to a side where the plurality of wet tissues is disposed so as to wrap around the plurality of wet tissues; 25
forming a first seal portion that extends in the direction of flow of the sheet member and a first seal extending portion that extends from the first seal portion to a direction crossing a direction in which the pair of side edges extends by bonding the pair of side edges of the folded sheet member with each other; and 30
forming a pair of second seal portions by bonding an upstream side and a downstream side of a position where the plurality of wet tissues is disposed on the sheet member following the step of forming the first seal portion in such a manner as to extend in a width direction of the sheet member, and forming the used wet tissue storage portion by bonding the second seal portions with the first seal extending portion by means of the adhesive material. 40

45

2. The method for producing the wet tissue package according to Claim 1, wherein 50
in the step of forming the first seal portion, the first seal portion is formed at a position off a center in the width direction of the sheet member.
3. The method for producing the wet tissue package according to Claim 1 or 2, wherein 55
in the step of attaching the lid member, a hot melt adhesive agent is used as the adhesive material.
4. The method for producing the wet tissue package according to Claim 1 or 2, wherein

an adhesive tape is used as the adhesive material in the step of attaching the lid member, the adhesive tape including a thermoplastic sheet material, and a tackiness agent that is applied to the surface of the sheet material, with which the sheet member is in contact.

FIG. 1

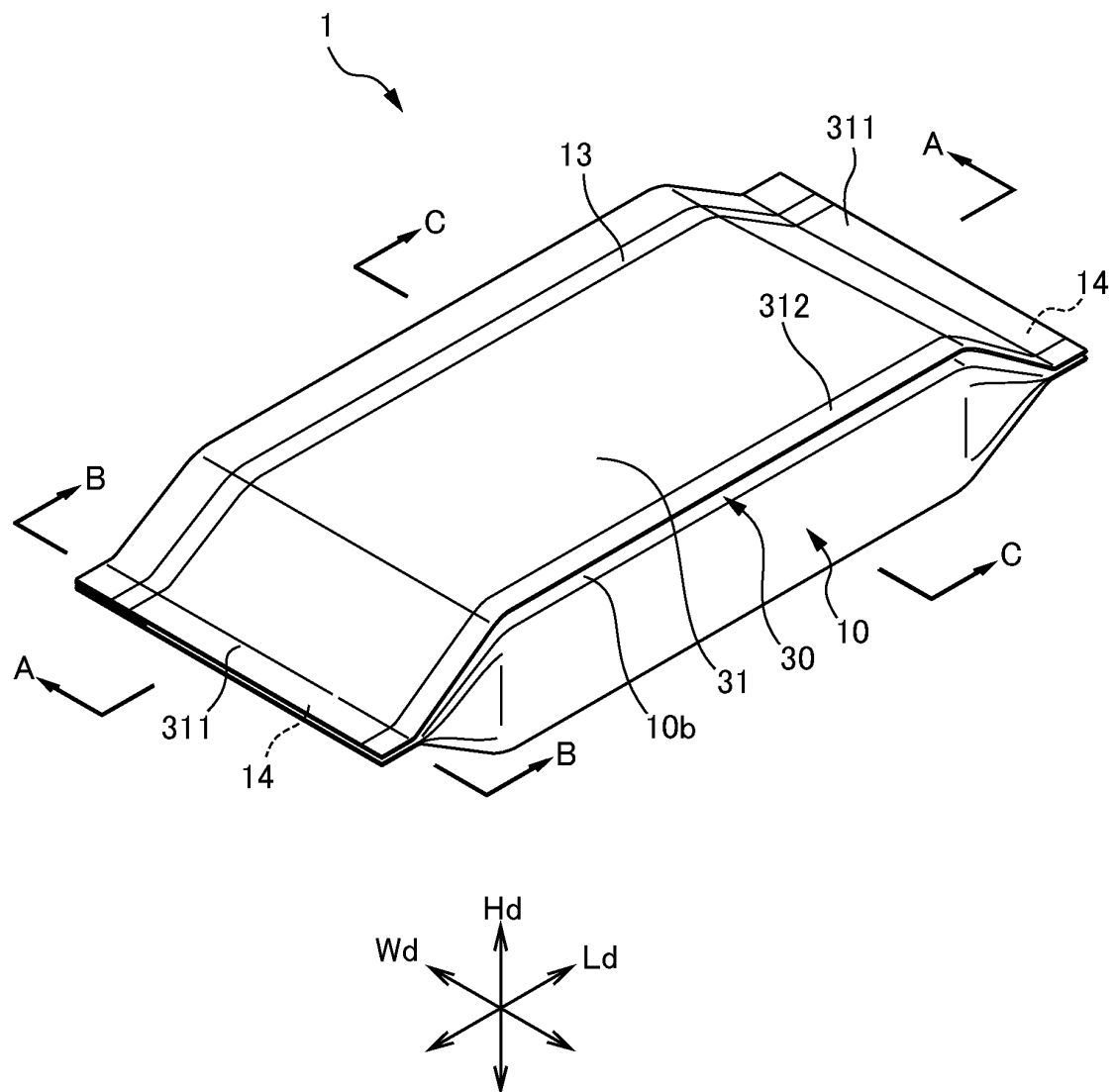


FIG. 2

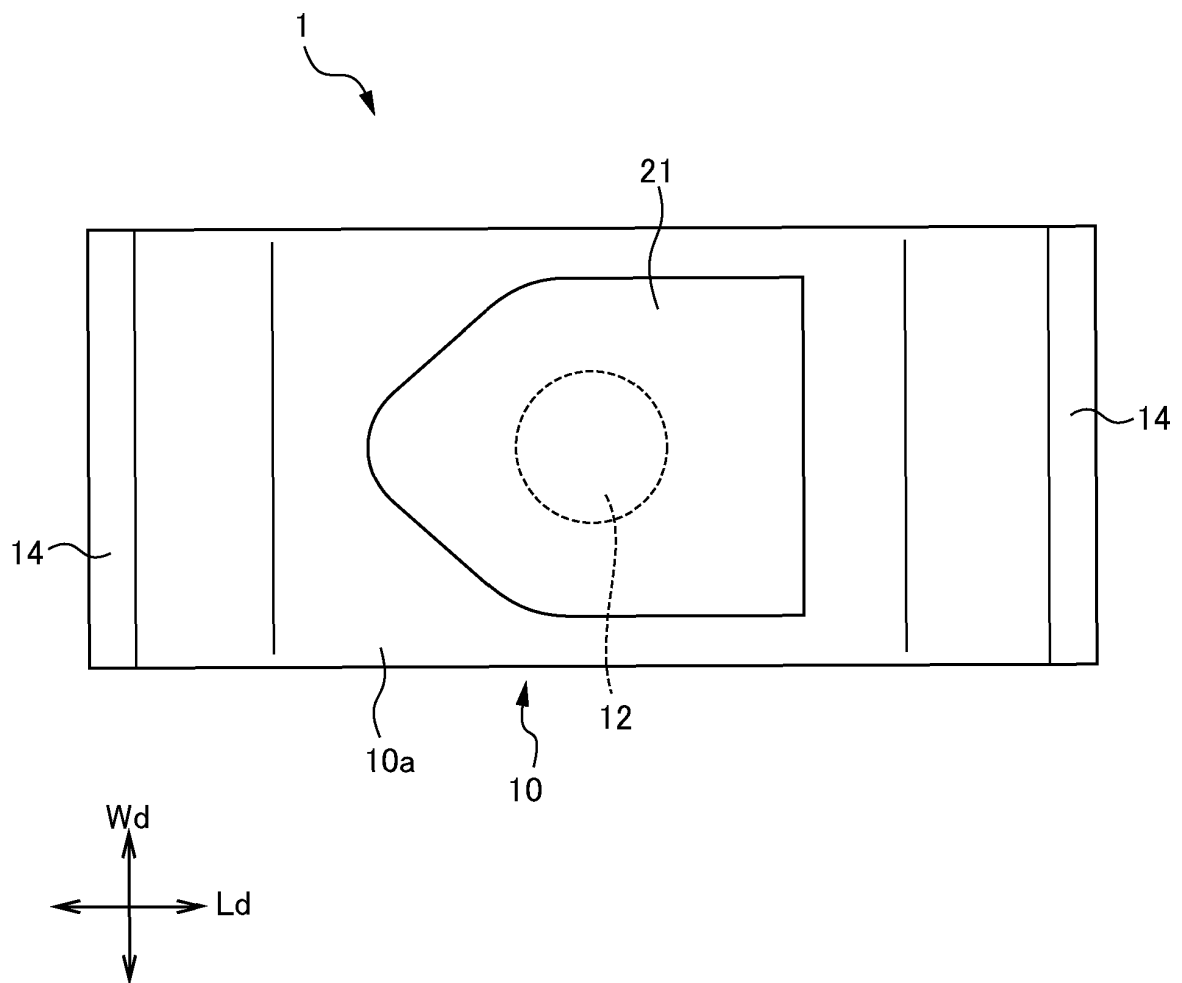


FIG. 3

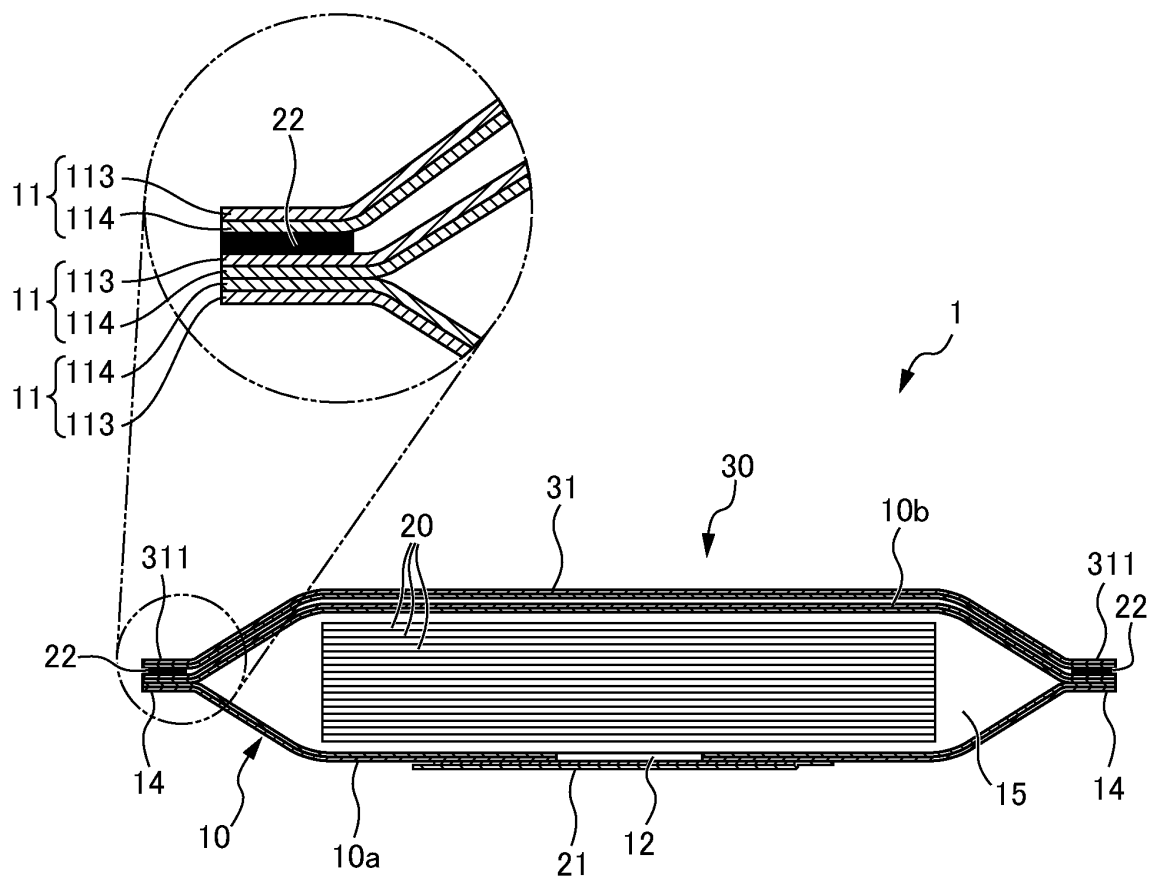


FIG. 4

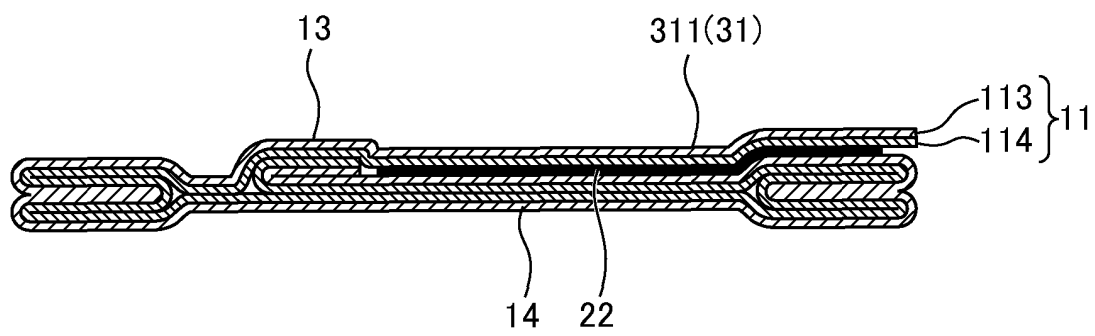


FIG. 5

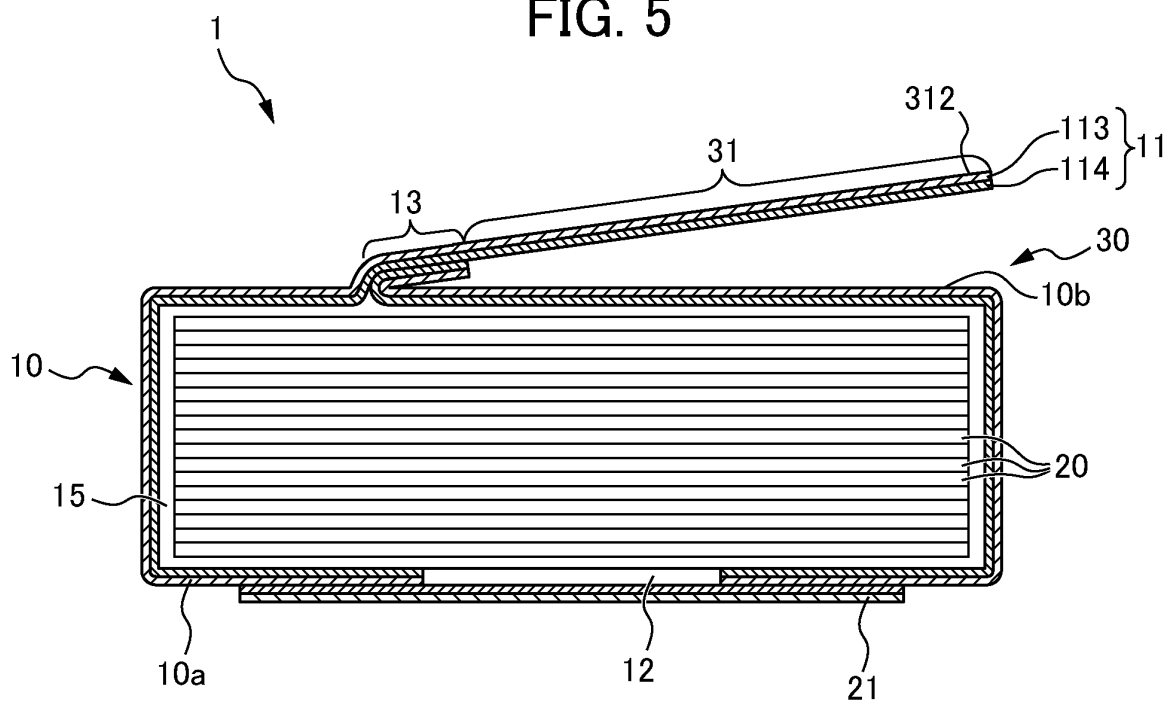


FIG. 6

