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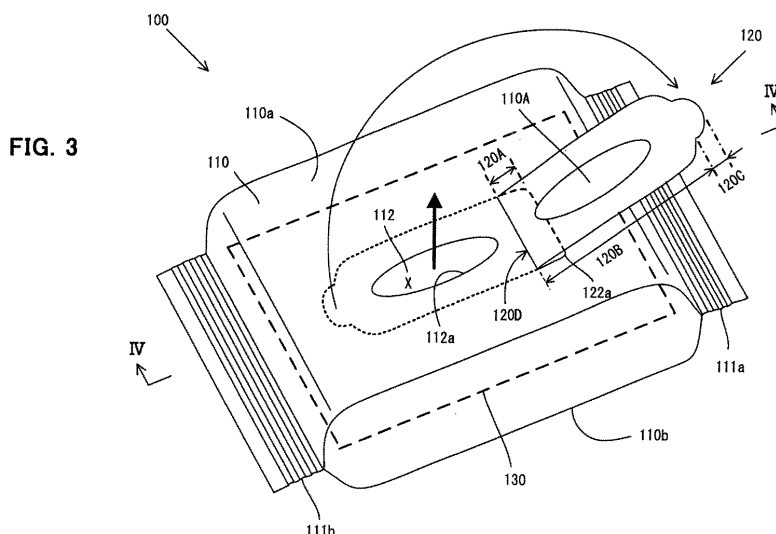
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(54) **PACKAGE BODY**

(57) It is an object of the invention to provide a technique which can prevent the occurrence of a wrinkle or bend in a lid which opens and closes an opening of a package. A body 110 of a package 100 has an opening 112 through which wet tissues 130 are taken out. A lid 120 of the package 100 has an opening-closing portion

120B formed by a laminated portion of a first sheet 121 and a second sheet 122, and a proximal portion 120A formed by a portion of the second sheet 122 which protrudes from the first sheet 121. A corner 122a of the proximal portion 120A of the lid 120 on the side opposite to the opening-closing portion 120B is rounded. The corner 122a may be chamfered.



Description

BACKGROUND OF THE INVENTION

Field of the Invention

[0001] The present invention relates to a package for storing an article for dispensation and more particularly, to a package manufactured with improved workability.

Description of the related Art

[0002] Various kinds of wet tissues are available which are formed by a sheet-type fibrous material, such as tissue paper and nonwoven fabric, and impregnated with liquid such as chemicals, skin lotion and alcohol. Generally, such wet tissues are stored in a package formed of a flexible material. The package includes a body having a wet-tissue storage space in which an article is stored and an opening through which the article is taken out of the article storage space, and a lid for opening and closing the opening of the body. The lid is bonded to a top of the body by an adhesive such that it can be repeatedly peeled off. Japanese non-examined laid-open Patent Publication No. 11-268783 discloses a package having a lid which includes a body portion in which a first sheet and a second sheet are stacked and an extended portion in which only the second sheet is extended.

SUMMARY OF THE INVENTION

[0003] In the lid of the known package, only the second sheet forming the extended portion is extended from the body portion in which the first and second sheets are stacked. During manufacturing such a package, a wrinkle may occur in the second sheet of the lid.

It is, accordingly, an object of the invention to provide a technique for manufacturing a package with improved workability.

[0004] In one aspect of the present invention, a package is provided with a body and a lid. The body of the package has an article storage space in which an article is stored and an opening through which the article is taken out of the article storage space. The body of the package is formed, for example, of a laminate film, or typically a heat-sealing film. The article to be stored in the body of the package includes a wet tissue formed by impregnating a sheet-type base material made of a fibrous material with liquid.

The lid of the body has an opening-closing portion that covers the opening of the body and a proximal portion that extends from the opening-closing portion. The opening-closing portion of the lid has a larger area than the opening of the body. The lid is formed by stacking a second sheet which is larger than a first sheet, on top of the first sheet. The opening-closing portion of the lid is formed by a laminated portion of the first and second sheets, and the proximal portion of the lid is formed by a portion of

the second sheet which protrudes from the first sheet. The second sheet preferably has a lower flexural rigidity than the first sheet. The lid is bonded to a top of the body by an adhesive applied to one side of the lid. One side of the lid comprises a side of the first sheet forming the opening-closing portion which faces away from the second sheet and a side of the second sheet forming the proximal portion which faces the first sheet. At this time, preferably, the proximal portion is bonded to an area in which the opening is not formed, and the opening-closing portion is bonded in a position in which it covers the opening. Further, typically, the second sheet is bonded to the first sheet and to the top of the body of the package by a second adhesive which is applied to one side of the second sheet. The first sheet is bonded to the top of the body of the package by a first adhesive which is applied to a side of the first sheet which faces away from the second sheet (one side of the first sheet). In this case, an adhesive having a higher adhesive strength than the first adhesive is preferably used as the second adhesive. In a construction in which the opening-closing portion of the lid is formed by a laminated portion of the first and second sheets, and the proximal portion of the lid is formed by a portion of the second sheet which protrudes from the first sheet, a corner of the proximal portion on the side opposite to the opening-closing portion has a lower rigidity. Particularly, a corner having a pointed shape (such as a square shape) has a much lower rigidity. As a result, the corner may warp or bend by a force acting upon the corner of the proximal portion during manufacturing of the package. If the lid having such a warp or bend in the corner of the proximal portion is bonded to the top of the body, a wrinkle will occur in the second sheet of the lid.

In this invention, in order to prevent the occurrence of a wrinkle in the second sheet of the lid, the corner of the proximal portion of the lid on the side opposite to the opening-closing portion is rounded. By thus shaping the corner of the proximal portion, the rigidity of the corner can be made higher, so that the corner can be prevented from warping or bending by the force acting upon the proximal portion. The radius of curvature of the corner of the proximal portion is set to an appropriate value according to the length and the width of the proximal portion, the thickness of the first sheet forming the opening-closing portion, or other similar factors, such that the occurrence of a wrinkle in the second sheet of the lid can be prevented. Preferably, the radius of curvature of the corner is set to 1.5 mm at the minimum. The maximum radius of curvature of the corner of the proximal portion is determined according to the length or strength of the proximal portion or other similar factors.

