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(54) PACKAGE BODY FOR POUCH CONTAINER AND POUCH CONTAINER PACKAGE

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(57) **ABSTRACT**

A pouch container packaging body and a pouch container package with which a container body can be more reliably opened. The packaging body includes a container body including a top sheet covering the container body at a top side and a spout fixed to an outer surface of the top sheet and including a dispensing space extending axially. The spout includes a fixed portion on the top sheet, a rotating portion to rotate the fixed portion, and a cutting portion to cut the top sheet. The top sheet includes a flat portion where the fixed portion is fixed. The cutting portion is positioned away from the flat portion in an initial state and moves while rotating in a direction from an external surface to an internal surface of the flat portion in response to rotation of the rotating portion, and cuts the flat portion.

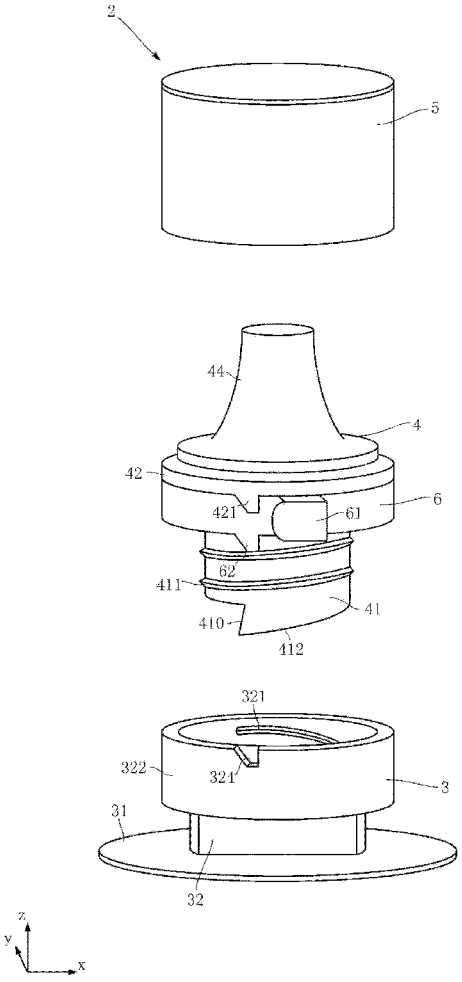


FIG.1

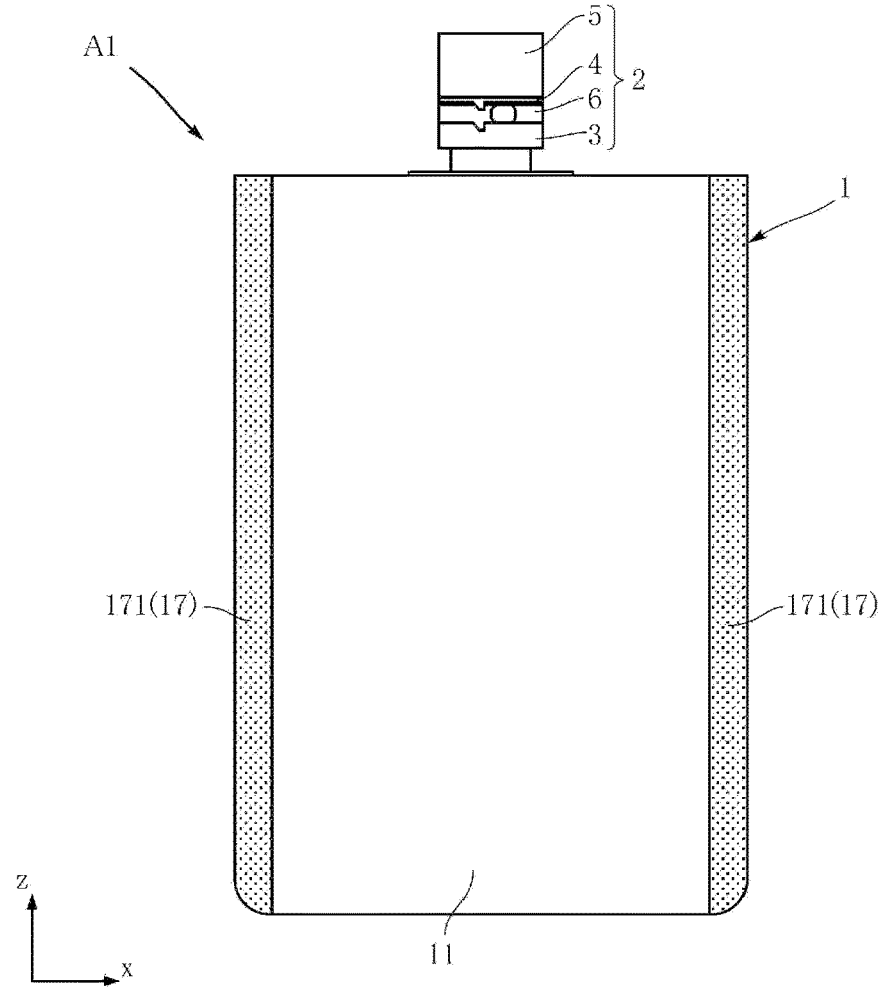


FIG.2

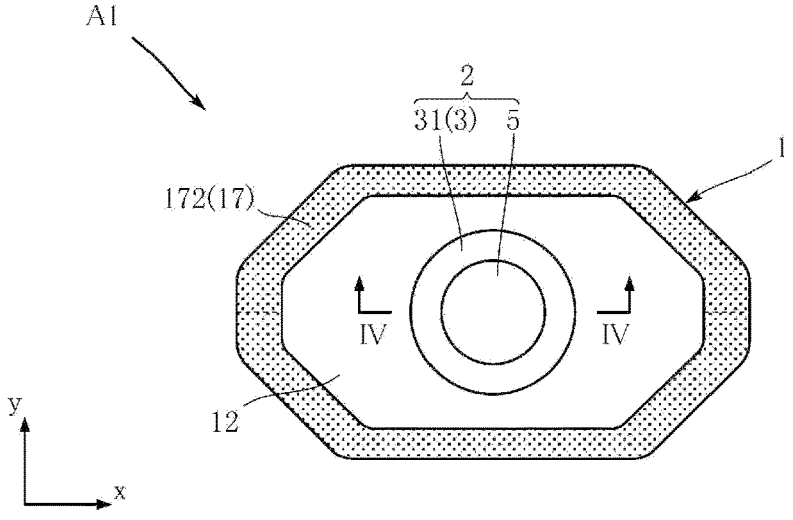


FIG.3

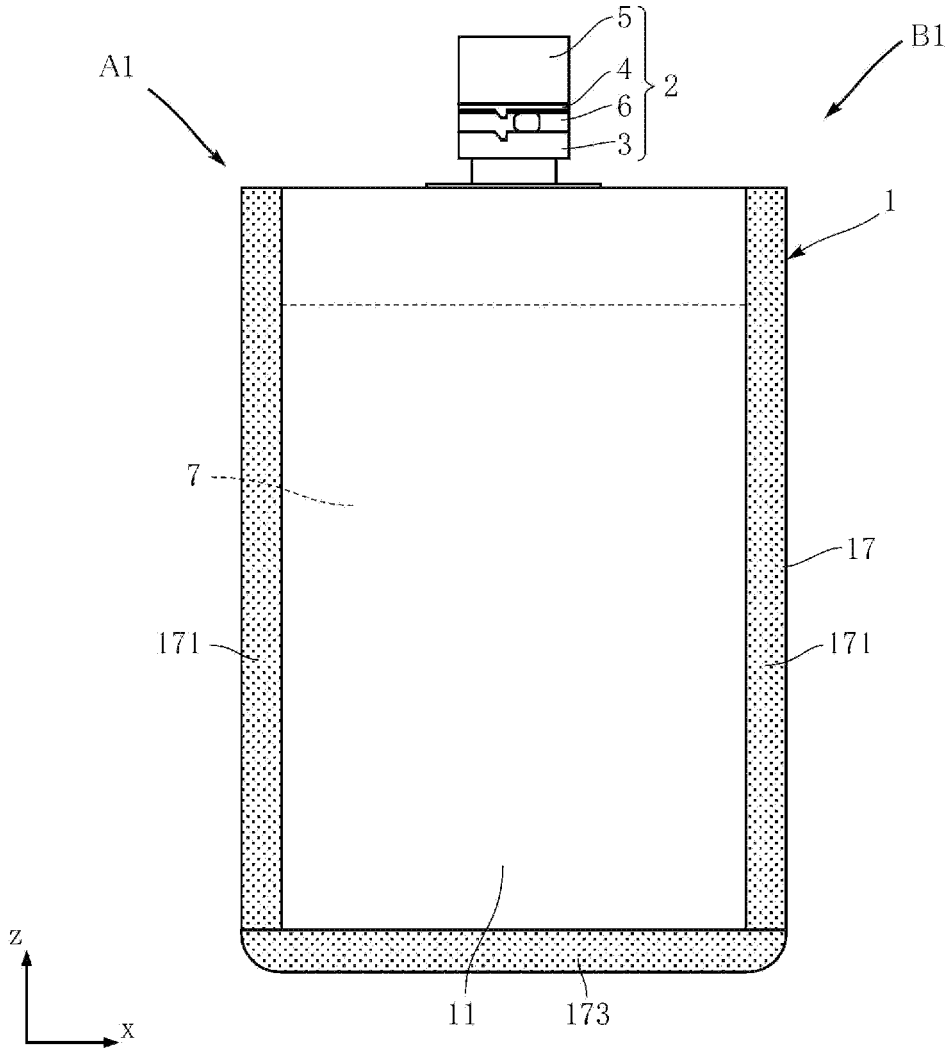


FIG.4

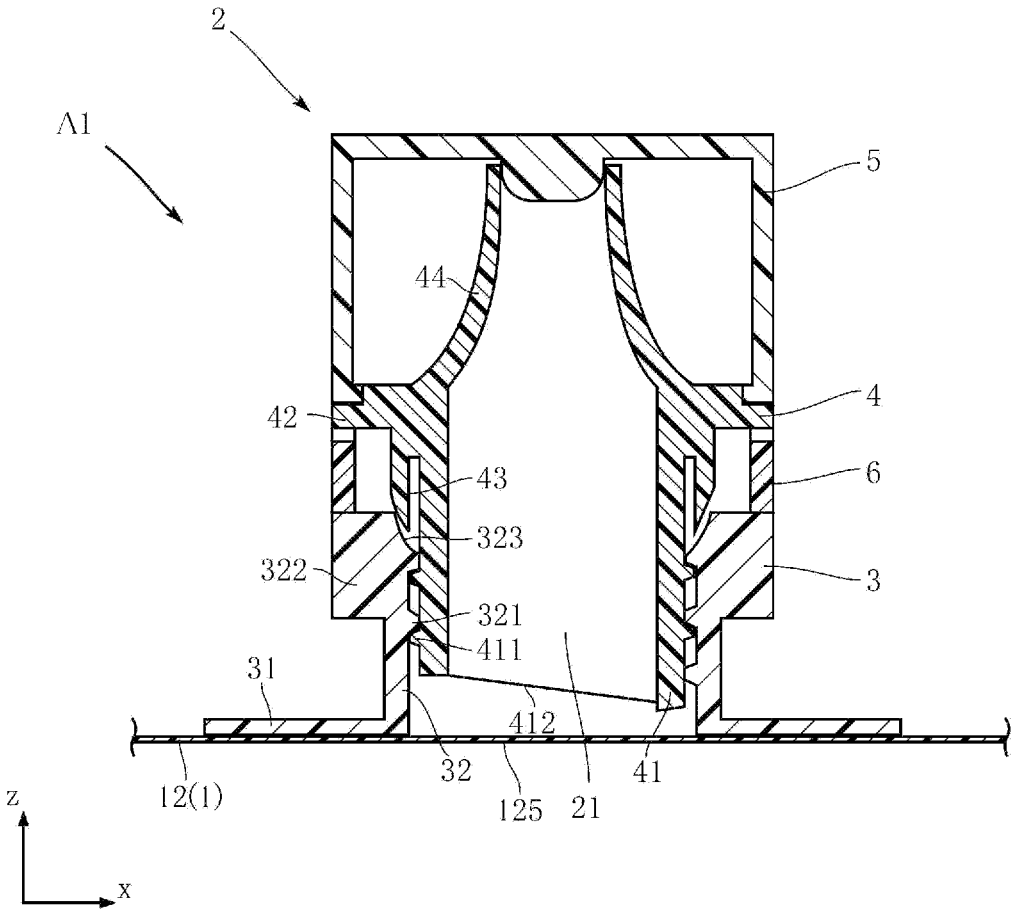


FIG.5

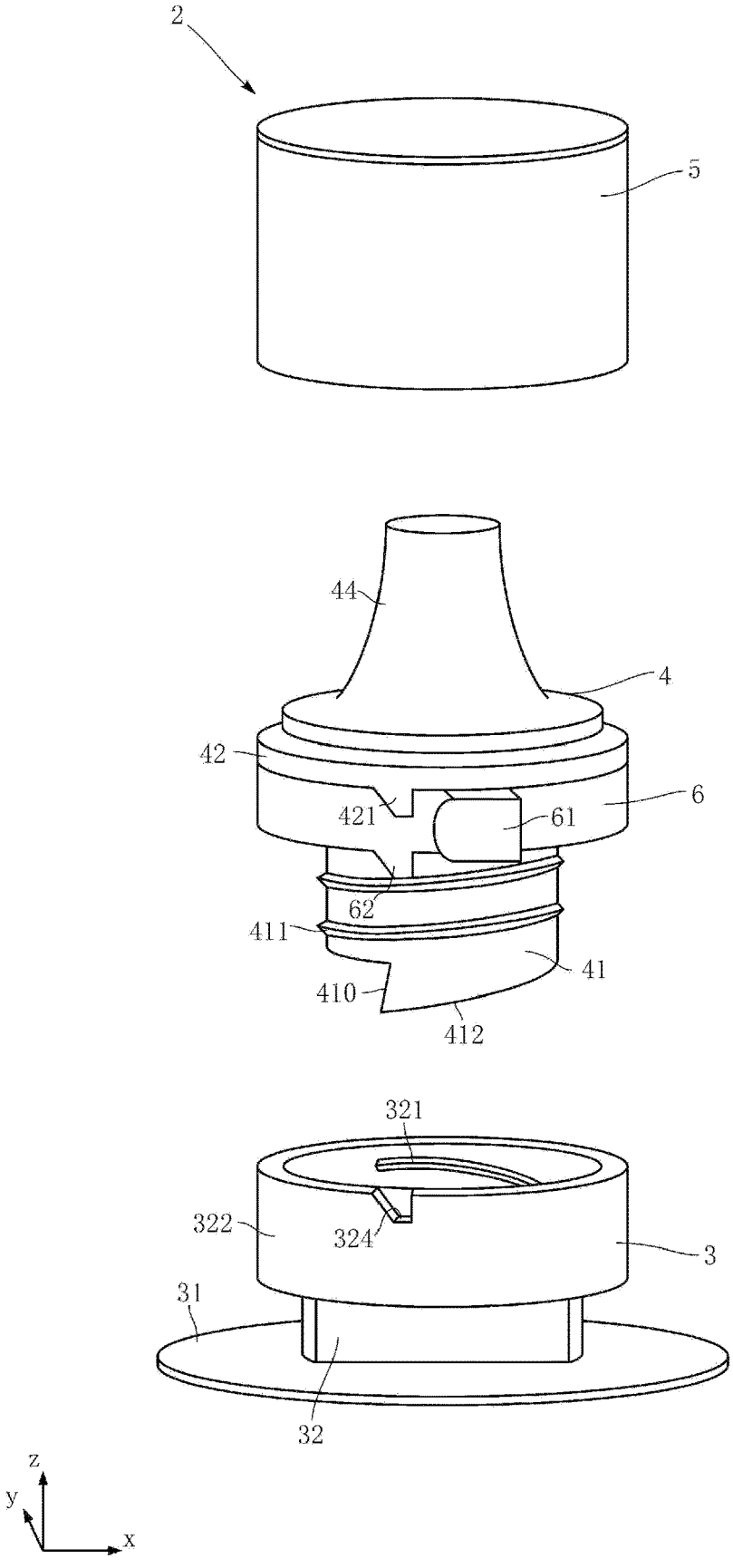