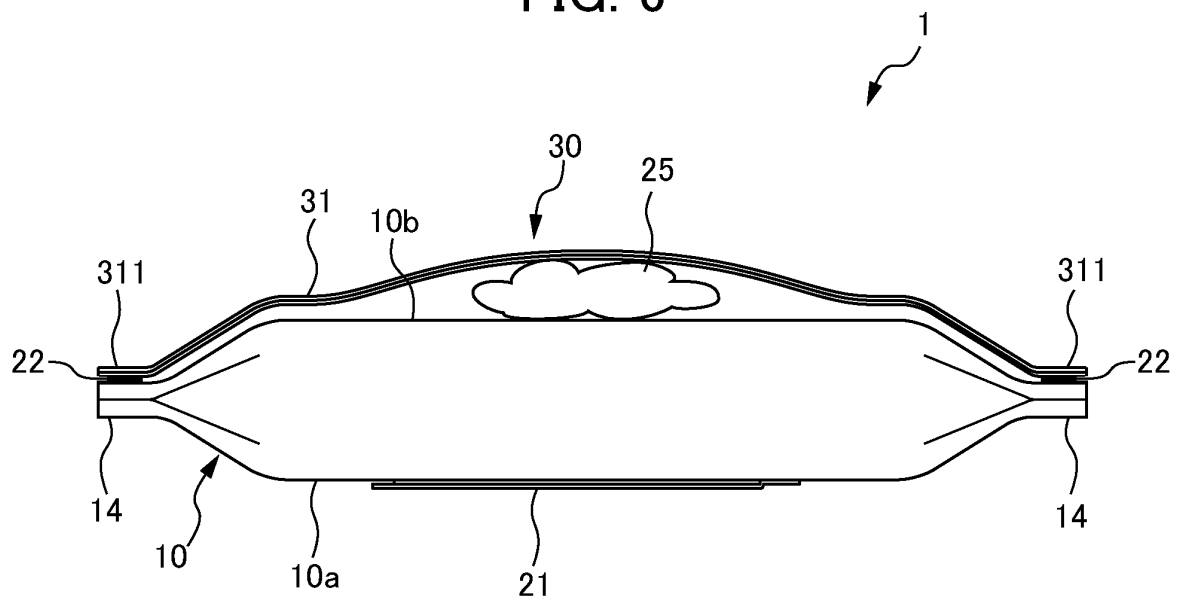


FIG. 7

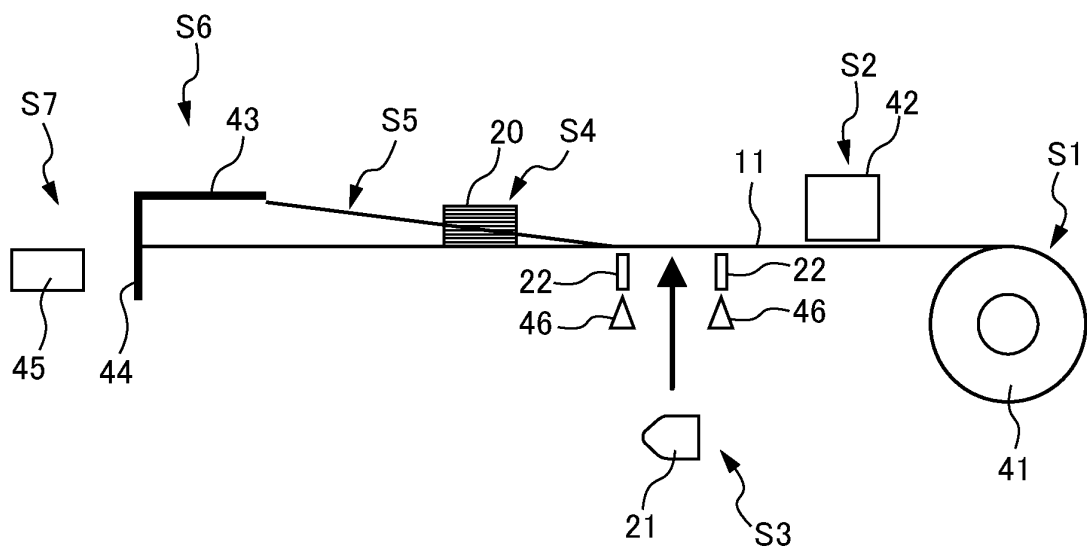


FIG. 8

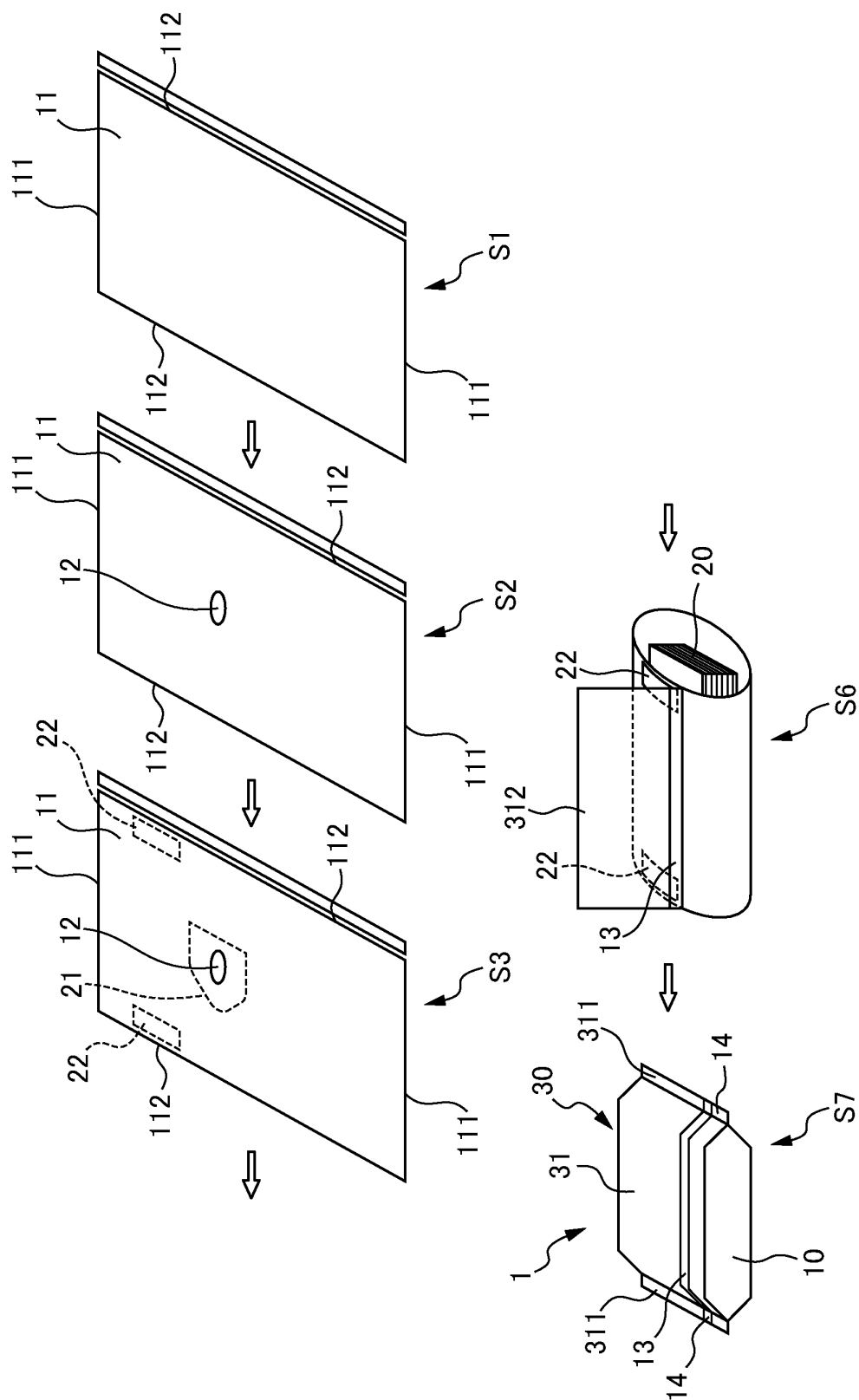


FIG. 9

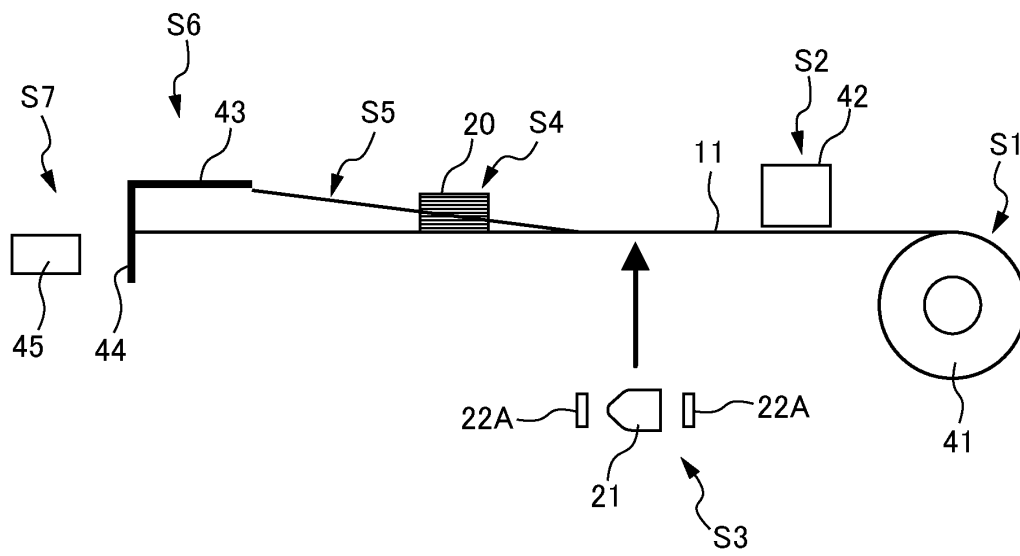


FIG. 10

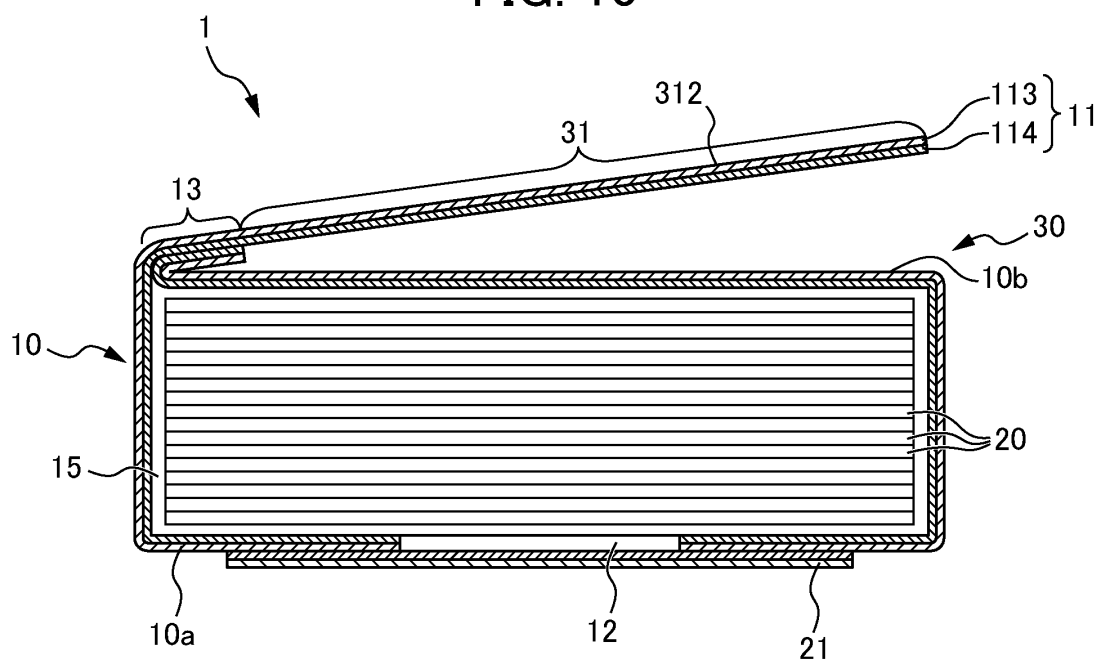


FIG. 11

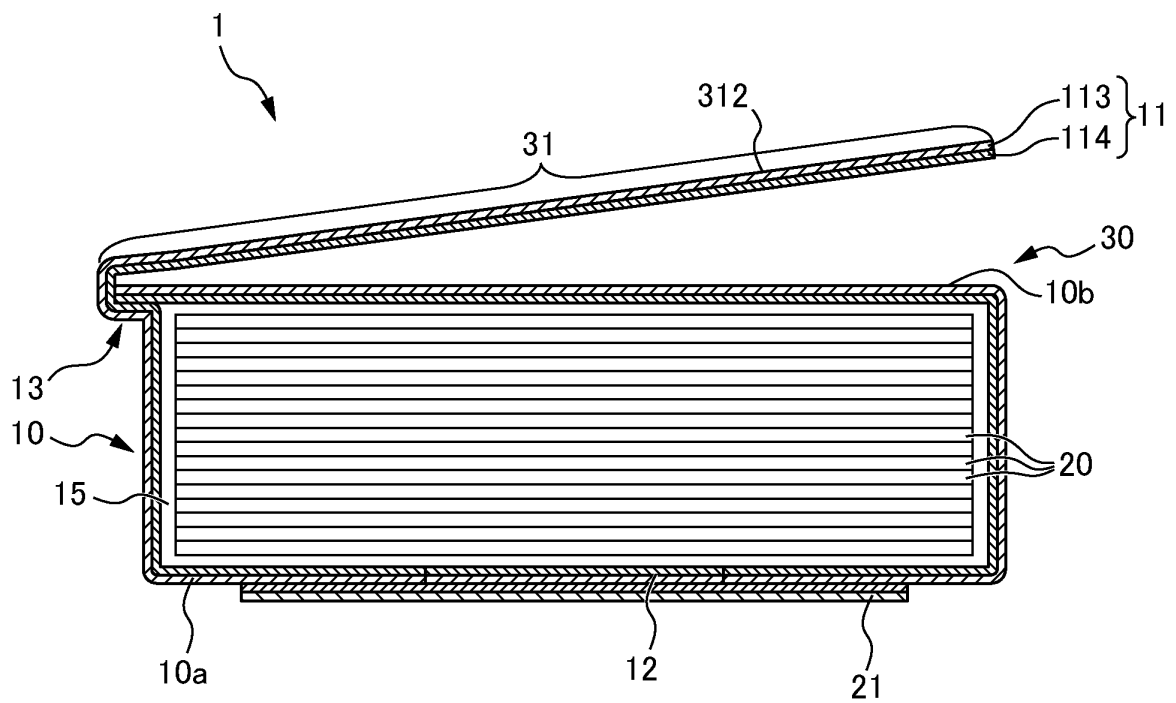
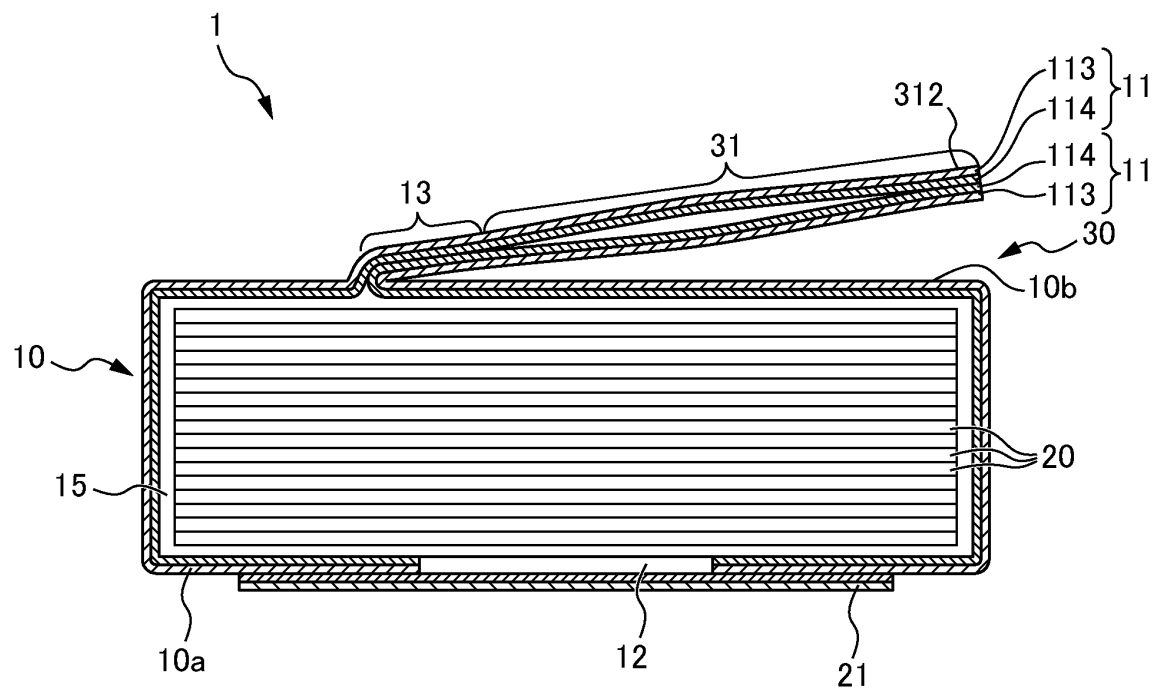


FIG. 12



INTERNATIONAL SEARCH REPORT

International application No.

PCT/JP2012/056467

A. CLASSIFICATION OF SUBJECT MATTER

B65B11/12(2006.01)i, B65B25/14(2006.01)i, B65D83/08(2006.01)n