In this invention, the thickness of the lid of the package changes at a boundary between the opening-closing portion and the proximal portion. Thus, when the opening-closing portion of the lid is peeled off the top of the body and turned over toward the proximal portion, the boundary between the opening-closing portion and the proximal

portion functions as a hinge. Therefore, when the opening-closing portion of the lid is turned over toward the proximal portion, the proximal portion of the lid can be prevented from being peeled off together with the opening-closing portion. Further, when the opening-closing portion of the lid is turned over toward the proximal portion, the opening-closing portion is held tilted toward the proximal portion under its own weight. As a result, the user can perform the opening or closing operation of the opening-closing portion of the lid and the operation of taking out the article by one hand. Further, due to the rounded shape of the corner of the proximal portion of the lid on the side opposite to the opening-closing portion, the rigidity of the corner becomes higher, so that the corner can be prevented from warping or bending by the force acting upon the corner. As a result, the occurrence of a wrinkle in the second sheet (the proximal portion) of the lid can be prevented, so that a package can be manufactured with improved workability.

[0005] In another aspect of the invention, in order to prevent the occurrence of a wrinkle in the second sheet of the lid, the corner of the proximal portion of the lid on the side opposite to the opening-closing portion is chamfered by cutting off a tip end portion of a square (for example, right-angled) corner in a predetermined chamfering dimension at a predetermined chamfering angle. The chamfering angle is an angle of a cutting face with respect to one of the edges which form the corner, and the chamfering dimension is a distance between a cutting point and the tip end of the corner. By chamfering the corner of the proximal portion, the rigidity of the corner becomes higher, so that the proximal portion can be prevented from warping or bending by the force acting upon the proximal portion. For chamfering the corner of the proximal portion, the chamfering angle and the chamfering dimension are set to appropriate values according to the length and the width of the proximal portion, the thickness of the first sheet forming the opening-closing portion, or other similar factors, such that the rigidity of the proximal portion of the lid can be made higher and thus the occurrence of a wrinkle in the second sheet of the lid can be prevented. Preferably, the chamfering angle is set to 45 degrees (or about 45 degrees) and the chamfering dimension is set to 1.5 mm at the minimum. The maximum chamfering dimension is determined according to the length or strength of the proximal portion or other similar factors.

In this invention, like in the first aspect of the invention, the boundary between the opening-closing portion and the proximal portion functions as a hinge. Therefore, when the opening-closing portion of the lid is turned over toward the proximal portion, the proximal portion of the lid can be prevented from being peeled off together with the opening-closing portion. Further, the opening-closing portion is held tilted toward the proximal portion, so that the user can perform the opening or closing operation of the opening-closing portion of the lid and the operation of taking out the article by one hand. Further, due to the

chamfered corner of the proximal portion of the lid on the side opposite to the opening-closing portion, the rigidity of the corner becomes higher, so that the corner can be prevented from warping or bending by the force acting upon the corner. As a result, the occurrence of a wrinkle in the second sheet of the lid can be prevented, so that a package can be manufactured with improved workability.

[0006] According to this invention, the proximal portion of the lid can be prevented from being peeled off the top of the body, and the opening or closing operation of the opening-closing portion of the lid and the operation of taking out the article can be performed by one hand of the user. Further, the occurrence of a wrinkle in the second sheet of the lid can be prevented, so that the workability can be improved.

BRIEF DESCRIPTION OF THE DRAWINGS

[0007]

FIG. 1 is a perspective view showing a package according to an embodiment of the present invention, with an opening closed.

FIG. 2 is a sectional view taken along line II-II in FIG. 1.

FIG. 3 is a perspective view showing the package according to the embodiment of the present invention, with an opening opened.

FIG. 4 is a sectional view taken along line IV-IV in FIG. 3.

FIG. 5 is a view for illustrating a problem of a lid of a package in which a proximal portion has a square corner.

FIG. 6 is a view for illustrating a problem of a lid of a package in which a proximal portion has a square corner.

FIG. 7 shows a lid of the package according to the embodiment of the present invention.

FIG. 8 shows a lid of the package according to another embodiment of the present invention.

DETAILED DESCRIPTION OF THE INVENTION

[0008] A package 100 for storing wet tissues 130 for dispensation is now explained as a representative embodiment of the present invention.

Wet tissues 130 mean a sheet-type base material made of a fibrous material (cf. nonwoven fabric, gauze, cotton sheet, tissue paper) and impregnated with liquid (cf. alcohol, antiseptic solution, skin lotion). The wet tissues 130 are features that correspond to the "article" according to this invention.

[0009] The construction of the package 100 of this embodiment is explained with reference to FIGS. 1 to 4. FIG. 1 is a perspective view showing the package 100 with an opening 112 closed, and FIG. 2 is a sectional view taken along line II-II in FIG. 1. FIG. 3 is a perspective view

showing the package 100 with the opening 112 opened, and FIG. 4 is a sectional view taken along line IV-IV in FIG. 3.

The package 100 includes a body 110 and a lid 120. The body 110 and the lid 120 are features that correspond to the "body of the package" and the "lid of the package", respectively, according to this invention.

[0010] The body 110 of the package 100 is formed by an upper wall 110a and a bottom wall 110b and has a wet-tissue storage space 110H in which the wet tissues 130 are stored. Further, the body 110 of the package 100 has the opening 112 which is formed in the upper wall 110a such that the wet tissues 130 can be taken out of the wet-tissue storage space 110H through the opening. Here, the side of the body in which the opening 112 is formed is referred to as the "upper wall". The wet-tissue storage space 110H and the opening 112 are features that correspond to the "article storage space" and the "opening of the body of the package through which the article is taken out of the article storage space", respectively, according to this invention.

The wet tissues 130 are stored in the wet-tissue storage space 110H in such a manner as to be taken out one by one through the opening 112. Preferably, the wet tissues 130 are stored such that, when a first wet tissue 130 is taken out through the opening 112, an underlying second wet tissue 130 is partially exposed outward through the opening 112. For example, the wet tissues 130 are individually folded in two and stacked one on the other in such orientation that a folding direction of the wet tissues 130 is alternately reversed. Then, an end of a lower half (in the laminated state) of a wet tissue 130 is located below an end of an upper half (in the laminated state) of an underlying wet tissue 130.