FIG.6

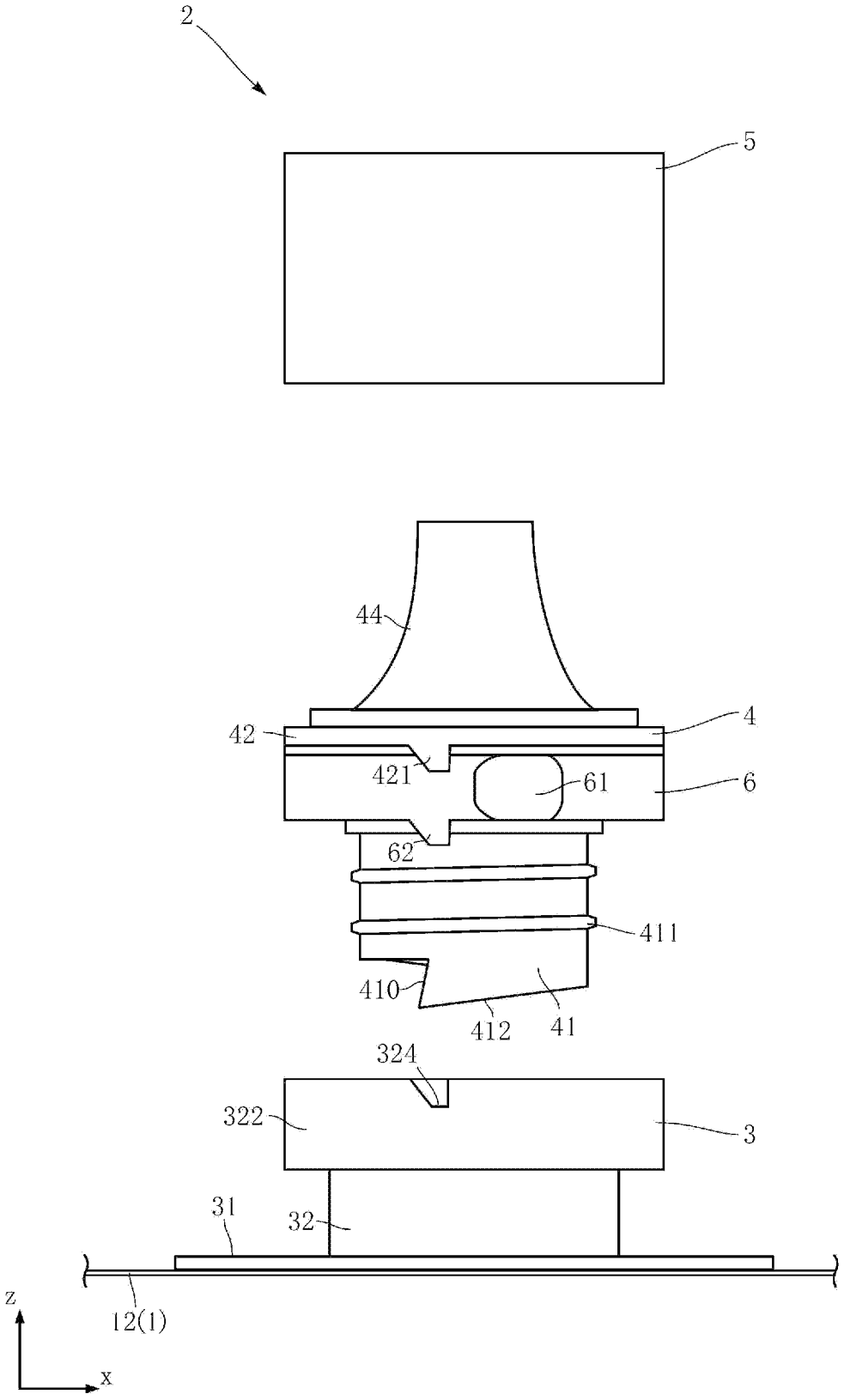


FIG.7

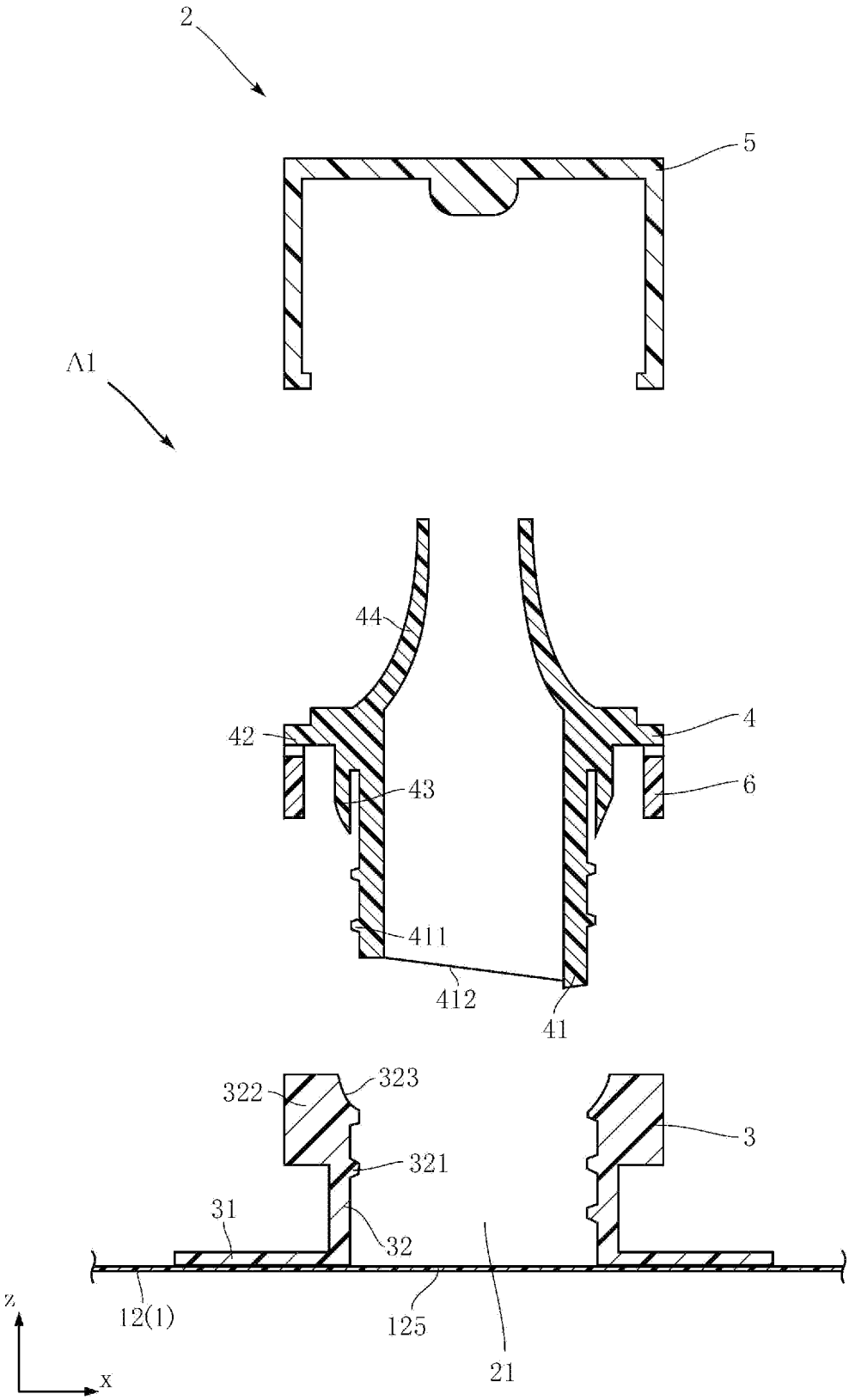


FIG.8

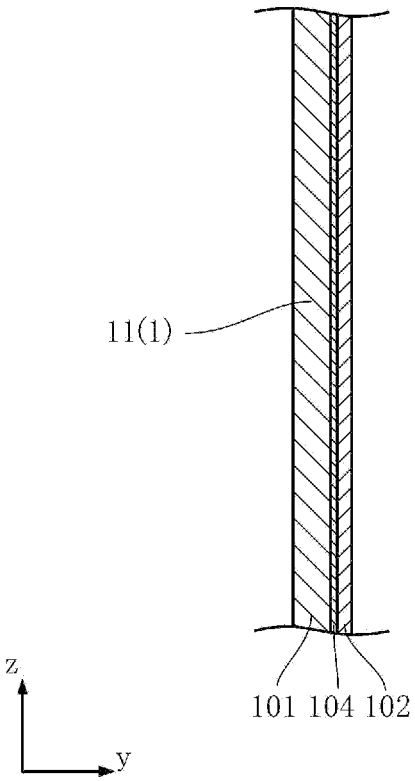


FIG.9

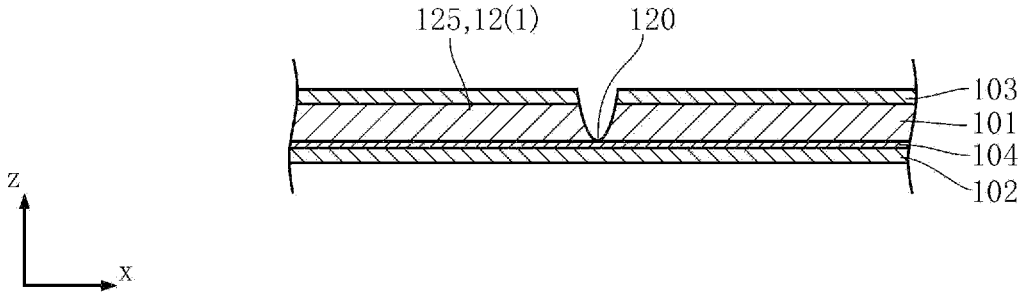


FIG.10

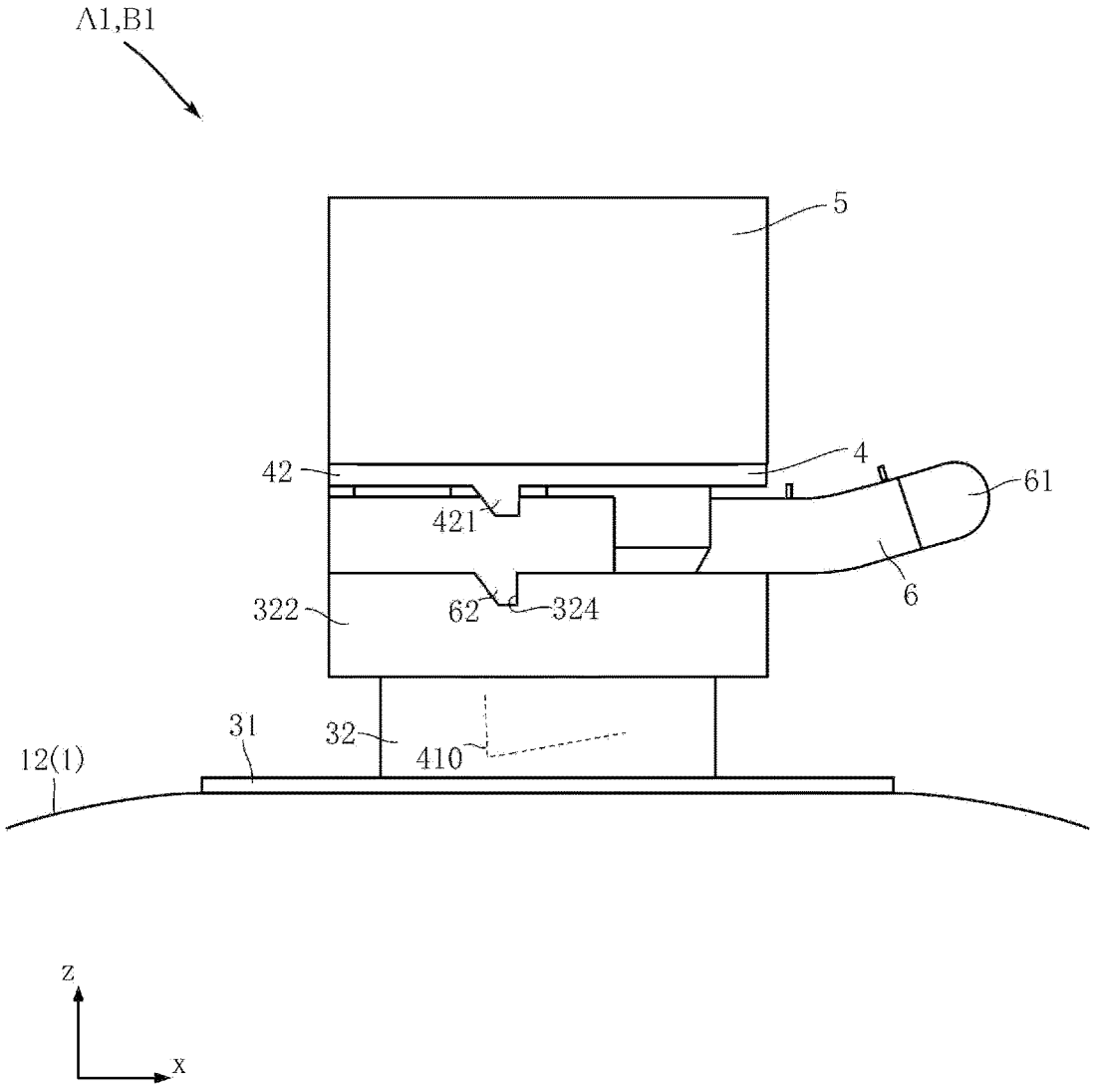


FIG.11

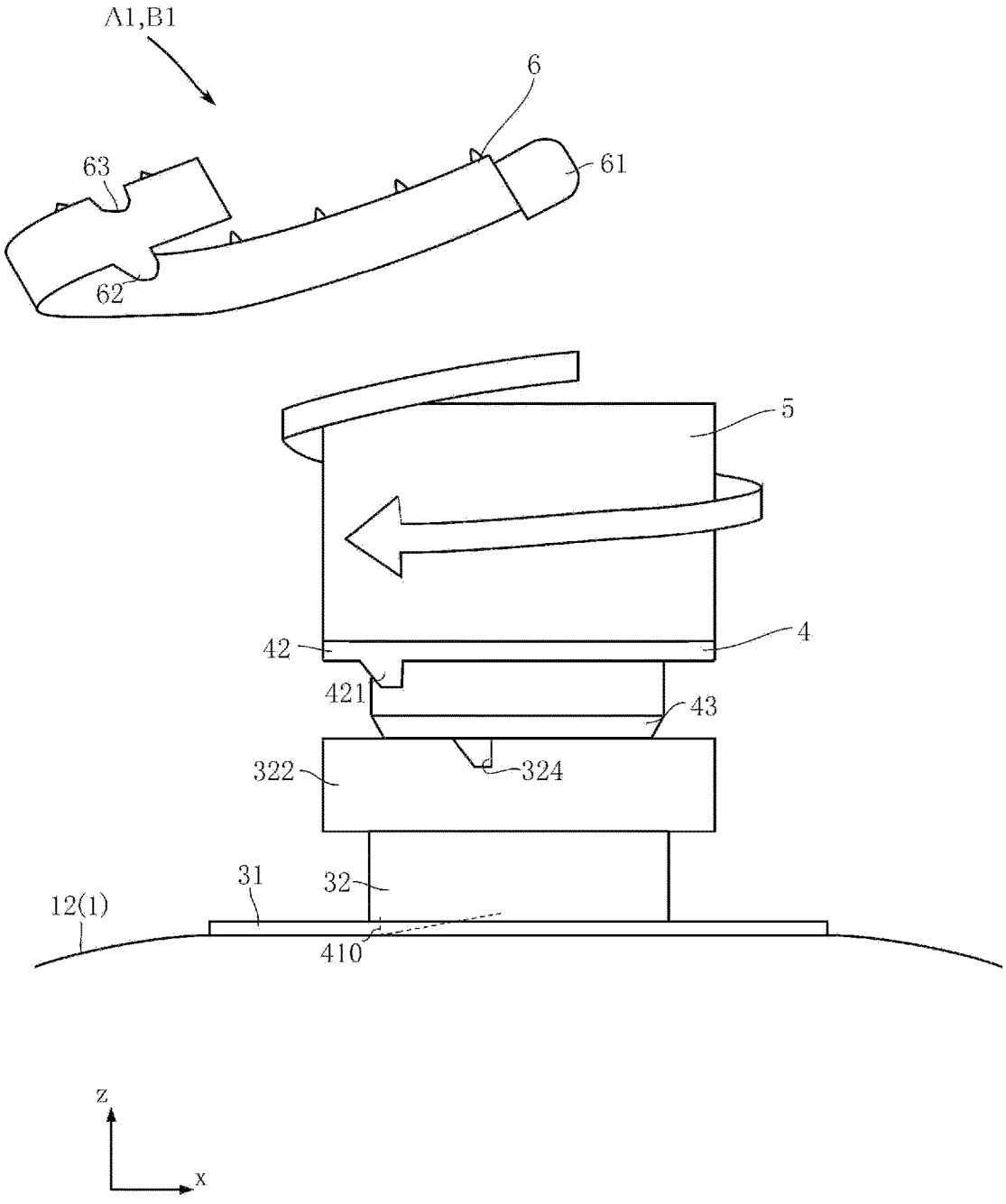


FIG.12

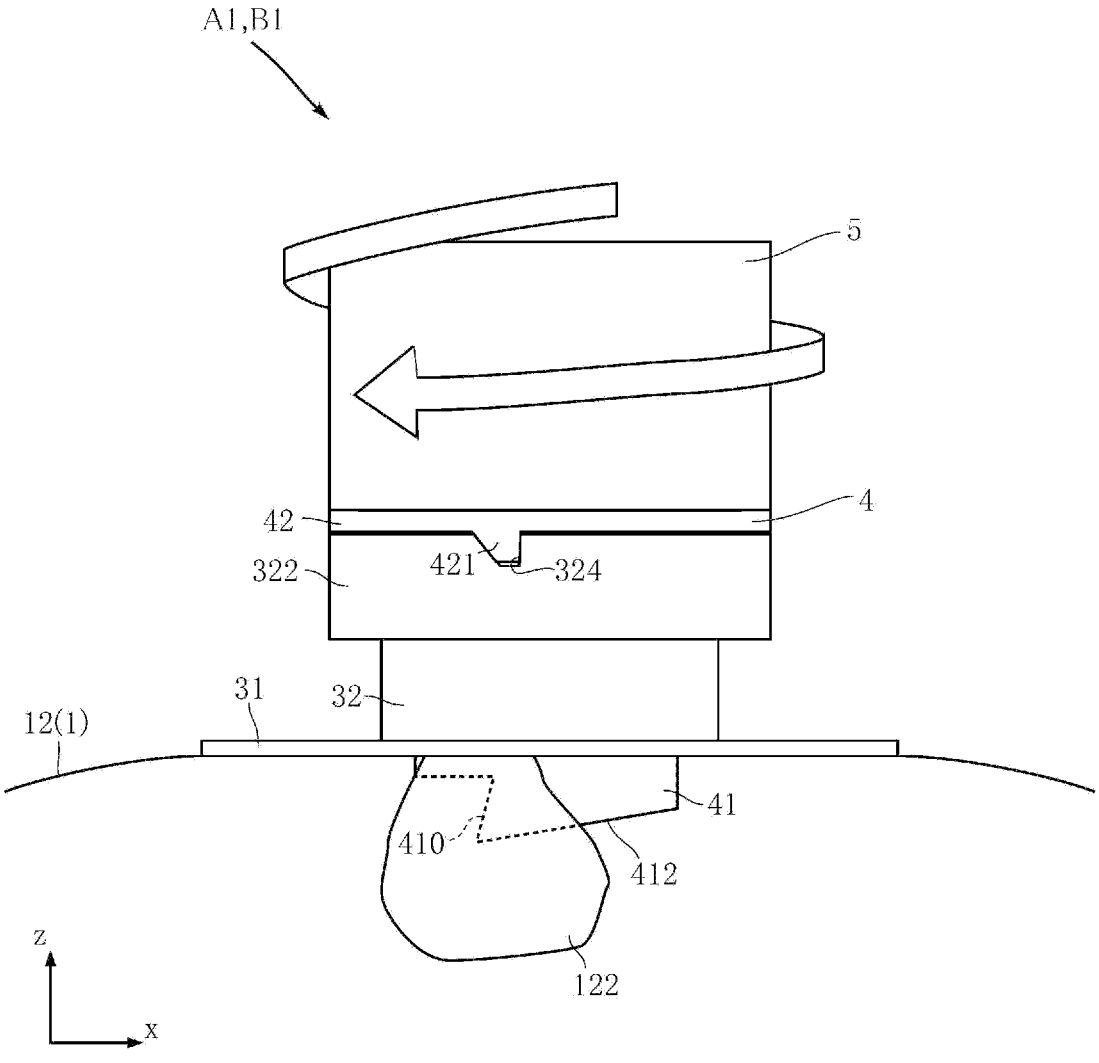


FIG.13

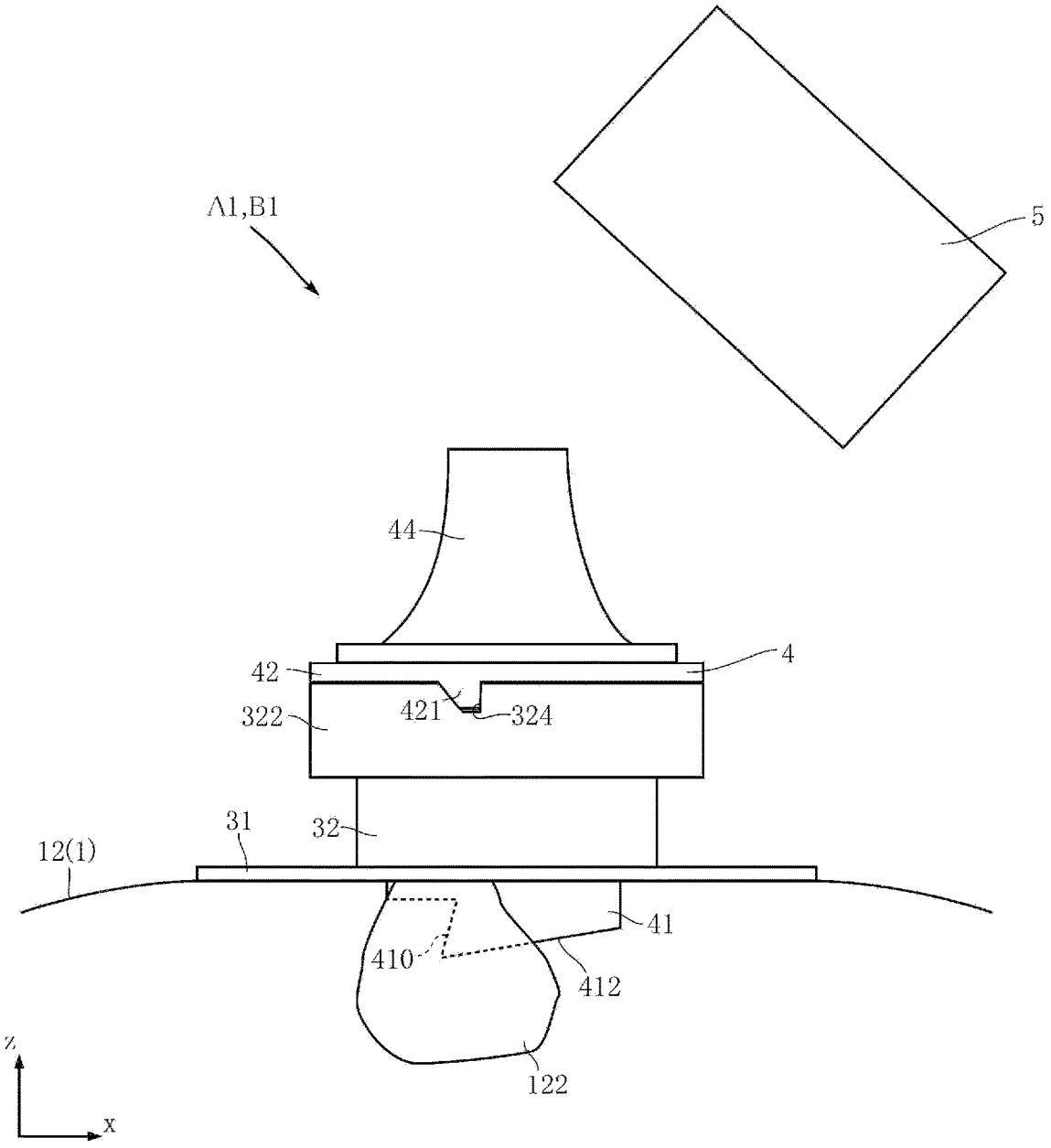
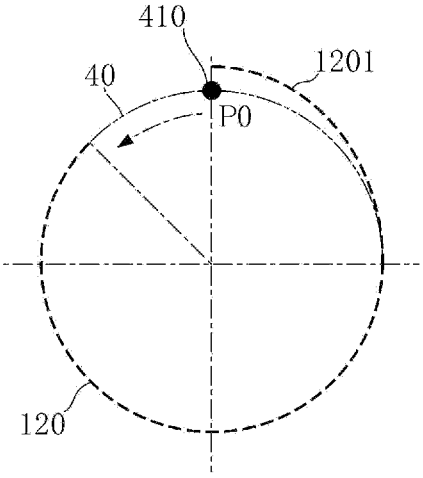
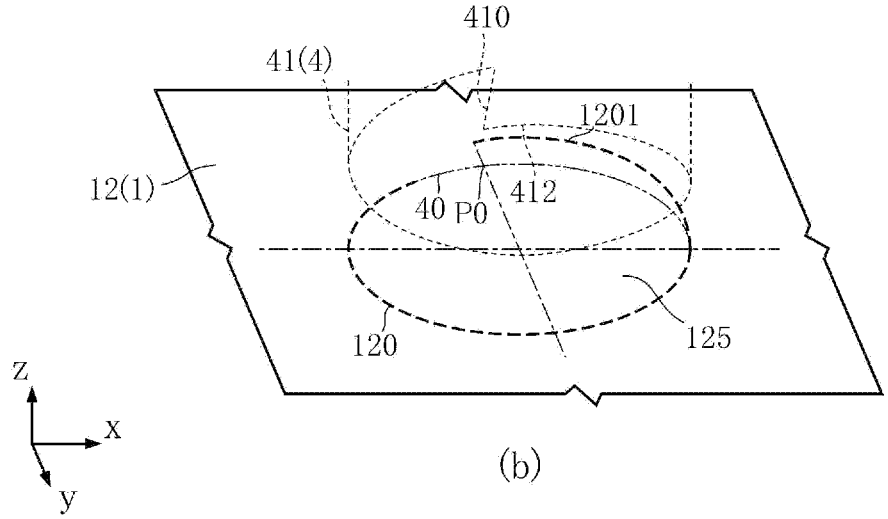


FIG.14

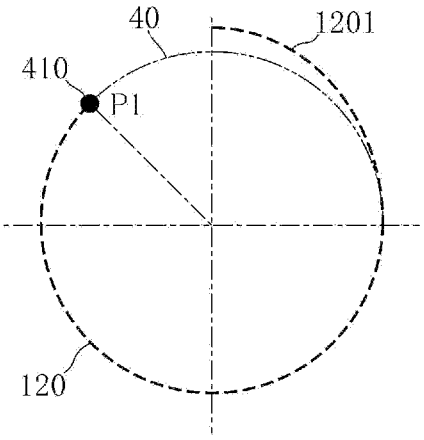


(a)

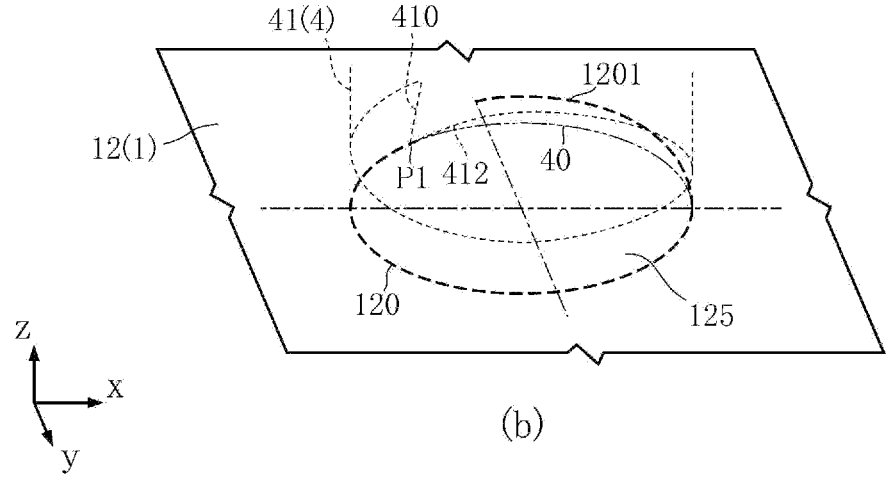


(b)

FIG.15

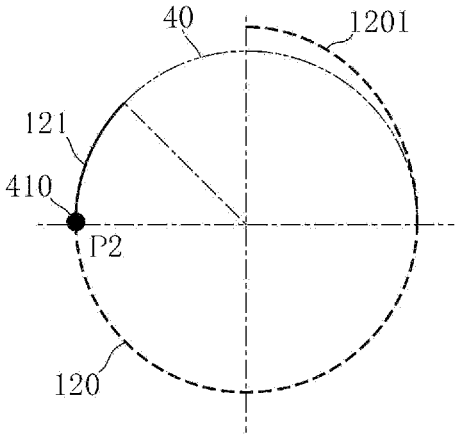


(a)



(b)