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

B65B11/12, B65B25/14, B65D83/08

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Jitsuyo Shinan Koho	1922-1996	Jitsuyo Shinan Toroku Koho	1996-2012
Kokai Jitsuyo Shinan Koho	1971-2012	Toroku Jitsuyo Shinan Koho	1994-2012

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	JP 2004-196303 A (Meisei Sansho Kabushiki Kaisha), 15 July 2004 (15.07.2004), paragraphs [0021] to [0027]; fig. 1 to 5 (Family: none)	1-4
Y	JP 8-40407 A (Kenji NAKAMURA), 13 February 1996 (13.02.1996), paragraphs [0037], [0048] (Family: none)	1-4

☐ Further documents are listed in the continuation of Box C.☐ See patent family annex.

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"I" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search
04 June, 2012 (04.06.12)Date of mailing of the international search report
26 June, 2012 (26.06.12)Name and mailing address of the ISA/
Japanese Patent Office

Authorized officer

Facsimile No.

Telephone No.

Form PCT/ISA/210 (second sheet) (July 2009)

REFERENCES CITED IN THE DESCRIPTION

This list of references cited by the applicant is for the reader's convenience only. It does not form part of the European patent document. Even though great care has been taken in compiling the references, errors or omissions cannot be excluded and the EPO disclaims all liability in this regard.

Patent documents cited in the description

- JP 3079883 B [0006]