[0011] The body 110 of the package 100 is formed, for example, of a film which can be fusion bonded by heating or heat-sealed (which film is referred to as a "heat-sealing film"). Typically, the body 110 of the package 100 is formed by wrapping the wet tissues 130 with a heat-sealing film, pressing and heating a longitudinal sealing part (not shown) and lateral sealing parts 111a, 111b in which the heat-sealing film edges are overlapped with each other, so that the heat-sealing film edges are bonded at the longitudinal sealing part and the lateral sealing parts 111a, 111b. The longitudinal sealing part is formed on the underside of the body 110 along the direction in which the heat-sealing film is fed during manufacturing of the package 100. The lateral sealing parts 111a, 111b are formed on front and rear ends or opposite ends of the heat-sealing film in the direction in which the heat-sealing film is fed during manufacturing of the package 100, and extend along a direction perpendicular to the feed direction.

Various kinds of films which can be fusion bonded by heating or heat-sealed can be used as the heat-sealing film for forming the body 110 of the package 100. In this embodiment, in which the heat-sealing film is used for packing the wet tissues 130, it is preferable to use one

that can hold the wet tissues 130 in wet condition (or prevent drying). For example, a laminate film is used which includes a protective layer made of polyethylene terephthalate (PET) resin, a moisture keeping layer (drying prevention layer) made of aluminum, and a heat-sealing layer made of biaxial oriented polypropylene resin. In order to form the body 110 by using such a heat-sealing film, edges of the heat-sealing film are laid one on top of the other such that portions of the heat-sealing layer (biaxial oriented polypropylene resin layer) which are located at the longitudinal and lateral sealing parts are opposed to each other. Thus, when the longitudinal and lateral sealing parts are heated, the opposed upper and lower portions of the heat-sealing layer (biaxial oriented polypropylene resin layer) are melted and bonded together at the sealing parts. The protective layer may be omitted. Further, the moisture keeping layer (drying prevention layer) is not limited to an aluminum layer, but includes any layers which can hold the wet tissues 130 in wet condition within the wet-tissue storage space 110H. The heat-sealing layer is not limited to a biaxial oriented polypropylene resin layer, but includes any layers which can be heat-sealed.

[0012] In this embodiment, the heat-sealing film which forms the body 110 has perforations along an opening edge 112a in a portion corresponding to the upper wall 110a of the body 110. An opening formation part 110A of the heat-sealing film which is bordered by the perforations (the opening edge 112a) is peeled off the body 110 when an opening-closing portion 120B of the lid 120 bonded to the top of the body 110 is peeled off the body 110 for the first time, which will be described below in further detail. Thus, the opening 112 is formed in the upper wall 110a of the body 110 by peeling off the opening formation part 110A from the body 110.

The opening 112 (the opening edge 112a) can have various shapes which allow the wet tissues 130 to be taken out of the wet-tissue storage space 110H, such as an elliptical shape having major and minor axes, a circular shape and a rectangular shape. In this embodiment, the opening 112 (the opening edge 112a) having an elliptical shape is formed in the body 110. The elliptical shape of the opening 112 is formed such that the major axis runs in the longitudinal direction of the body 110 (in the direction in which the longitudinal sealing part extends) and the minor axis runs in a direction perpendicular to the longitudinal direction of the body 110 (in the direction in which the lateral sealing parts extend).

Further, a heat-sealing film having the opening 112 formed in advance may also be used to form the body 110.

[0013] The lid 120 of the package 100 includes the opening-closing portion 120B, a proximal portion 120A extending from one end of the opening-closing portion 120B, and a tab portion (tip) 120C extending from the other end of the opening-closing portion 120B (which faces away from the proximal portion 120A). The opening-closing portion 120B has a larger area than the opening

112 of the body 110. The lid 120 is bonded to the top of the upper wall 110a of the body 110 by an adhesive which is applied to one side of the lid. At this time, the proximal portion 120A is bonded to a portion of the upper wall in which the opening 112 is not formed, and the opening-closing portion 120B is bonded in a position in which it covers the opening 112. The tab portion 120C is used as a tab for opening and closing the opening-closing portion 120B. Therefore, preferably, an adhesive is not applied to the tab portion 120C. It is suitable to use an adhesive which can bond at least the opening-closing portion 120B to the top of the upper wall 110a of the body 110 such that the opening-closing portion 120B can be repeatedly peeled off. For example, a pressure sensitive adhesive is used.

[0014] In order to take out a wet tissue 130 from the wet-tissue storage space 110H, the tab portion 120C of the lid 120 is picked up and the opening-closing portion 120B is peeled off the top of the upper wall 110a of the body 110. Then the opening-closing portion 120B is turned over toward the proximal portion 120A in order to open the opening 112. In this state, when the tab portion 120c is released, the wet tissues 130 cannot be taken out if the opening-closing portion 120B tilts toward the top of the upper wall 110a of the body 110 by the resiliency of the lid 120. In this case, it is difficult to perform the opening or closing operation of the opening-closing portion 120B and the operation of taking out the wet tissues 130 by one hand.

In this embodiment, in order to make it possible to take out the wet tissues 130 from the package 100 by one hand, as shown in FIGS. 2 and 4, the lid 120 of the package 100 is formed by a first sheet 121 and a second sheet 122 stacked one on the other. The first sheet 121 has a shape corresponding to the opening-closing portion 120B. The second sheet 122 is larger than the first sheet 121 and has a shape corresponding to the proximal portion 120A, the opening-closing portion 120B and the tab portion 120C.

The first sheet 121 is formed, for example, by a sheet or synthetic paper made of polypropylene (PP) resin or polyethylene terephthalate (PET) resin. The first sheet 121 is formed in the thickness of 50 to 100 μm , or preferably in the thickness of 70 μm . The second sheet 122 is formed, for example, by a sheet made of polypropylene (PP) resin or polyethylene terephthalate (PET) resin. The second sheet 122 is formed in the thickness of 10 to 20 μm , or preferably in the thickness of 20 μm . Specifically, the second sheet 122 has a thickness smaller than that of the first sheet 121. Therefore, the flexural rigidity of the second sheet 122 is lower than that of the first sheet 121. The way of making the flexural rigidity of the second sheet 122 lower than that of the first sheet 121 is not limited to the way in which a difference is made between the first and second sheets in thickness, but, for this purpose, the first and second sheets may be made different in materials.

[0015] A first adhesive 123 is applied to one side of

the first sheet 121, and a second adhesive 124 is applied to one side of the second sheet 121. In this embodiment, the second adhesive 124 is not applied to a portion corresponding to the tab portion 120C which is used as a tab. As the first and second adhesives 123, 124, for example, acrylic adhesives may be used.