FIG.16



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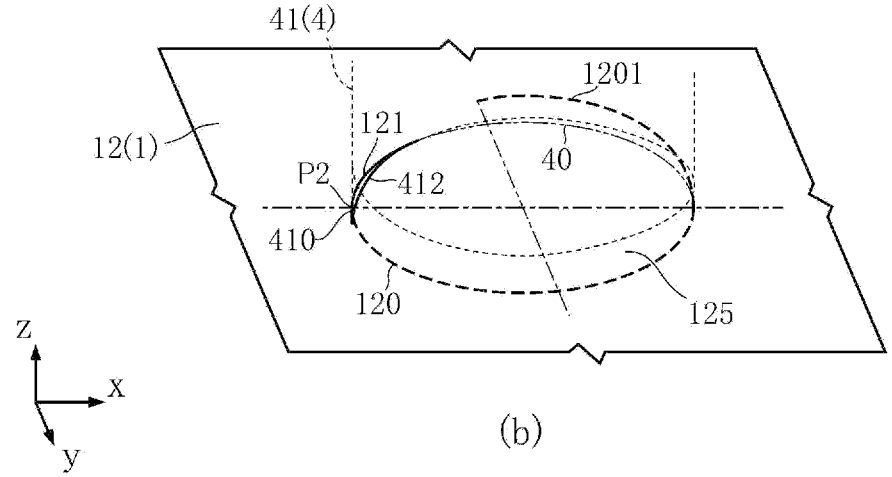
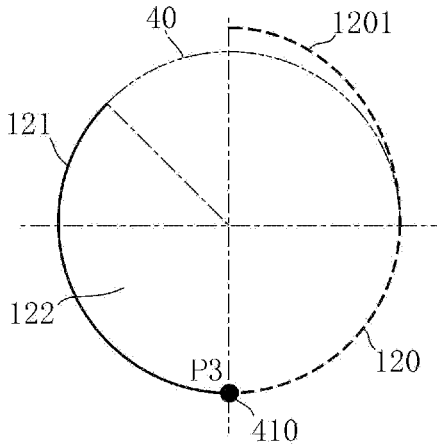
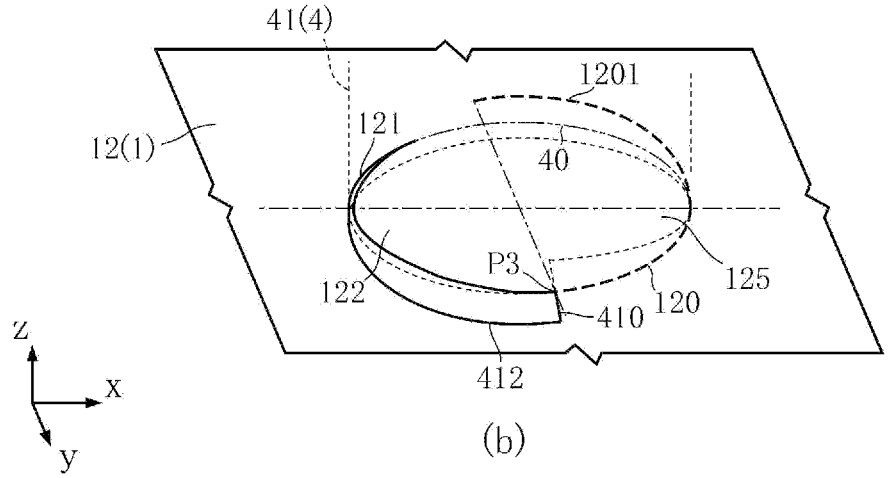


(b)

FIG.17

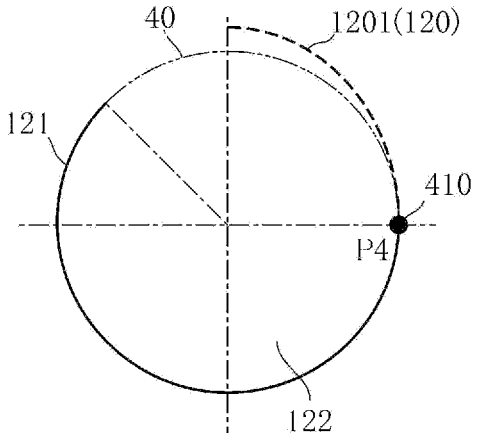

40
1201
121
122
P3
120
410

(a)

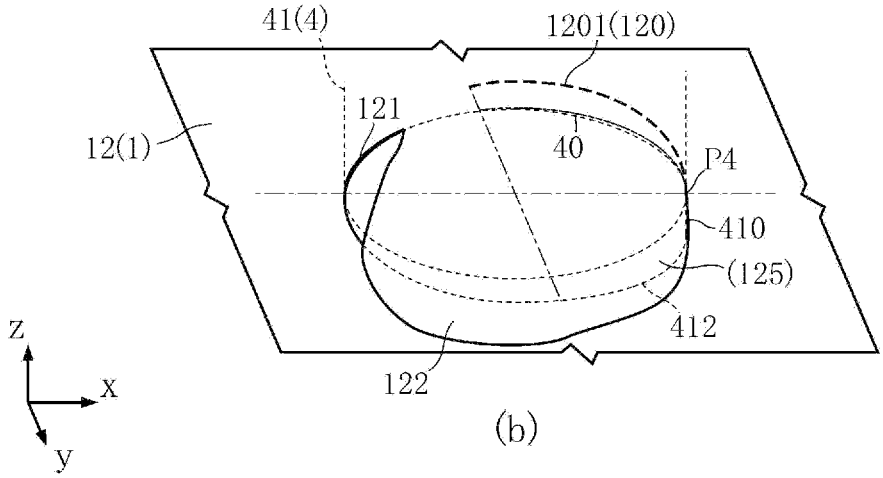

41(4)
1201
12(1)
121
40
P3
125
122
120
410
412
z
x
y

(b)

FIG.18

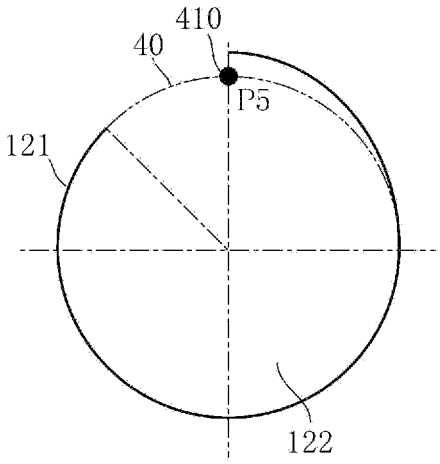

40
1201(120)
121
410
P4
122

(a)

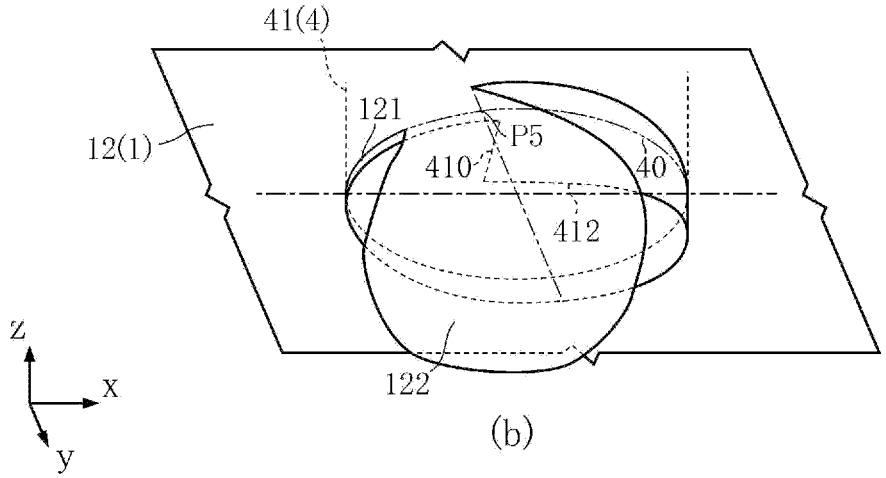

41(4)
1201(120)
121
12(1)
40
P4
410
(125)
412
122
z
x
y

(b)

FIG.19



(a)



(b)

FIG.20

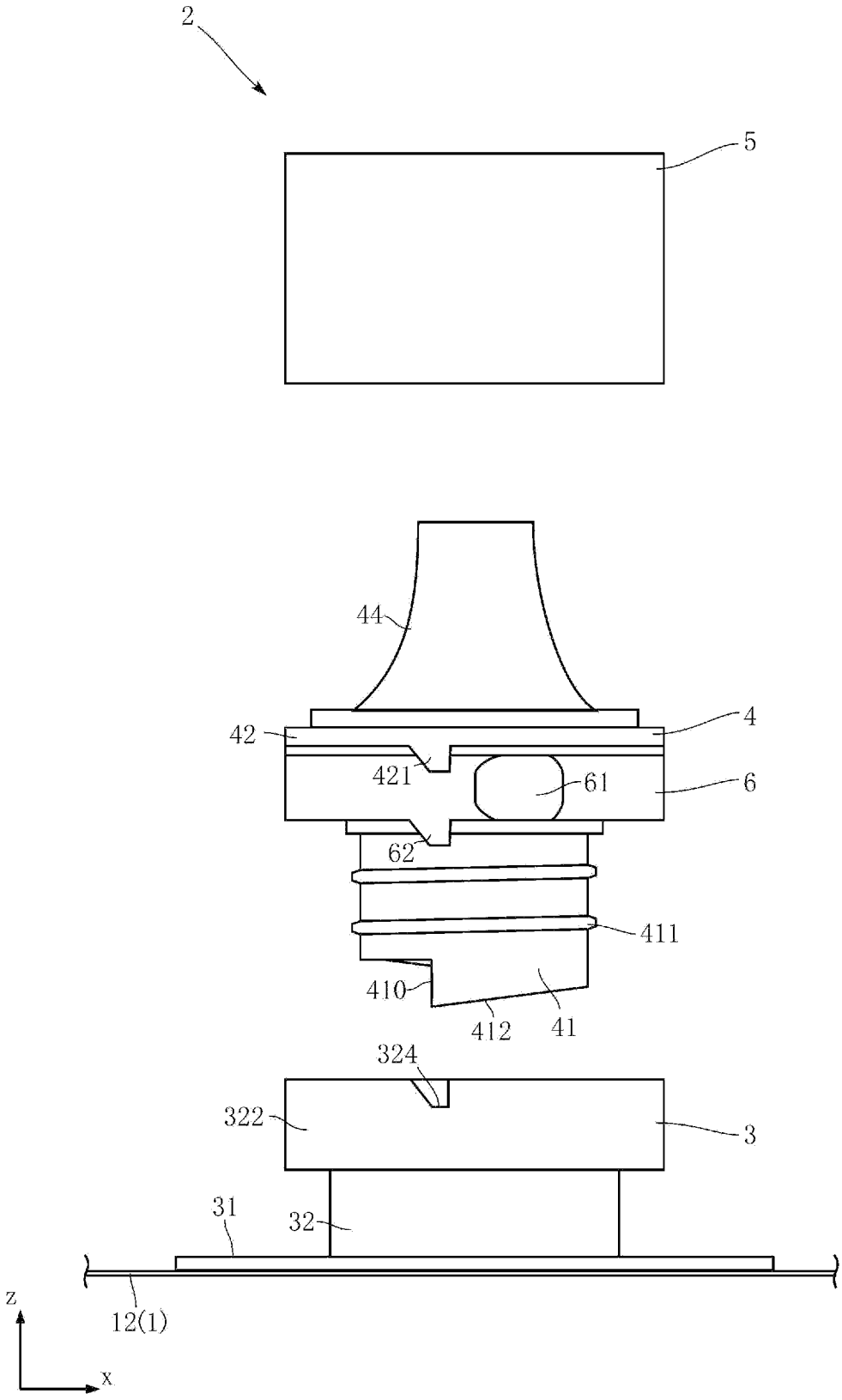


FIG.21

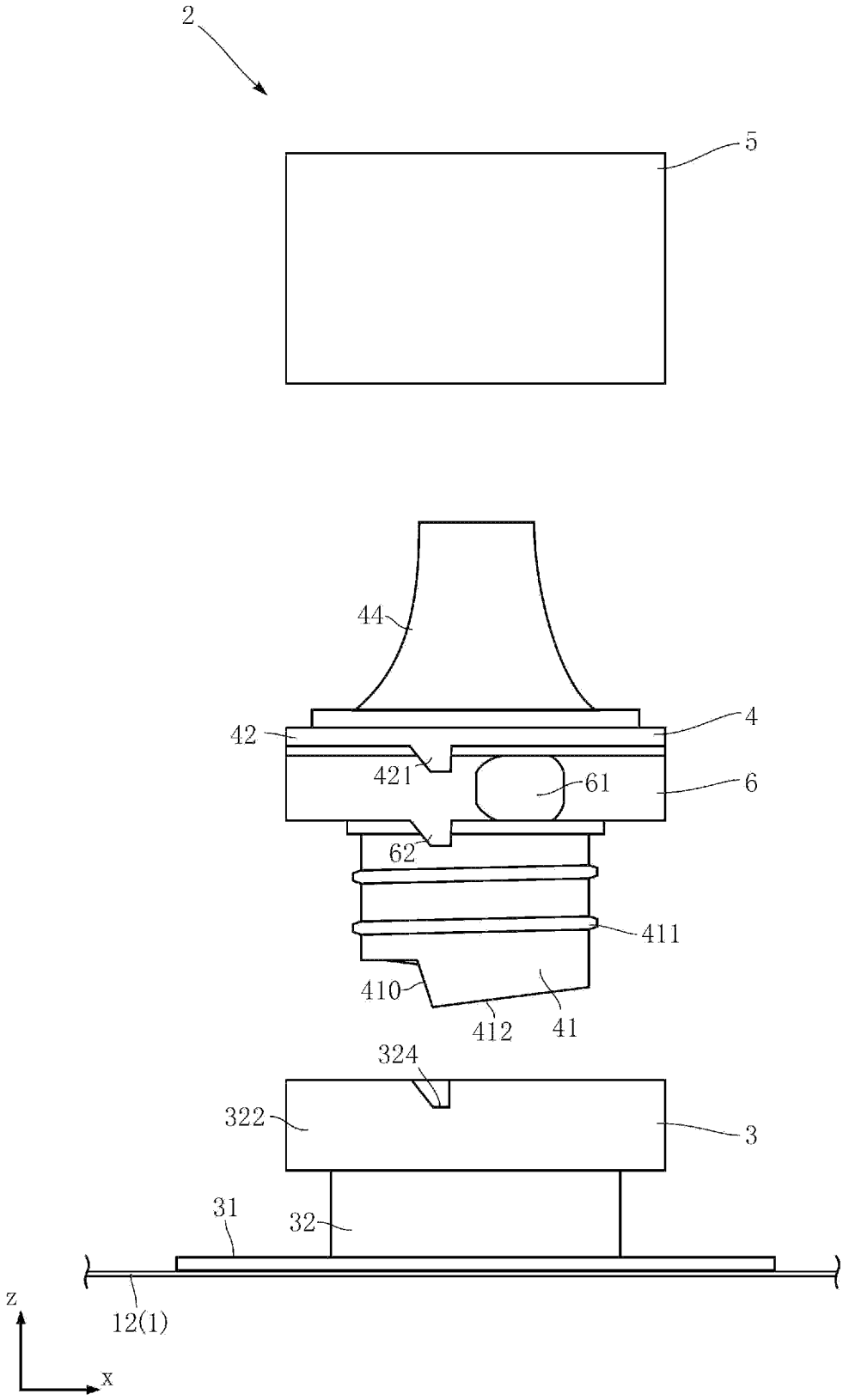


FIG.22

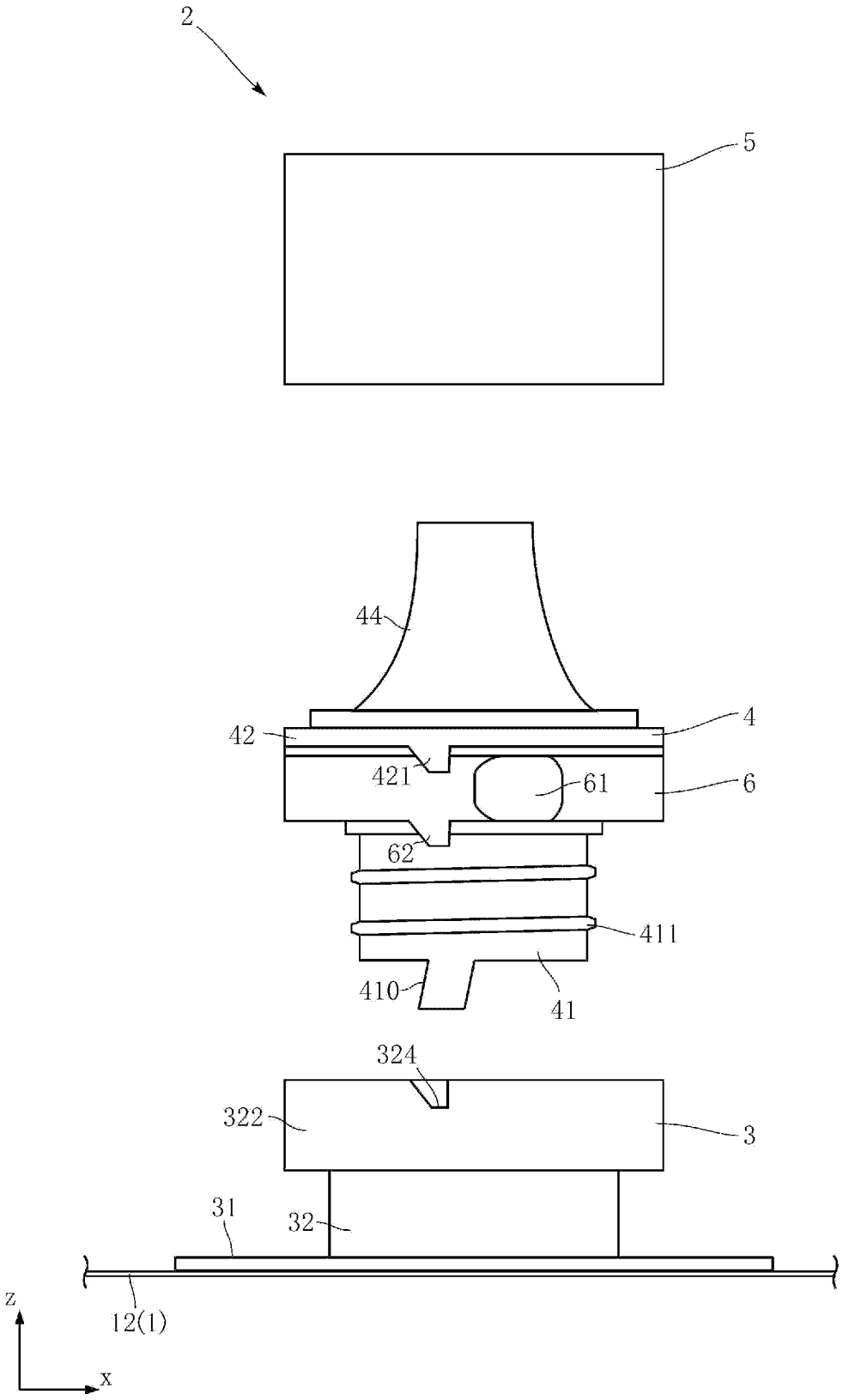


FIG.23

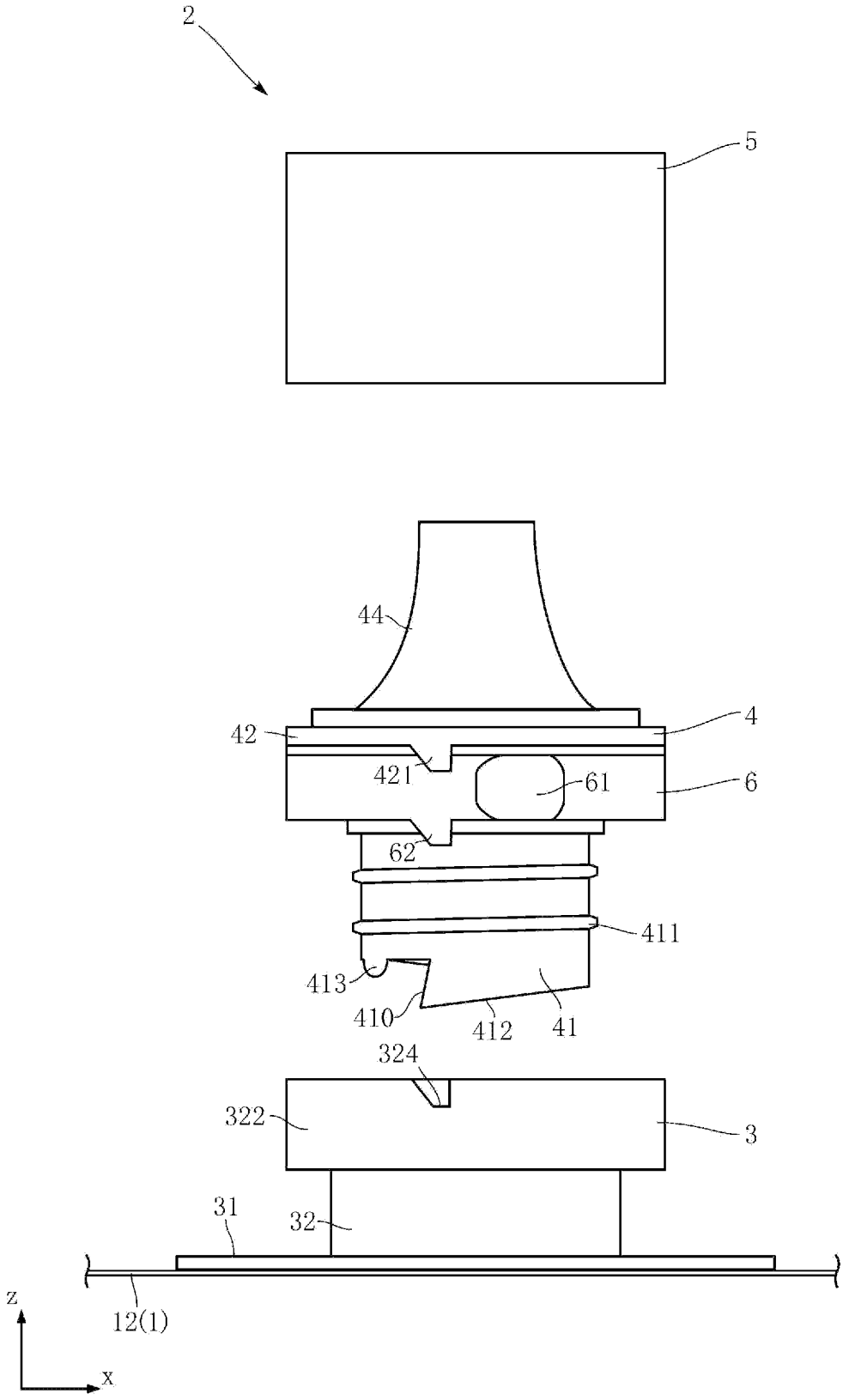
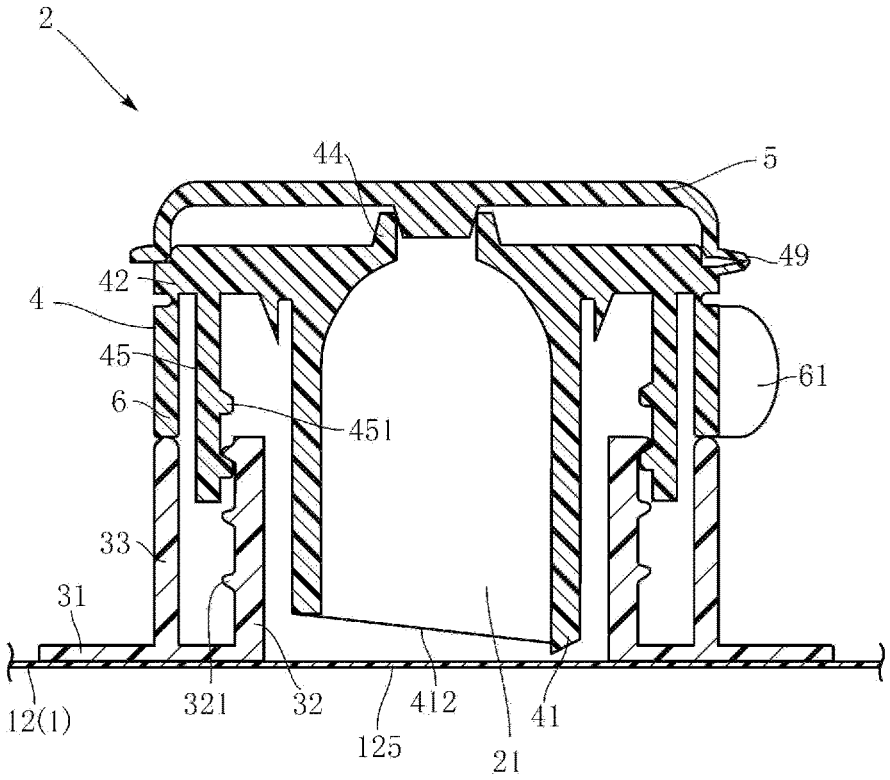


FIG.24


2
44
5
49
42
4
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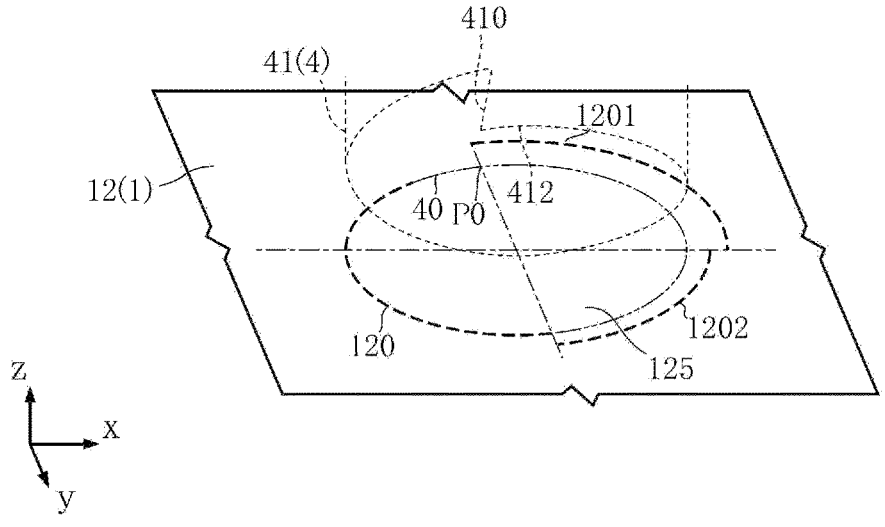
61
6
451
33
31
12(1)
321
32
412
125
41
21
z
x

FIG.25


410
41(4)
1201
12(1)
40
P0
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120
1202
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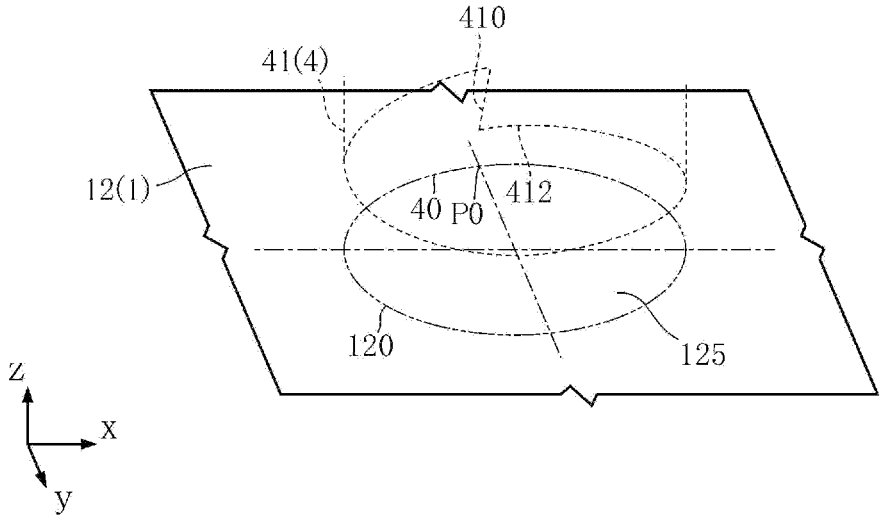
z
x
y

FIG.26



PACKAGE BODY FOR POUCH CONTAINER AND POUCH CONTAINER PACKAGE

TECHNICAL FIELD

[0001] The present invention relates to a pouch container packaging body and a pouch container package.

BACKGROUND ART

[0002] A pouch container package is widely used as packaging suitable for storing beverages such as sports drinks, food products such as ice cream and jelly, and packaged materials such as pharmaceuticals. A spout fixed to the container body is used as a member for dispensing the packaged material inside the pouch. Patent Document 1 discloses an example of a pouch container package including a spout. In the pouch container package disclosed in Patent Document 1, before being used, the spout does not break the seal of the container body and the container body is maintained in a sealed state.

[0003] When the packaged material in the pouch container is to be dispensed at the time of use, a portion of the spout is rotated so that the spout pierces the container body. This can suppress degradation of the packaged material before use.

CITATION LIST

Patent Literature

[0004] Patent Document 1: EP 2143658 B1

SUMMARY OF INVENTION

Technical Problem

[0005] The pouch container package disclosed in Patent Document 1 has a structure in which a sharp tip portion of the spout is pressed against the container body so that the tip portion pierces the container body. In such a configuration, the ductility of the container body may result in the container body being insufficiently pierced.

[0006] The present invention has been made in light of the forgoing, and has an object to provide a pouch container packaging body and a pouch container package with which a container body can be more reliably opened.

Solution to Problem

[0007] A pouch container packaging body provided by one aspect of the present invention includes a container body including a top sheet covering the container body at a top side and a spout fixed to an outer surface of the top sheet and including a dispensing space extending in an axial direction. The spout includes a fixed portion fixed to the top sheet, a rotating portion configured to rotate relative to the fixed portion, and a cutting portion configured to cut the top sheet. The top sheet includes a flat portion that is flat in a state where the fixed portion is fixed. The cutting portion is positioned away from the flat portion in an initial state and moves while rotating in a direction from an external surface to an internal surface of the flat portion in response to rotation of the rotating portion, and cuts the flat portion.

[0008] In a preferred embodiment of the present invention, the fixed portion includes a flange portion having a flat and annular shape, and the flange portion is fixed to an outer surface of the top sheet.

[0009] In a preferred embodiment of the present invention, the spout includes a rotation angle regulator configured to regulate rotation of the rotating portion to less than 3600 after the cutting portion starts to cut the top sheet.

[0010] In a preferred embodiment of the present invention, the rotating portion includes a first cylindrical portion configured to screw into the fixed portion, and the cutting portion is formed on an endmost side in the axial direction of the first cylindrical portion.

[0011] In a preferred embodiment of the present invention, the cutting portion is inclined and protrudes further in a rotation direction closer to a tip end in the axial direction.

[0012] In a preferred embodiment of the present invention, the endmost side in the axial direction of the first cylindrical portion is formed into an inclined edge, the inclined edge increasing in inclination, from a tip end of the cutting portion to a base end in the axial direction, along a direction opposite to a rotation direction.

[0013] In a preferred embodiment of the present invention, the top sheet is formed with an easy-cut line configured to be easier to cut than adjacent portions, and the easy-cut line overlaps at least a portion of a rotation path of the cutting portion when viewed along the axial direction.

[0014] In a preferred embodiment of the present invention, the easy-cut line includes an outer guide portion located radially outward from the rotation path of the cutting portion and provided near a terminal of the rotation path of the cutting portion as viewed along the axial direction.

[0015] In a preferred embodiment of the present invention, the spout includes a band-like portion being removable and configured to prevent rotation of the rotating portion relative to the fixed portion.