The first and second sheets 121, 122 are bonded together by the second adhesive 124, or in other words, stacked one on the other. At this time, the other side of the first sheet 121 is bonded to a portion of the one side of the second sheet 122 which corresponds to the opening-closing portion 120B. As a result, the opening-closing portion 120B of the lid 120 is formed by a laminated portion of the first and second sheets 121, 122, the proximal portion 120A is formed by a portion of the second sheet 122 which protrudes from one end of the first sheet 121, and the tab portion 120C is formed by a portion of the second sheet 122 which protrudes from the other end of the first sheet 121. Designated by 120D is a boundary between the opening-closing portion 120B and the proximal portion 120A. The thickness of the lid 120 changes at the boundary 120D. The lid 120 is bonded to the top of the upper wall 110a of the body 110 by the first adhesive 123 which is applied to one side of the first sheet 121 forming the opening-closing portion 120B and by the second adhesive 124 which is applied to one side (on the same side as the one side of the first sheet 121) of the second sheet 122 forming the proximal portion 120A. Under normal conditions, the opening-closing portion 120B is bonded to the top of the upper wall 110a of the body 110 in order to prevent the wet tissues 130 from drying. In order to take out the wet tissues 130, the opening-closing portion 120B is peeled off the top of the upper wall 110a of the body 110 so that the opening 112 is opened. Therefore, the second adhesive 124 is used which can bond the opening-closing portion 120B to the top of the upper wall 110a of the body 110 such that the opening-closing portion 120B can be repeatedly peeled off.

Here, if the adhesive strength of the second adhesive 124 is the same as that of the first adhesive 123, the proximal portion 120A may also be peeled off the top of the upper wall 110a of the body 110 when the opening-closing portion 120B is peeled off the top of the upper wall 110a of the body 110 and turned over toward the proximal portion 120A. Therefore, in this embodiment, an adhesive having a higher adhesive strength than the first adhesive 123 is used as the second adhesive 124.

[0016] Operation of taking out the wet tissues 130 from the wet-tissue storage space 110H through the opening 112 of the body 110 is now described.

In order for a user to take out a wet tissue 130 through the opening 112, the tab portion (tip) 120C is picked and pulled up by the fingers. For example, the tab portion 120C is pulled up above the top of the upper wall 110a and toward the proximal portion 110A. Thus, the opening-closing portion 120B bonded to the top of the upper wall 110a by the first adhesive 121 is peeled off the top of the

upper wall 110a beginning at the tab portion 120C and turned over toward the proximal portion 120A. When the opening-closing portion 120B is peeled off for the first time, the opening formation part 110A which is bordered by the perforations formed along the opening edge 112a is peeled off while being kept bonded to the first sheet 121 by the first adhesive 123. Thus, the opening 112 is formed in the upper wall 110a of the body 110.

In this embodiment, the second adhesive 124 for bonding the proximal portion 120A of the lid 120 to the body 110 has a higher adhesive strength than the first adhesive 123 for bonding the opening-closing portion 120B of the lid 120 to the body 110. Therefore, when the opening-closing portion 120B is peeled off up to the boundary 120D between the opening-closing portion 120B and the proximal portion 120A, the user can recognize by increased reaction force applied to the user's fingers that the opening-closing portion 124B has been peeled off up to the boundary 120D.

Further, in this embodiment, the opening-closing portion 120B of the lid 120 is formed by the laminated portion of the first and second sheets 121, 122, and the proximal portion 120A of the lid 120 is formed by a portion of the second sheet 122 which protrudes from the first sheet 121. Thus, the thickness of the lid 120 changes at the boundary 120D between the opening-closing portion 120B and the proximal portion 120A. Therefore, when the opening-closing portion 120B is peeled off up to the boundary 120D, the boundary 120D functions as a hinge, so that the force of peeling off the opening-closing portion 120B is absorbed as a force of rotating the opening-closing portion 120B around the boundary 120D.

Further, in this embodiment, the second sheet 122 has a lower flexural rigidity than the first sheet 121. Therefore, as shown in FIG. 4, when the opening-closing portion 120B is peeled off up to the boundary 120D, the opening-closing portion 120B is held tilted toward the proximal portion 120A under its own weight. In this state, even if the tab portion 120C is released, the opening-closing portion 120B is prevented from tilting toward the opening 112. Therefore, the user can perform the opening or closing operation of the opening-closing portion 120B and the operation of taking out the wet tissues 130 by one hand.

In order to prevent the wet tissues 130 from drying, when the wet tissues 130 are not in use, the tab portion 120C is returned to the opening 112 side and the opening-closing portion 120B is bonded to the top of the upper wall 110a of the body 110 by the user.

[0017] As described above, the lid 120 of this embodiment includes the opening-closing portion 120B formed by the laminated portion of the first and second sheets 121, 122, and the proximal portion 120A formed by a portion of the second sheet 122 which protrudes from the first sheet 121. Therefore, when the lid 120 is formed by arranging the second sheet 122 on top of the first sheet 121, the first sheet 121 is not present under the portion of the second sheet 122 which forms the proximal

portion 120A (see FIG. 5). In this case, the portion of the second sheet 122 which forms the proximal portion 120A is acted upon by a force under its own weight. This force becomes larger away from the boundary 120D between the opening-closing portion 120B and the proximal portion 120A.

Further, in the package 100 of this embodiment, as described above, the second sheet 122 forming the proximal portion 120A of the lid 120 has a lower flexural rigidity than the first sheet 121 forming the opening-closing portion 120B. Therefore, the proximal portion 120A has a lower flexural rigidity. Particularly, a corner of the proximal portion 120A on the side opposite to the opening-closing portion 120B (where an edge extending from the boundary 120D and an edge on the side opposite to the opening-closing portion 120B meet) has a lower flexural rigidity.

FIG. 5 shows a lid 520 having a pointed (for example, right-angled) corner 522a in a proximal portion 520A on the side opposite to an opening-closing portion 520B. In the lid 520 shown in FIG. 5, the opening-closing portion 520B is formed by a laminated portion of first and second sheets 521, 522, the proximal portion 520A is formed by a portion of the second sheet 522 which protrudes from one end of the first sheet 521, and the tab portion 520C is formed by a portion of the second sheet 522 which protrudes from the other end of the first sheet 521. Due to the pointed shape of the corner 522a of the proximal portion 520A on the side opposite to the opening-closing portion 520B, the corner 522a has a particularly lower flexural rigidity. Therefore, when the lid 520 shown in FIG. 5 is formed by arranging the second sheet 522 on top of the first sheet 521, the corner 522a may warp toward the first sheet 521 as shown by the hollow arrow.