[0016] A pouch container package provided by a second aspect of the present invention includes the pouch container packaging body provided by the first aspect of the present invention and a packaged material stored in the container body in a sealed state.

Advantageous Effects of Invention

[0017] According to the present invention, a container body can be more reliably opened.

[0018] Other features and advantages of the present invention will become more apparent from the following detailed description made with reference to the accompanying drawings.

BRIEF DESCRIPTION OF DRAWINGS

[0019] FIG. **1** is a front view illustrating a pouch container packaging body according to a first embodiment of the present invention.

[0020] FIG. **2** is a plan view illustrating the pouch container packaging body according to the first embodiment of the present invention.

[0021] FIG. **3** is a front view illustrating a pouch container package according to the first embodiment of the present invention.

[0022] FIG. **4** is an enlarged cross-sectional view of a main part taken along line IV-IV in FIG. **2**.

[0023] FIG. **5** is an exploded perspective view illustrating a spout of the pouch container packaging body according to the first embodiment of the present invention.

[0024] FIG. **6** is an exploded front view illustrating the spout of the pouch container packaging body according to the first embodiment of the present invention.

[0025] FIG. **7** is an exploded cross-sectional view illustrating the spout of the pouch container packaging body according to the first embodiment of the present invention.

[0026] FIG. **8** is a cross-sectional view of a main part illustrating a body sheet of a container body of the pouch container packaging body according to the first embodiment of the present invention.

[0027] FIG. **9** is a cross-sectional view of a main part illustrating a top sheet of the container body of the pouch container packaging body according to the first embodiment of the present invention.

[0028] FIG. **10** is a front view of a main part illustrating opening of the pouch container package according to the first embodiment of the present invention.

[0029] FIG. **11** is a front view of a main part illustrating opening of the pouch container package according to the first embodiment of the present invention.

[0030] FIG. **12** is a front view of a main part illustrating opening of the pouch container package according to the first embodiment of the present invention.

[0031] FIG. **13** is a front view of a main part illustrating opening of the pouch container package according to the first embodiment of the present invention.

[0032] FIG. **14** illustrates opening of the pouch container package according to the first embodiment of the present invention, where (a) is a schematic diagram illustrating a rotation angle, and (b) is an enlarged perspective view of a main part.

[0033] FIG. **15** illustrates opening of the pouch container package according to the first embodiment of the present invention, where (a) is a schematic diagram illustrating a rotation angle, and (b) is an enlarged perspective view of a main part.

[0034] FIG. **16** illustrates opening of the pouch container package according to the first embodiment of the present invention, where (a) is a schematic diagram illustrating a rotation angle, and (b) is an enlarged perspective view of a main part.

[0035] FIG. **17** illustrates opening of the pouch container package according to the first embodiment of the present invention, where (a) is a schematic view illustrating a rotation angle, and (b) is an enlarged perspective view of a main part.

[0036] FIG. **18** illustrates opening of the pouch container package according to the first embodiment of the present invention, where (a) is a schematic diagram illustrating a rotation angle, and (b) is an enlarged perspective view of a main part.

[0037] FIG. **19** illustrates opening of the pouch container package according to the first embodiment of the present invention, where (a) is a schematic diagram illustrating a rotation angle, and (b) is an enlarged perspective view of a main part.

[0038] FIG. **20** is an exploded front view illustrating a first modification of the spout of the pouch container packaging body according to the first embodiment of the present invention.

[0039] FIG. **21** is an exploded front view illustrating a second modification of the spout of the pouch container packaging body according to the first embodiment of the present invention.

[0040] FIG. **22** is an exploded front view illustrating a third modification of the spout of the pouch container packaging body according to the first embodiment of the present invention.

[0041] FIG. **23** is an exploded front view illustrating a fourth modification of the spout of the pouch container packaging body according to the first embodiment of the present invention.

[0042] FIG. **24** is a cross-sectional view illustrating a fifth modification of the spout of the pouch container packaging body according to the first embodiment of the present invention.

[0043] FIG. **25** is an enlarged perspective view of a main part illustrating a first modification of the top sheet of the container body of the pouch container packaging body according to the first embodiment of the present invention.

[0044] FIG. **26** is an enlarged perspective view of a main part illustrating a second modification of the top sheet of the container body of the pouch container packaging body according to the first embodiment of the present invention.

DESCRIPTION OF EMBODIMENTS

[0045] Preferable embodiments of the present invention will now be described with reference to the drawings.

[0046] In the following description, an upper side in the up-down direction may be referred to as a "top" side, and a lower side in the up-down direction may be referred to as a "bottom" side. Further, the terms "up-down direction" and "front-back direction" are merely used for convenience to explain configurations, and the orientation of the pouch container packaging body and the pouch container package is not limited to these directions. Terms such as "first" and "second" used herein are merely used for convenience to distinguish between components and are not intended to denote an order to the components.

First Embodiment

[0047] FIGS. **1** to **9** illustrate a pouch container packaging body and a pouch container package according to a first embodiment of the present invention. A pouch container packaging body A**1** according to the present embodiment includes a container body **1** and a spout **2**.

[0048] The pouch container packaging body A**1** is a packaging body used in a pouch container package B**1**.

[0049] FIG. **1** is a front view illustrating the pouch container packaging body A**1**. FIG. **2** is a plan view illustrating the pouch container packaging body A**1**. FIG. **3** is a front view illustrating the pouch container package B**1**. FIG. **4** is an enlarged cross-sectional view of a main part taken along line IV-IV in FIG. **2**. FIG. **5** is an exploded perspective view illustrating a spout of the pouch container packaging body A**1**. FIG. **6** is an exploded front view illustrating the spout of the pouch container packaging body A**1**. FIG. **7** is an exploded cross-sectional view illustrating the spout of the pouch container packaging body A**1**. FIG. **8** is a cross-sectional view of a main part illustrating a body sheet of the container body of the pouch container packaging body A**1**.

FIG. **9** is a cross-sectional view of a main part illustrating a top sheet of the container body of the pouch container packaging body A**1**.

Container Body **1**

[0050] In the pouch container package B**1**, a packaged material **7** is stored in the container body **1** in a sealed state. The container body **1** includes a pair of body sheets **11** and a top sheet **12**. Note that the specific configuration of the container body **1** in the pouch container packaging body A**1** and the pouch container package B**1** is not particularly limited. The container body **1** may include only the pair of body sheets **11** and the top sheet **12**, or may have a configuration further including a side gusset sheet or a bottom gusset sheet.

[0051] The pair of body sheets **11** overlap in the y-direction. The shape and size of the pair of body sheets **11** are not particularly limited. The body sheet **11** has, for example, a rectangular shape, a polygonal shape, or another appropriately selected shape. In this embodiment, the body sheet **11** has a substantially rectangular shape. The body sheets **11** are configured to maintain the sealed state of the container body **1** before the pouch container package B**1** is used, and do not include a through hole or a cut portion in communication with the inside. Note that the pair of body sheets **11** constituting the container body **1** is not limited to separate sheet materials. For example, the pair of body sheets **11** overlapping in the y-direction may be formed by joining the ends of one sheet material in the width direction and folding this cylindrical sheet to be flat.

[0052] The top sheet **12** covers the pair of body sheets **11** at the top side (the upper side in the z-direction in FIGS. **1** and **3**). The shape and size of the top sheet **12** are not particularly limited. The top sheet **12** has, for example, a rectangular shape, a polygonal shape, a circular shape, an elliptical shape, or another appropriately selected shape. In this embodiment, the top sheet **12** has a substantially hexagonal shape as illustrated in FIG. **2**. The top sheet **12** is configured to maintain the sealed state of the container body **1** before the pouch container package B**1** is used, and does not include a through-hole or cutting portion in communication with the inside. As illustrated in FIG. **4**, the top sheet **12** includes a flat portion **125**. The flat portion **125** is a portion that is flat in a state where a fixed portion **3** described below is fixed.

[0053] The pair of body sheets **11** and the top sheet **12** are typically each formed of a resin film. The resin film is required to have basic packaging performance, such as impact resistance, wear resistance, and heat resistance. The sheet is also required to have heat sealing properties in order to form a seal portion **17** (described below), which is typically formed by heat sealing. The spout **2** to be described below is fixed to the top sheet **12** by ultrasonic welding, for example. Suitable examples of the sheet include a multilayer sheet including a base film layer and a sealant film layer that imparts heat sealing properties. When high gas barrier properties or light shielding properties is required, a barrier layer is preferably provided between the base film layer and the sealant film layer. Note that the base film layer itself may impart barrier properties. In this case, the barrier layer is used as the base film layer, and the multilayer sheet includes the barrier layer and the sealant film layer.

[0054] As illustrated in FIG. **8**, in the present embodiment, a case in which the body sheet **11** is formed by layering a base film layer **101**, a sealant film layer **102**, and a barrier film layer **104** will be described as an example. Also, as illustrated in FIG. **9**, a case in which the top sheet **12** is formed by layering the base film layer **101**, the sealant film layer **102**, a sealant film layer **103**, and the barrier film layer **104** will be described as an example.

[0055] As illustrated in FIG. **8**, in the body sheet **11**, the base film layer **101** is disposed on the outer surface side, and the sealant film layer **102** is exposed to the inner surface. Further, the barrier film layer **104** is present between the base film layer **101** and the sealant film layer **102**. Note that in FIG. **8**, the left side in the y-direction denotes the outer surface side, and the right side denotes the inner surface side.

[0056] In the top sheet **12**, the sealant film layer **103** is exposed to the outer surface, and the sealant film layer **102** is exposed to the inner surface. The base film layer **101** is present between the sealant film layer **102** and the sealant film layer **103**. The barrier film layer **104** is present between the base film layer **101** and the sealant film layer **102**. Note that the barrier film layer **104** may be present between the base film layer **101** and the sealant film layer **103**. Additionally, the barrier film layer **104** may be provided on both sides of the base film layer **101**. Note that in FIG. **9**, the upper side in the z-direction denotes the outer surface side, and the lower side denotes the inner surface side.

[0057] In the present embodiment, the top sheet **12** includes an easy-cut line **120**. The easy-cut line **120** is a linear portion formed in the flat portion **125** and configured to be easier to cut than adjacent portions. The easy-cut line **120** is constituted by a groove recessed from the sealant film layer **103** on the outer surface side, for example. The specific configuration of the easy-cut line **120** is not particularly limited, and the easy-cut line **120** may be constituted by a cavity portion, for example. Examples of such a cavity portion include a cavity formed in only the base film layer **101** among the sealant film layer **103**, the base film layer **101**, the barrier film layer **104** and the sealant film layer **102** that constitute the top sheet **12** illustrated in FIG. **9**, where the cavity is formed by altering the base film layer **101** by irradiation with laser light. However, from the perspective of protecting the packaged material **7**, the easy-cut line **120** is preferably configured not to extend through the barrier film layer **104**. The easy-cut line **120** can be formed by, for example, irradiating the material sheet of the top sheet **12** with a laser beam from the sealant film layer **103** side. The position at which the easy-cut line **120** is provided and its function will be described later.

[0058] Examples of the constitutional materials of the base film layer **101**, the sealant film layers **102**, **103**, and the barrier film layer **104** will now be described. These layers can be layered by using a conventional laminating method such as co-extrusion lamination, dry lamination with an adhesive, and thermal lamination in which the layers are heat-bonded with a heat-adhesive layer in between.

[0059] Examples of the film constituting the base film layer **101** include one layer or two or more layers of a stretched film or an unstretched film made of, for example, a polyester (polyethylene terephthalate (PET), polyethylene naphthalate (PEN), polybutylene terephthalate (PBT), polycarbonate (PC), or the like), a polyolefin (polyethylene (PE), polypropylene (PP), or the like), a polyamide (nylon-6, nylon-66, or the like), polyacrylonitrile (PAN), polyimide

(PI), polyvinyl chloride (PVC), polyvinylidene chloride (PVDC), polymethyl methacrylate (PMMA), and polyethersulfone (PES).

[0060] Examples of the film constituting the sealant film layers **102**, **103** include one layer or two or more layers of a stretched film or an unstretched film made of, for example, low density polyethylene (LDPE), linear low density polyethylene (LLDPE), an ethylene-propylene copolymer (EP), cast polypropylene (CPP), oriented nylon (ON), an ethylene-olefin copolymer, an ethylene-acrylic acid copolymer (EAA), an ethylene-methacrylic acid copolymer (EMAA), and an ethylene-vinyl acetate copolymer (EVA).

[0061] Examples of the barrier film layer **104** include a metal thin film made of aluminum or the like and a resin film made of vinylidene chloride (PVDC), an ethylene-vinyl alcohol copolymer (EVOH), or any synthetic resin film (e.g., a base film layer) on which an inorganic oxide such as aluminum, aluminum oxide or silica is deposited (or sputtered).

[0062] Note that examples of the preferred configuration of the top sheet **12** having the above-described easy-cut line **120** formed of a cavity portion include a layered film including at least four layers being a polyethylene-based sealant film layer (sealant film layer **103**), a polyester-based or a polyamide-based base film layer (base film layer **101**), a metal thin film (barrier film layer **104**), and a polyethylene-based sealant layer (sealant film layer **103**).

[0063] The seal portion **17** is a portion where the pair of body sheets **11** and the top sheet **12** are joined together at suitable portions, and allows the container body **1** to store the packaged material **7** in a sealed state. The specific configuration of the seal portion **17** is not particularly limited. In the present embodiment, the seal portion **17** is formed by heat sealing. As illustrated in FIGS. **1** and **2**, in the illustrated pouch container packaging body A**1**, the seal portion **17** includes a pair of side seal portions **171** and a top seal portion **172**.

[0064] The pair of side seal portions **171** are portions where end portions of the pair of body sheets **11** in the x-direction are joined. In the present embodiment, the sealant film layers **102** of the pair of body sheets **11** are joined by heat sealing at the side seal portions **171**.

[0065] As illustrated in FIG. **2**, the top seal portion **172** is a portion where the top portions of the pair of body sheets **11** and the edge portion of the top sheet **12** are joined together. In the illustrated example, the sealant film layer **102** of the pair of body sheets **11** and the sealant film layer **102** of the top sheet **12** are joined by heat sealing.

[0066] Also, as illustrated in FIG. **3**, in the pouch container package B**1**, the seal portion **17** includes a bottom seal portion **173** in addition to the pair of side seal portions **171** and the top seal portion **172**. The bottom seal portion **173** is a portion where the bottom portions of the pair of body sheets **11** are joined after the container body **1** of the pouch container packaging body A**1** is filled with the packaged material **7** from the bottom side of the container body **1**. In the present embodiment, the sealant film layers **102** of the pair of body sheets **11** are joined by heat sealing at the bottom seal portion **173**. By forming the seal portion **17** in the pouch container package B**1**, the packaged material **7** is stored in the container body **1** in a sealed state.

Spout **2**

[0067] The spout **2** is used for dispensing the packaged material **7** in the pouch container package B**1**. In the present embodiment, as illustrated in FIGS. **4** to **7**, the spout **2** includes a fixed portion **3**, a rotating portion **4**, a cap portion **5**, and a band-like portion **6**. As illustrated in FIG. **4**, the spout **2** includes a dispensing space **21** that extends in the z-direction, which is an axial direction. After the pouch container package B**1** is opened, the packaged material **7** is dispensed via the dispensing space **21**. The material of the spout **2** is not particularly limited. For example, the spout **2** is constituted by a resin material such as polyethylene. Note that the specific configuration of the spout **2** is not limited and may be changed as appropriate, provided that the intended function of the present invention can be achieved.

[0068] As illustrated in FIGS. **4**, **6** and **7**, the fixed portion **3** is fixed to the outer surface (upper surface in the drawing) of the top sheet **12**. In the present embodiment, the fixed portion **3** includes a flange portion **31** and a second cylindrical portion **32**.

[0069] The flange portion **31** has a flat shape along the xy-plane, and is annular when viewed from the z-direction. The shape of the flange portion **31** viewed from the z-direction is selected from a variety of shapes such as an annular shape, an elliptical ring shape and a polygonal ring shape. In the illustrated example, the flange portion **31** has an annular shape.

[0070] In the present embodiment, as illustrated in FIG. **4**, the flange portion **31** is fixed to the outer surface of the top sheet **12**. The method used for fixing the flange portion **31** is not particularly limited. In the present embodiment, ultrasonic welding is used to join the flange portion **31** to the sealant film layer **103** of the top sheet **12**. Note that the flange portion **31** may be fixed to the top sheet **12** by using an adhesive or heat sealing. When the flat and annular flange portion **31** is fixed, a portion of the top sheet **12** overlapping the flange portion **31** and a portion located inward of the flange portion **31** when viewed from at least the z-direction are maintained in a flat shape, and these portions are designated as the flat portion **125** described above.

[0071] As illustrated in FIGS. **4** to **7**, the second cylindrical portion **32** is a portion that is connected to an inner peripheral end of the flange portion **31** and has a substantially cylindrical shape extending toward the top side in the z-direction (upper side in the figures). In the illustrated example, the second cylindrical portion **32** includes a second thread portion **321** and a thick portion **322**.

[0072] As illustrated in FIGS. **4**, **5** and **7**, the second thread portion **321** is formed on the inner peripheral surface of the second cylindrical portion **32**. The second thread portion **321** is a portion that engages with a first thread portion **411** (described below) of the rotating portion **4**.

[0073] As illustrated in FIGS. **4** and **7**, the thick portion **322** is formed on the upper side in the z-direction of the second cylindrical portion **32**, and is a portion that has a partially large dimension in the radial direction when the z-direction is the axial direction. The thick portion **322** of the present embodiment includes a tapered surface **323** and a recessed portion **324**.

[0074] As illustrated in FIGS. **4** and **7**, the tapered surface **323** is a portion on the upper side in the z-direction of the inner peripheral surface of the thick portion **322**. The tapered surface **323** is an inclined surface with a larger radial dimension closer to the upper side in the z-direction.

[0075] As illustrated in FIGS. **5** and **6**, the recessed portion **324** is a portion recessed downward from the upper surface of the thick portion **322** in the drawings. The recessed portion **324** is a portion that functions with a protruding portion **421** of the rotating portion **4** to be described below to constitute a rotation angle regulator according to the present invention.

[0076] The rotating portion **4** is a member that can rotate relative to the fixed portion. As illustrated in FIGS. **4** and **7**, the rotating portion **4** has an entirely cylindrical shape and forms the dispensing space **21** together with the fixed portion **3**. As illustrated in FIGS. **4** to **7**, in the present embodiment, the rotating portion **4** includes a first cylindrical portion **41**, a rim portion **42**, an outer cylinder portion **43**, and a nozzle portion **44**.

[0077] The first cylindrical portion **41** is a portion having a substantially cylindrical shape and, as illustrated in FIG. **4**, is located on the inner side of the second cylindrical portion **32** of the fixed portion **3**. As illustrated in FIGS. **4** to **7**, the first cylindrical portion **41** of the present embodiment includes a cutting portion **410**, the first thread portion **411**, and an inclined edge **412**.

[0078] The cutting portion **410** is a portion that, when the rotating portion **4** is rotated relative to the fixed portion **3** and the top sheet **12**, moves in a direction from the outer surface to the inner surface of the flat portion **125** (downward in the z-direction in the drawings) while rotating about a central axis extending in the z-direction. In the present embodiment, the cutting portion **410** is integrally formed with the rotating portion **4** as a part of the first cylindrical portion **41**. As illustrated in FIGS. **4** and **5**, the cutting portion **410** is provided at a position separated from the central axis extending in the z-direction (axial direction) of the rotating portion **4** by a predetermined distance. In an initial state to be described below, a tip of the cutting portion **410** is separated from the flat portion **125** on the upper side in the z-direction (axial direction). Note that the cutting portion according to the present invention is not limited to being integrally formed as a part of the first cylindrical portion **41**. The specific configuration of the cutting portion is not particularly limited, and the cutting portion need only be configured to move in the direction from the outer surface to the inner surface of the flat portion **125** while rotating about the central axis extending in the z-direction when the rotating portion **4** is rotated relative to the fixed portion **3** and the flat portion **125**. For example, the cutting portion may be constituted by a member separate from the first cylindrical portion **41**. Further, the rotating portion **4** may be configured to move upward in the z-direction and the cutting portion may be configured to move downward in the z-direction by rotating the rotating portion **4** with a gear member present between the cutting portion and the first cylindrical portion **41**.

[0079] The specific shape and size of the cutting portion **410** are not particularly limited. The cutting portion **410** need only be able to cut the flat portion **125** of the top sheet **12**. In the present embodiment, the cutting portion **410** has a shape that becomes thinner closer to the tip end in the circumferential direction, and has a shape similar to a cutting blade. Note that the cutting portion **410** is not limited to a pointed shape that can smoothly cut the flat portion **125**, and may have any shape with which the flat portion **125** can be cut when the rotating portion **4** is rotated as to be described below. Additionally, in the present embodiment, the cutting portion **410** is inclined and protrudes further in a rotation direction closer to a tip end in the axial direction (lower end in the z-direction), as clearly illustrated in FIGS. **5** and **6**. Here, "rotation direction" refers to the direction in which the cutting portion **410** rotates when the cutting portion **410** moves in the direction from the outer surface to the inner surface of the flat portion **125** due to the rotation of the rotating portion **4**. Further, at the endmost portion of the first cylindrical portion **41**, the angle formed by the cutting portion **410** and the inclined edge **412** is an acute angle. This provides the advantage that, when the pouch container package B**1** is opened as to be described below, the tip of the cutting portion **410** more easily pierces the flat portion **125**.

[0080] As illustrated in FIGS. **4** to **7**, the first thread portion **411** is formed on the outer peripheral surface of the first cylindrical portion **41**. The first thread portion **411** screws into the second thread portion **321** of the fixed portion **3**. In the present embodiment, when the rotating portion **4** is rotated clockwise as viewed from above in the z-direction, the rotating portion **4** moves in the direction from the outer surface to the inner surface of the flat portion **125** (moves lower in the z-direction) due to this screw configuration.

[0081] The inclined edge **412** is a lower edge of the first cylindrical portion **41** in the z-direction, and is continuous with a tip of the cutting portion **410**. As illustrated in FIGS. **4** to **7**, the inclined edge **412** is inclined in the axial direction from a tip end side (lower side in the z-direction) of the cutting portion **410** to a base end side (upper side in the z-direction) of the cutting portion **410**, the inclination increasing from the tip end side of the cutting portion **410** further along a direction opposing the rotation direction.

[0082] As illustrated in FIGS. **4** to **7**, the rim portion **42** is a portion that projects radially from an upper portion of the first cylindrical portion **41** in the z-direction (axial direction). In the illustrated example, the rim portion **42** has a substantially annular shape and has an outer diameter dimension that is, for example, substantially equal to the outer dimension of the thick portion **322** of the fixed portion **3**. The rim portion **42** of the present embodiment has a protruding portion **421**.

[0083] As illustrated in FIGS. **5** and **6**, the protruding portion **421** is a portion protruding downward from the bottom surface of the rim portion **42** in the drawings. The protruding portion **421** is a portion that constitutes, with the recessed portion **324** of the fixed portion **3** described above, the rotation angle regulator according to the present invention.

[0084] As illustrated in FIGS. **4** and **7**, the outer cylinder portion **43** is disposed on the outer side of the first cylindrical portion **41** in the radial direction, and extends downward in the z-direction from the rim portion **42**. The endmost portion of the outer cylinder portion **43** has a tapered shape that becomes thinner further downward in the z-direction.

[0085] The outer cylinder portion **43** overlaps with the tapered surface **323** of the fixed portion **3** when viewed from the z-direction.

[0086] The nozzle portion **44** is a portion for dispensing the packaged material **7** in the pouch container package B**1**. As illustrated in FIGS. **4** to **7**, in the present embodiment, the nozzle portion **44** extends upward in the z-direction from an upper inner edge of the rim portion **42**. The shape of the nozzle portion **44** is not particularly limited. In the illustrated

example, the nozzle portion **44** has a tapered cylindrical shape that decreases in diameter further upward in the z-direction.

[0087] The cap portion **5** is a member that covers the dispensing space **21** of the spout **2** from above in the z-direction. The specific configuration of the cap portion **5** is not particularly limited. In the present embodiment, the cap portion **5** is configured as a member separate from the rotating portion **4**, and is configured to fit into the rotating portion **4**. More specifically, when the cap portion **5** is fitted into the rim portion **42** of the rotating portion **4**, a portion of the cap portion **5** covers the tip of the nozzle portion **44**. Note that the cap portion **5** may be fixed by a technique such as threaded engagement with the rotating portion **4**. Additionally, the cap portion **5** may be integrally formed with the rotating portion **4**, or may have an open/close configuration that can switch between covering and opening the nozzle portion **44**.

[0088] As illustrated in FIGS. **4** to **7**, the band-like portion **6** is provided between the thick portion **322** of the fixed portion **3** and the rim portion **42** of the rotating portion **4**. In the illustrated example, the band-like portion **6** surrounds the first cylindrical portion **41** and the outer cylinder portion **43** of the rotating portion **4** from the outer side in the radial direction. The band-like portion **6** can be removed from the fixed portion **3** and the rotating portion **4** and, in the illustrated example, the band-like portion **6** is connected to the rotating portion **4** at a plurality of locations. Additionally, the band-like portion **6** includes a tab portion **61**. The tab portion **61** is provided at one end of the band-like portion **6** and has a shape that can be easily grasped by a user. The band-like portion **6** functions to prevent the rotating portion **4** from approaching the fixed portion **3**.

[0089] Opening of the pouch container package B**1** will now be described with reference to FIGS. **10** to **19**.

[0090] FIG. **4** illustrates the pouch container package B**1** in an unopened state. As illustrated in FIGS. **10** and **11**, to open the pouch container package B**1** and dispense the packaged material **7**, the band-like portion **6** is first removed from the rotating portion **4** by grasping the tab portion **61**, for example. In this state, the rotating portion **4** is not yet rotated relative to the fixed portion **3**. This state is referred to as the initial state. In the initial state, the circumferential position of the recessed portion **324** of the fixed portion **3** and the circumferential position of the protruding portion **421** of the rotating portion **4** are substantially aligned. In addition, the tip of the cutting portion **410** is separated from the flat portion **125** on the upper side in the z-direction (axial direction). In the illustrated example, a case where the circumferential position of the tip of the cutting portion **410** is substantially equal to those of the recessed portion **324** and the protruding portion **421** is described as an example, but no limitation is intended.

[0091] FIG. **14** illustrates the relationship between the rotating portion **4** (cutting portion **410**) and the flat portion **125** of the top sheet **12** in the initial state. FIG. **14**(*a*) is a schematic view of the flat portion **125** of the top sheet **12** as viewed from the lower side in the z-direction (axial direction). A rotation path **40** is a virtual line representing the path traveled by the tip of the cutting portion **410** when the rotating portion **4** rotates, projected onto the flat portion **125** along the z-direction. As to be described below, in the present embodiment, the rotating portion **4** rotates approximately 3600 from the initial state until the flat portion **125** has finished being cut, where the rotation path **40** is a substantially true circle. Note that the rotation angle from the initial state until the top sheet **12** has finished being cut can be appropriately set and may be, for example, from 540° to 1080°. In such a case, there is a margin of 0.5 to 2 rotations for rotating the rotating portion **4** from the initial state until the cutting portion **410** comes into contact with the flat portion **125**, and the tip of the cutting portion **410** can be further separated from the flat portion **125** in the z-direction by this margin in the initial state. As described above, the easy-cut line **120** is a linear portion that is provided in the flat portion **125** and configured to be easy to cut. In FIG. **14**(*a*), to facilitate understanding, the easy-cut line **120** is indicated by a dotted line. Further, a portion of the easy-cut line **120** overlaps the rotation path **40**. This portion is indicated only by the dotted line indicating the easy-cut line **120**.

[0092] A point P**0** is the circumferential position of the tip of the cutting portion **410** in the initial state. The rotating portion **4** of the present embodiment is configured to rotate relative to the fixed portion **3** clockwise when viewed from the upper side in the z-direction. Thus, in FIG. **14**(*a*), the cutting portion **410** rotates counterclockwise. The easy-cut line **120** of the present embodiment is provided at a position separated from a point P in the circumferential direction. The distance (angle) between the point P and the end portion of the easy-cut line **120** is not particularly limited, and is, for example, approximately from 15° to 60°. The easy-cut line **120** includes a portion that overlaps the rotation path **40** when viewed from the z-direction (axial direction). The entire easy-cut line **120** may be configured to overlap the rotation path **40**, or some of the easy-cut line **120** may be configured to overlap the rotation path **40**. In the illustrated example, **1**/**2** to **3**/**4** of the easy-cut line **120** overlaps the rotation path **40**. Further, the easy-cut line **120** includes an outer guide portion **1201**. The outer guide portion **1201** is provided closer to the terminal of the rotation path **40** (easy-cut line **120**) of the cutting portion **410** when viewed from the z-direction (axial direction) and is positioned radially outward relative to the rotation path **40**. The angle at which the easy-cut line **120** is provided is not particularly limited, and the easy-cut line **120** is provided in an angle range from 450 to 345°, for example.

[0093] FIG. **14**(*b*) is a perspective view of a main part illustrating the flat portion **125** of the top sheet **12** when viewed from below in the z-direction (axial direction). The flat portion **125** and the cutting portion **410** are illustrated in the initial state illustrated in FIG. **14**(*b*). In the initial state, the tip of the cutting portion **410** is separated from the flat portion **125** upward in the z-direction, and the circumferential position is at the point P**0** as described above. Note that, to facilitate understanding, FIGS. **14**(*a*) and (*b*) illustrate an auxiliary line passing through the point P**0** and parallel to the y-direction and an auxiliary line that is orthogonal to the auxiliary line. Note that the description made with reference to FIGS. **15** to **19** is the same as the description made with reference to FIG. **14**.

[0094] Next, after removing the band-like portion **6** as illustrated in FIGS. **10** and **11**, the rotating portion **4** is rotated relative to the fixed portion **3**. In the present embodiment, the rotating portion **4** and the cap portion **5** are integrally rotated. FIGS. **11** and **15** illustrate a state where the cutting portion **410** is rotated to a point P**1** in the circumferential direction. In this state, rotation of the rotating portion **4** causes the cutting portion **410** to approach the

flat portion **125** in the z-direction, and the tip of the cutting portion **410** comes into contact with the flat portion **125**. This state is a state where the flat portion **125** starts to be cut by the cutting portion **410**. Thus, the flat portion **125** is not cut in the range from the point P**0** to the point P**1** of the flat portion **125**. In the present embodiment, the easy-cut line **120** is provided from near the point P**1** at which the cutting portion **410** is in contact with the flat portion **125**.

[0095] FIG. **16** illustrates a state where the rotating portion **4** is further rotated and the cutting portion **410** has reached a point P**2** in the circumferential direction. When the rotating portion **4** rotates from the state illustrated in FIG. **15** to the state illustrated in FIG. **16**, the cutting portion **410** rotates about the z-direction while moving further downward in the z-direction, and moves from the point P**1** to the point P**2** in the circumferential direction. As a result, some of the flat portion **125** is cut by the cutting portion **410**. In the present embodiment, the cutting portion **410** cuts the flat portion **125** from the point P**1** to the point P**2** along the easy-cut line **120**.