Further, during manufacturing of the package 100, in the state in which the second sheet 522 is arranged on top of the first sheet 521 in the lid 520, a force F is sometimes applied to the lid 520 in a direction of the hollow arrow shown in FIG. 6. When the corner 522a of the proximal portion 520A has a pointed shape, the force F is applied as-is to the corner 522a. As a result, the corner 522a may bend as shown by the solid arrow in FIG. 6.

As described above, when the corner 522a of the proximal portion 520A has a pointed shape, the corner 522a may warp or bend. If the lid 520 having such a warp or bend is bonded to the top of the body 110, a wrinkle will occur in the proximal portion 520A of the lid 520.

[0018] Therefore, in this embodiment, a corner of the proximal portion is provided with a greater flexural rigidity in order to prevent the occurrence of a warp or a bend so as to prevent the occurrence of a wrinkle in the proximal portion of the lid.

FIG. 7 shows the lid 120 of this embodiment. As described above, the lid 120 of this embodiment includes the opening-closing portion 120B formed by the laminated portion of the first and second sheets 121, 122, the proximal portion 120A formed by the portion of the second sheet 122 which protrudes from one end of the first

sheet 121, and the tab portion 120C formed by the portion of the second sheet 122 which protrudes from the other end of the first sheet 121 (which faces away from the proximal portion 120A). The corner 122a of the proximal portion 120A on the side opposite to the opening-closing portion 120B is rounded. For such rounding operation, a radius of curvature of the rounded corner is set. When the corner 122a of the proximal portion 120A has a rounded shape, as shown in FIG. 7, the force F acting upon the corner 122a is scattered. Therefore, the rigidity of the corner 122a becomes higher than that of a corner having a pointed shape such as a square shape. Thus, the corner 122a can be prevented from warping or bending by the force acting upon the corner 122a, so that the occurrence of a wrinkle in the proximal portion 120A of the lid 120 can be prevented.

The radius of curvature of the corner 122a is set to an appropriate value according to the shape (the length along the longitudinal direction of the lid 120 and the width in a direction perpendicular to the longitudinal direction of the lid 120) of the proximal portion 120A, the thickness of the first sheet 121 forming the opening-closing portion 120B, or other similar factors, such that the occurrence of a warp or a bend in the corner 122a of the proximal portion 120A can be prevented. In experiments made on the lids 120 of various dimensions, a wrinkle has occurred in the proximal portion 120A of the lid 120 when the radius of curvature of the corner 122a is 1 mm, but no wrinkle has occurred in the proximal portion 120A of the lid 120 when the radius is 1.5 mm. The experimental results show that it is preferable to set the radius of curvature of the corner 122a to 1.5 mm at the minimum. The maximum radius of curvature of the corner 122a is determined according to the length of the proximal portion 120A, a desired strength of the proximal portion 120A or other similar factors.

[0019] The shape of the corner of the proximal portion is not limited to the rounded shape. A differently-shaped lid 420 is shown in FIG. 8.

In the lid 420 shown in FIG. 8, a corner 422a of a proximal portion 420A on the side opposite to an opening-closing portion 420B is chamfered by cutting off a tip end portion of the corner 422a. For chamfering, a chamfering angle θ and a chamfering dimension m are set. The chamfering angle θ represents an angle of a cutting face with respect to one of the edges which form the corner 422a, or, for example, an angle of a cutting face with respect to an edge 422d of the proximal portion 420A on the side opposite to the opening-closing portion 420B. The chamfering dimension m represents a distance between a cutting point and the tip end of the corner 422a, or, for example, a distance between a cutting point and an edge 422c which extends from a boundary 420D between the opening-closing portion 420B and the proximal portion 420A. Also in the case in which the corner 422a of the proximal portion 420A is chamfered, as shown in FIG. 8, the force F acting upon the corner 422a is scattered. Therefore, the rigidity of the corner 422a becomes higher

than that of a corner having a pointed shape such as a square shape. Thus, the corner 422a can be prevented from warping or bending by the force acting upon the corner 422a, so that the occurrence of a wrinkle in the proximal portion 420A of the lid 420 can be prevented.

The chamfering shape (chamfering angle and chamfering dimension) of the corner 422a of the proximal portion 420A is set according to the shape (the length and the width) of the proximal portion 420A of the lid 420, the thickness of the first sheet 121 forming the opening-closing portion 420B, or other similar factors. From the above-described experimental results, it is found preferable to set the chamfering shape of the corner 422a such that the chamfering angle is about 45 degrees and the chamfering dimension is 1.5 mm at the minimum. The maximum chamfering dimension of the corner 422a is determined according to the length of the proximal portion 420A, a desired strength of the proximal portion 420A or other similar factors.

[0020] The present invention is not limited to the construction of the above-mentioned embodiments, but rather, may be added to, changed, replaced with alternatives or otherwise modified.

The package of this invention is not limited to a package for storing a sheet-type article, such as wet tissues, but it can also be formed as a package for storing various other articles.

The opening 112 of the package 100 is described as being formed in the upper wall 110a of the body 110, but it is essential that at least part of the opening 112 is formed in the upper wall 110a of the body 110.

The lid 120 of the package 100 is described as being formed by the proximal portion 120A, the opening-closing portion 120B and the tab portion (tip) 120C, but it may also be formed by the proximal portion 120A and the opening-closing portion 120B.

The adhesive for bonding the proximal portion 120A of the lid 120 of the package 100 to the top of the body 110 may be an adhesive having an adhesive strength with which the proximal portion 120A can be removably bonded to the top of the body 110, or it may be an adhesive having an adhesive strength with which the proximal portion 120A can be firmly (irremovably) bonded to the top of the body 110.

The lid 120 of the package 100 is described as being formed by a lamination of the first and second sheets 121, 122, but it may be formed by a lamination of three or more sheets.

The opening 112 is described as being formed by forming perforations along the opening edge 112a in the upper wall 110a of the body 110 and peeling off the opening formation part 110A bordered by the perforations, via the adhesive applied to the lid 120. However, the body 110 having the opening 112 formed in advance may also be used. In this case, preferably, the first adhesive 123 is applied to an entire area of the lid 120 other than an area corresponding to the opening 112.

The package 100 is not limited to the construction de-

scribed in the above embodiments. For example, the shape of the package 100, the shape and position of the opening 112, or the shape and position of the lid 120 can be appropriately changed. Further, various manners can be used to pack the article in the package 100.

Description of Numerals

[0021]

100 package (sheet-type article package)	
110 body of the package	
110a upper wall	
110b bottom wall	
110A opening formation part	15
110H wet-tissue storage space (sheet-type article storage space)	
111 a, 111 b lateral sealing part	
112 opening	
112a opening edge	20
120, 420, 520 lid of the package	
120A, 420A, 520A proximal portion	
120B, 420B, 520B opening-closing portion	
120C, 420C, 520C tab portion (tip)	
120D, 420D, 520D boundary	25
121, 521 first sheet	
122, 422, 522 second sheet	
122a, 422a, 522a corner	
123, 523 first adhesive	
124, 524 second adhesive	30
130 wet tissue (sheet-type article)	

Claims

1. A package comprising a body and a lid, the body having an article storage space in which an article is stored and an opening through which the article is taken out of the article storage space, the lid having an opening-closing portion that covers the opening of the body and a proximal portion that extends from the opening-closing portion, and the lid being bonded to a top of the body by an adhesive applied to one side of the lid such that the opening-closing portion can be peeled off, wherein: 45

the opening-closing portion of the lid is formed by a laminated portion of a first sheet and a second sheet which is larger than the first sheet, and the proximal portion of the lid is formed by a portion of the second sheet which protrudes from the first sheet, so that one side of the lid comprises a side of the first sheet forming the opening-closing portion which faces away from the second sheet and a side of the second sheet forming the proximal portion which faces the first sheet, and a corner of the proximal portion of the lid on the 50 55

side opposite to the opening-closing portion is rounded.

2. A package comprising a body and a lid, the body having an article storage space in which an article is stored and an opening through which the article is taken out of the article storage space, the lid having an opening-closing portion that covers the opening of the body and a proximal portion that extends from the opening-closing portion, and the lid being bonded to a top of the body by an adhesive applied to one side of the lid such that the opening-closing portion can be peeled off, wherein: 10

the opening-closing portion of the lid is formed by a laminated portion of a first sheet and a second sheet which is larger than the first sheet, and the proximal portion of the lid is formed by a portion of the second sheet which protrudes from the first sheet, so that one side of the lid comprises a side of the first sheet forming the opening-closing portion which faces away from the second sheet and a side of the second sheet forming the proximal portion which faces the first sheet, and a corner of the proximal portion of the lid on the side opposite to the opening-closing portion is chamfered.

FIG. 1

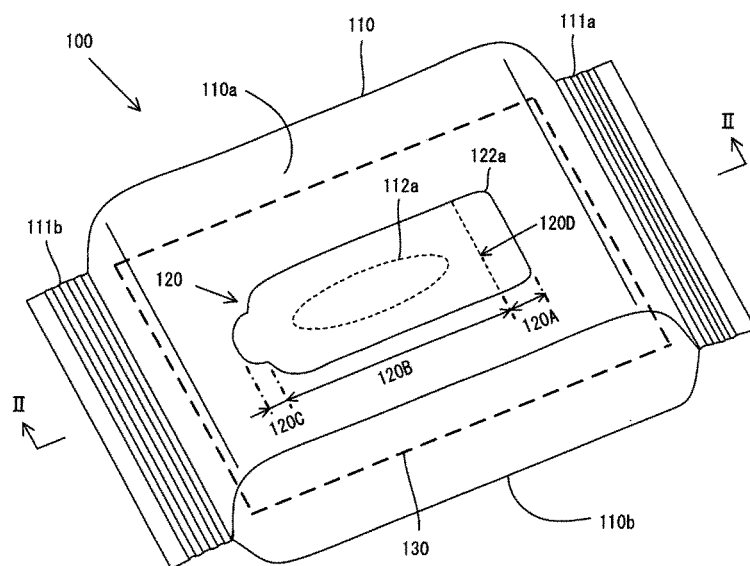
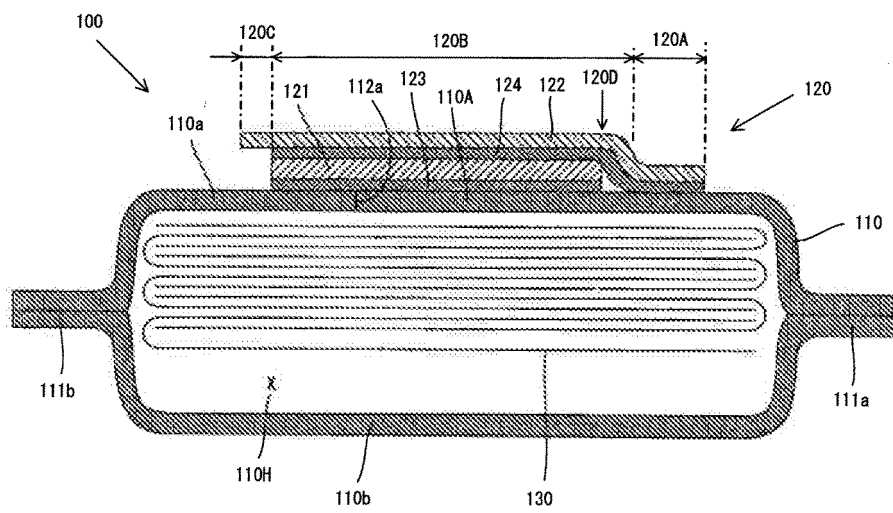


FIG. 2



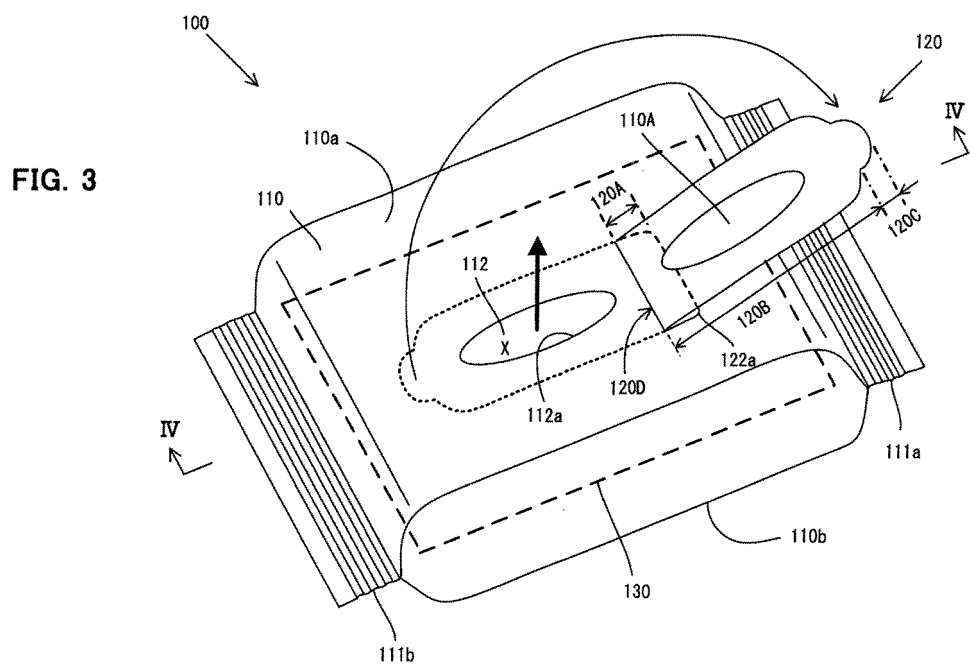


FIG. 4

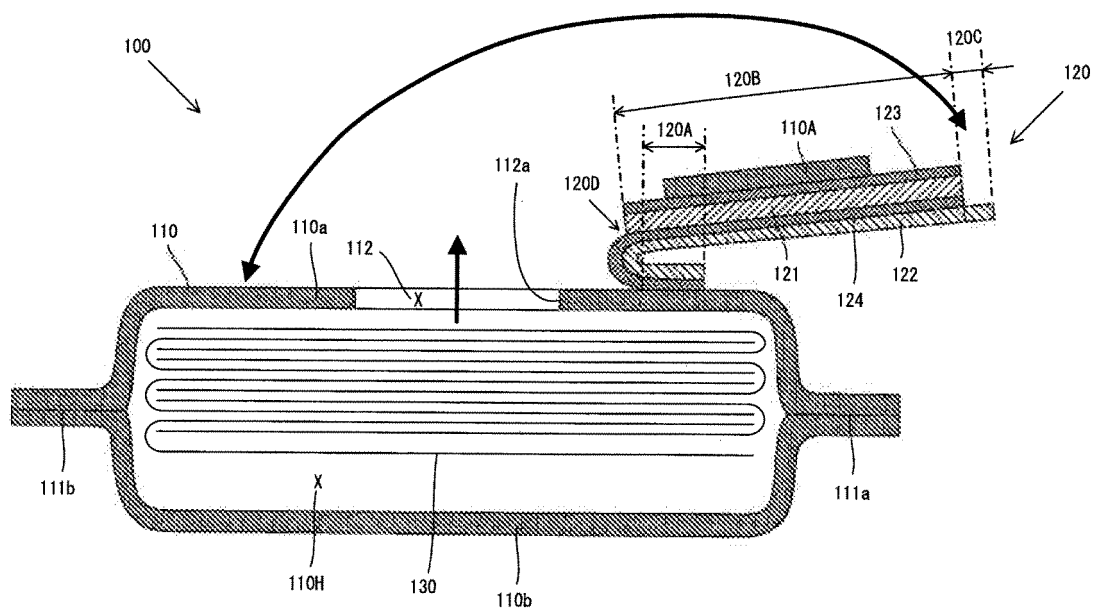


FIG. 5

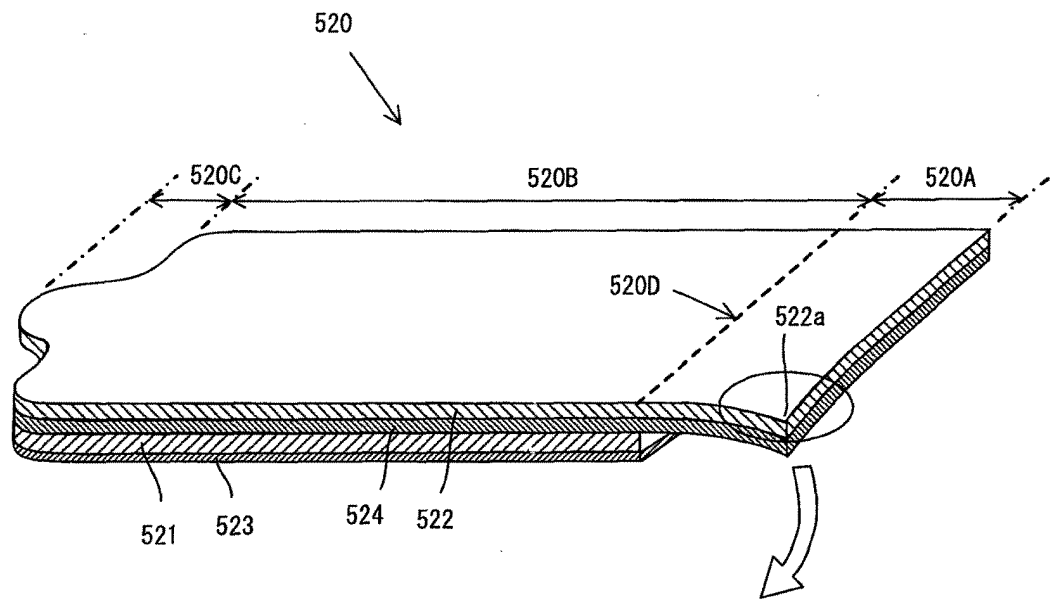


FIG. 6

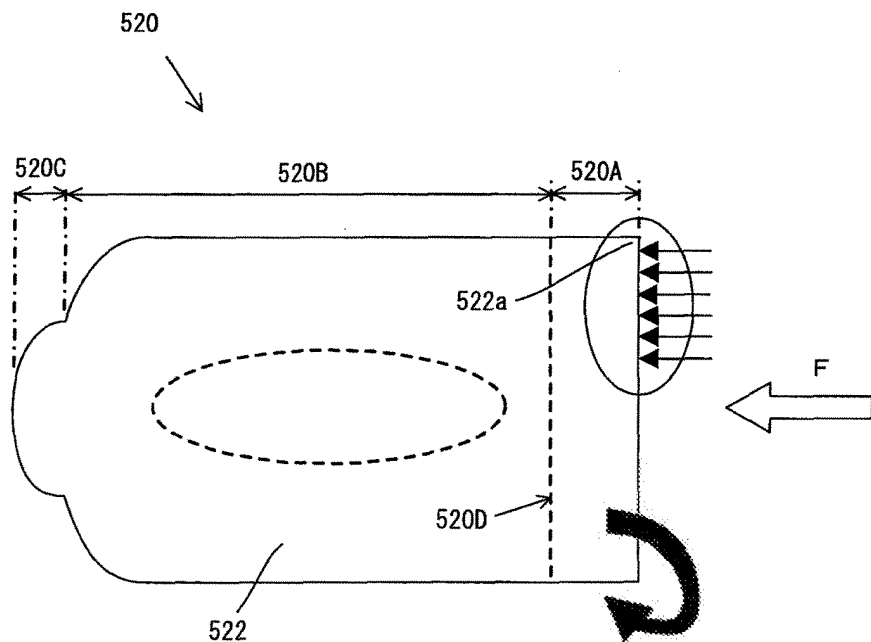


FIG. 7

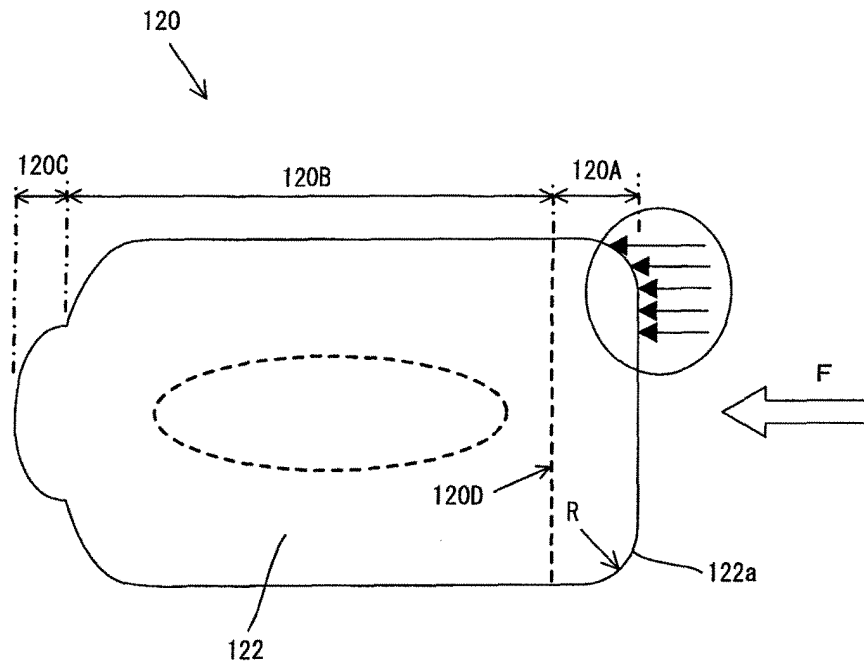
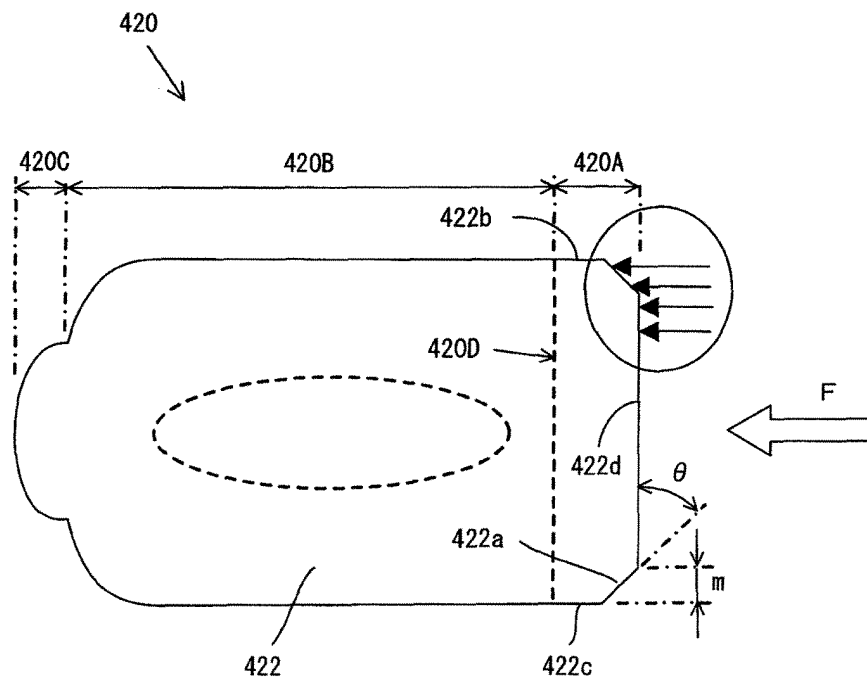


FIG. 8



INTERNATIONAL SEARCH REPORT

International application No.

PCT/JP2009/061988

A. CLASSIFICATION OF SUBJECT MATTER

B65D83/08(2006.01)i, A47K7/00(2006.01)i

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)

B65D83/08, A47K7/00

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	1996-2009
Kokai Jitsuyo Shinan Koho	1971-2009	Toroku Jitsuyo Shinan Koho	1994-2009

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 11-268783 A (Uni-Charm Corp.), 05 October, 1999 (05.10.99), Full text; Fig. 2 (Family: none)	1-2
Y	Microfilm of the specification and drawings annexed to the request of Japanese Utility Model Application No. 13883/1989 (Laid-open No. 105793/1990) (Toyo Printing Co., Ltd.), 22 August, 1990 (22.08.90), Full text; Fig. 1 (Family: none)	1-2

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

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"&" document member of the same patent family

Date of the actual completion of the international search
23 July, 2009 (23.07.09)

Date of mailing of the international search report
01 September, 2009 (01.09.09)

Name and mailing address of the ISA/
Japanese Patent Office

Authorized officer

Facsimile No.

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INTERNATIONAL SEARCH REPORT

International application No.

PCT/JP2009/061988

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	JP 2001-145582 A (Fukuyo Kosan Kabushiki Kaisha), 29 May, 2001 (29.05.01), Full text; Fig. 1 (Family: none)	1-2
A	JP 3120352 U (Yugen Kaisha Tekunoreizu), 30 March, 2006 (30.03.06), Full text; Fig. 1 (Family: none)1	1-2

Form PCT/ISA/210 (continuation of second sheet) (April 2007)

REFERENCES CITED IN THE DESCRIPTION

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Patent documents cited in the description

- JP 11268783 A [0002]