[0096] FIG. **17** illustrates a state where the rotating portion **4** is further rotated and the cutting portion **410** has reached a point P**3** in the circumferential direction. When the rotating portion **4** rotates from the state illustrated in FIG. **16** to the state illustrated in FIG. **17**, the cutting portion **410** rotates about the z-direction while moving further downward in the z-direction, and moves from the point P**2** to the point P**3** in the circumferential direction. Thus, the flat portion **125** is further cut by the cutting portion **410**. In the present embodiment, the cutting portion **410** cuts the flat portion **125** from the point P**2** to the point P**3** along the easy-cut line **120**. By cutting the flat portion **125** from the point P**1** to the point P**3**, a cut piece **122** is formed in the flat portion **125**. The cut piece **122** is a portion defined by an arc-shaped cut line **121** formed by the cutting portion **410**.

[0097] FIG. **18** illustrates a state where the rotating portion **4** is further rotated and the cutting portion **410** has reached a point P**4** in the circumferential direction. When the rotating portion **4** rotates from the state illustrated in FIG. **17** to the state illustrated in FIG. **18**, the cutting portion **410** rotates about the z-direction while moving further downward in the z-direction, and moves from the point P**3** to the point P**4** in the circumferential direction. As a result, the flat portion **125** is further cut by the cutting portion **410** and, in the illustrated example, is clearly no longer in a flat state. In the present embodiment, the cutting portion **410** cuts the top sheet **12** (flat portion **125**) from the point P**3** to the point P**4** along the easy-cut line **120**. The cut piece **122** is expanded due to the development of the cut in the top sheet **12** (flat portion **125**).

[0098] FIGS. **12** and **19** illustrate a state where the rotating portion **4** is further rotated and the cutting portion **410** has reached a point P**5** in the circumferential direction. The point P**5** is substantially the same position as the point P**0**. When the rotating portion **4** rotates from the state illustrated in FIG. **18** to the state illustrated in FIG. **19**, the cutting portion **410** rotates about the z-direction while moving further downward in the z-direction, and moves from the point P**4** to the point P**5** in the circumferential direction. In the present embodiment, the easy-cut line **120** overlaps with the rotation path **40** in the range from the point P**0** to the point P**4**, and is provided with the outer guide portion **1201** located radially outward from the rotation path **40** in the range from the point P**4** to the point P**5**. Thus, although the cutting portion **410** moves from the point P**4** to the point P**5**, cutting of the top sheet **12** (flat portion **125**) advances along the outer guide portion **1201**. As a result, the cutting portion **410** exhibits a behavior of being located radially inward from the cut piece **122** as a result of moving from the point P**4** to the point P**5**. As illustrated in FIG. **12**, in this state, the protruding portion **421** is fitted into the recessed portion **324**. This prevents further rotation of the rotating portion **4**. In this way, the recessed portion **324** and the protruding portion **421** regulate the rotation of the cutting portion **410** starting from the point P**0** and reaching the point P**5**. That is, the recessed portion **324** and the protruding portion **421** restrict the rotation of the rotating portion **4** after the point P**1** at which the cutting portion **410** starts to cut the top sheet **12** (flat portion **125**) to less than 360°, and constitutes the rotation angle regulator according to the present invention. Note that the specific configuration of the rotation angle regulator is not limited to the configuration consisting of the recessed portion **324** and the protruding portion **421**. For example, the rotation angle regulator may be configured by a protruding portion formed on the fixed portion **3** and a recessed portion formed in the rotating portion **4**. In addition, when one of the fixed portion **3** and the rotating portion **4** is configured to cover the other, the rotation angle regulator may be configured by a protruding portion or a recessed portion formed on an inner surface of the component located on the outer side and a recessed portion or a protruding portion formed on the outer surface of the component located on the inner side.

[0099] The cutting by the cutting portion **410** forms an opening corresponding to the size of the cut piece **122** in a portion (flat portion **125**) surrounded by the flange portion **31** of the top sheet **12**. As a result, the container body **1** is opened. For example, as illustrated in FIG. **13**, the packaged material **7** can be dispensed from the nozzle portion **44** by removing the cap portion **5** from the rotating portion **4**. The above step completes the opening of the pouch container package B**1**.

[0100] Next, the operation of the pouch container packaging body A**1** and the pouch container package B**1** is described.

[0101] According to the present embodiment, as illustrated in FIGS. **14** to **19**, the cutting portion **410** rotates about the central axis extending in the z-direction (axial direction) so as to draw the rotation path **40** while moving in the direction from the outer surface to the inner surface of the flat portion **125** of the top sheet **12**, thereby cutting the flat portion **125**. This allows the flat portion **125** to be more reliably cut. For example, in a configuration where the container body **1** is opened by piercing the flat portion **125**, the container body may not be sufficiently pierced due to the ductility of the container body. However, this is less likely to happen in the present embodiment. Therefore, with the pouch container packaging body A**1** and the pouch container package B**1**, the container body **1** can be more reliably opened.

[0102] As illustrated in FIG. **5**, the flange portion **31** of the fixed portion **3** has a flat annular shape. Due to this flat shape, as illustrated in FIGS. **4** and **7**, the flatness of a portion of the flat portion **125** overlapping the flange portion **31** when viewed from the z-direction and a portion located inside the flange portion **31** can be reliably maintained. This makes it possible to more easily cut with the cutting portion **410**.

[0103] As illustrated in FIG. **12**, because the rotation angle regulator constituted by the recessed portion **324** of the fixed portion **3** and the protruding portion **421** of the rotating

portion **4** is provided, the rotation of the rotating portion **4** after the cutting portion **410** starts cutting is restricted to less than 360°. Thus, as illustrated in FIG. **19**, the range from the point P**0** (point P**5**) to the point P**1** of the flat portion **125** can be set to a region that is not cut by the cutting portion **410**. As a result, the cut piece **122** can be prevented from accidentally detaching from the flat portion **125**, and the packaged material **7** is less likely to be contaminated by the cut piece **122**.

[0104] As illustrated in FIGS. **5** and **6**, the cutting portion **410** is integrally formed with the rotating portion **4**, and rotating the rotating portion **4** causes the cutting portion **410** to rotate. As a result, the force of rotating the rotating portion **4** is efficiently transmitted to the cutting portion **410**, and the flat portion **125** can be more reliably cut.

[0105] Also, as illustrated in FIGS. **5** and **6**, the cutting portion **410** is inclined so as to be positioned further in the rotation direction closer to a z-direction (axial direction) tip end. As a result, as illustrated in FIG. **19**, the tip of the cutting portion **410** is positioned on the radial inner side of the cut piece **122**, and this can reduce the possibility that the cut piece **122** bends inward. This is preferable for reducing the possibility that the packaged material **7** is inhibited from being dispensed due to the cut piece **122** covering the opening of the top sheet **12**.

[0106] As illustrated in FIGS. **5** and **6**, the first cylindrical portion **41** includes the inclined edge **412**. As a result, the first cylindrical portion **41** has a shape including a portion supporting the cutting portion **410** from the direction opposite to the rotation direction. This is preferable for reducing the possibility that the cutting portion **410** unintentionally deforms or becomes damaged when the cutting portion **410** cuts the flat portion **125**.

[0107] As illustrated in FIG. **9** and FIGS. **14** to **18**, the easy-cut line **120** is formed in the flat portion **125**. This allows the flat portion **125** to be more smoothly cut by the cutting portion **410**. Additionally, this can reduce the possibility that the flat portion **125** is cut at an unintended position. In the illustrated example, the easy-cut line **120** is not provided in the range from the point P**0** to the point P**1**. This makes it possible to set the range to a range in which cutting is difficult, and to prevent the cut piece **122** from detaching from the flat portion **125**.

[0108] Additionally, the outer guide portion **1201** is provided on the easy-cut line **120**. The outer guide portion **1201** is provided closer to the terminal of the rotation path **40** (easy-cut line **120**) and is located radially outward from the rotation path **40**. Accordingly, the flat portion **125** can be cut radially outward from the rotation path **40** and, as illustrated in FIG. **19**, the cutting portion **410** can be more reliably positioned on the radially inner side of the cut piece **122**. This is preferable for increasing the effect of preventing the cut piece **122** from bending due to the cutting portion **410**.

[0109] Because the band-like portion **6** is provided in the spout **2**, the rotating portion **4** can be prevented from unintentionally rotating and accidentally cutting the flat portion **125** during transportation or shelf stacking.

[0110] FIGS. **20** to **26** illustrate other examples of the present invention. Note that in these drawings, elements identical or similar to those of the above-described embodiments are denoted by the same reference symbols as those described above.

First Modification of Spout **2**

[0111] FIG. **20** illustrates a first modification of the spout **2**. In the present example, the cutting portion **410** has a shape substantially parallel to the z-direction, and is not inclined relative to the z-direction.

[0112] Even with the present modification, the container body **1** can be more reliably opened. Also, as will be appreciated from the present modification, the specific shape of the cutting portion **410**, such as the inclination, is not particularly limited, and the cutting portion **410** need only be able to cut the flat portion **125**.

Second Modification of Spout **2**

[0113] FIG. **21** illustrates a second modification of the spout **2**. In the present modification, the cutting portion **410** is inclined so as to be positioned further in a direction opposite to the rotation direction closer to a tip end in the axial direction (lower end in the z-direction in the drawings).

[0114] Even with the present modification, the container body **1** can be more reliably opened. In addition, according to the present modification, unintended deformation of the cutting portion **410** when cutting the flat portion **125** can be suppressed.

Third Modification of Spout **2**

[0115] FIG. **22** illustrates a third modification of the spout **2**. In the present modification, the first cylindrical portion **41** does not include the inclined edge **412** as in the example described above. The cutting portion **410** is provided at a portion of the first cylindrical portion **41** protruding downward in the z-direction.

[0116] Even with the present modification, the container body **1** can be more reliably opened. Also, as will be appreciated from the present modification, the first cylindrical portion **41** may have a configuration that does not include the inclined edge **412**. The first cylindrical portion **41** need only have a configuration that can appropriately cut the flat portion **125** even with the cutting portion **410** of the present modification depending on the shape and material of the cutting portion **410** or the thickness and material of the top sheet **12**.

Fourth Modification of Spout **2**

[0117] FIG. **23** illustrates a fourth modification of the spout **2**. In the present modification, the first cylindrical portion **41** includes a projected portion **413**. The projected portion **413** is positioned in the rotation direction relative to the cutting portion **410** and projects downward from the inclined edge **412** in the z-direction. However, the projected portion **413** has a size that does not protrude from the cutting portion **410** in the z-direction.

[0118] Even with the present modification, the container body **1** can be more reliably opened. Also, since the projected portion **413** is provided, this can more reliably reduce the possibility that the cut piece **122** bends inward in the state illustrated in FIG. **19**. This allows the packaged material **7** to be dispensed more smoothly.

Fifth Modification of Spout **2**

[0119] FIG. **24** illustrates a fifth modification of the spout **2**. In the present modification, the rotating portion **4** and the cap portion **5** are integrally formed via a hinge **49**. When the

cap portion **5** is turned with the hinge **49** as the center of turn, the nozzle portion **44** of the rotating portion **4** can be switched between a closed state by the cap portion **5** and an open state. Such a configuration in which the rotating portion **4** and the cap portion **5** are integrally formed via the hinge **49** can be appropriately combined and adopted with other examples.

[0120] In the present modification, the rotating portion **4** further includes a third cylindrical portion **45**. The third cylindrical portion **45** is provided on the outer side of the first cylindrical portion **41** so as to surround the first cylindrical portion **41**. A first thread portion **451** is formed on an inner surface of the third cylindrical portion **45**.

[0121] The fixed portion **3** includes a fourth cylindrical portion **33**. The fourth cylindrical portion **33** is provided on the outer side of the second cylindrical portion **32** so as to surround the second cylindrical portion **32**. A second thread portion **321** is formed on the outer surface of the second cylindrical portion **32**. The second thread portion **321** and the first thread portion **451** engage with each other, similarly to the second thread portion **321** and the first thread portion **411** in the example described above, to restrict movement of the rotating portion **4** relative the fixed portion **3**. In addition, in the present modification, when the rotating portion **4** is rotated after the band-like portion **6** is removed, the lower end of the third cylindrical portion **45** comes into contact with the flange portion **31** or the upper end of the fourth cylindrical portion **33** comes into contact with the rim portion **42** when the rotating portion **4** is lowered relative to the fixed portion **3**, which restricts the lowering of the rotating portion **4**.

[0122] Even with the present modification, the container body **1** can be more reliably opened. Also, as will be appreciated from the present modification, the specific configuration of the spout **2** is not in any way limited, and various configurations can be appropriately combined and adopted.

First Modification of Top Sheet **12**

[0123] FIG. **25** illustrates a modification of the easy-cut line **120** on the flat portion **125** of the top sheet **12**.

[0124] In the present modification, the easy-cut line **120** includes an outer guide portion **1201** and an outer guide portion **1202**. The outer guide portion **1202** is located in a direction opposite to the rotation direction relative to the outer guide portion **1201**. Also, the outer guide portion **1202** is positioned radially inward from the outer guide portion **1201** and radially outward from the rotation path **40**.

[0125] Even with the present modification, the container body **1** can be more reliably opened. Further, by providing the outer guide portion **1202**, the cutting can be guided along the rotation path **40** to the cut along the outer guide portion **1202** and further to the cut along the outer guide portion **1201**. As will be appreciated from the present modification, the specific shape and size of the easy-cut line **120** are not limited. For example, the easy-cut line **120** may have a configuration without the outer guide portions **1201**, **1202** or the like, and that coincides with the rotation path **40** when viewed from the z-direction (simple circle shape). Furthermore, the easy-cut line **120** may constitute a double or triple circle. In addition, some or all of the easy-cut line **120** may be positioned radially inward from the rotation path **40** when viewed from the z-direction. Further, the easy-cut line **120** may be composed of a plurality of regions separated from each other at a start point (e.g., the point P**0**) to an end point (e.g., the point P**5**).

Second Modification of Top Sheet **12**

[0126] FIG. **26** illustrates a modification of the flat portion **125** of the top sheet **12**. In the present example, the easy-cut line **120** described in the above example is not provided in the flat portion **125**.

[0127] Even with the present modification, the container body **1** can be more reliably opened. Further, even in a configuration where the easy-cut line **120** is not provided, the flat portion **125** can be cut by the cutting portion **410** depending on the shape and material of the cutting portion **410** or the thickness and material of the top sheet **12**.

[0128] According to tests conducted by the inventors, even when the flat portion **125** is not provided with the easy-cut line **120** including the outer guide portion **1201**, the inventors confirmed that the flat portion **125** is cut radially outward with respect to the rotation path **40** in the range from the point P**4** to the point P**5** and that the cutting portion **410** tends to be located radially inward with respect to the cut piece **122**, similar to the state illustrated in FIG. **19**(*b*). For this reason, when the first cylindrical portion **41** first moves downward in the z-direction due to the rotation of the rotating portion **4**, a portion of the first cylindrical portion **41** positioned in the rotation direction relative to the cutting portion **410** is lowered to a position overlapping the flat portion **125** in the z-direction. This portion is arranged to depress the flat portion **125** in the z-direction preceding the cutting portion **410**. This depression causes the cut line **121** of the flat portion **125** to advance forward. It was found that the cut had a tendency to advance in the direction in which the tip end of the cut line **121** faces, that is, the direction toward the tangential direction of the rotation path **40**.

[0129] As a result, the cutting portion **410** is believed to exhibit behavior of being located radially inward from the cut piece **122**.

[0130] The pouch container packaging body and the pouch container package according to the present invention are not limited to the embodiments described above. The specific configuration of each part of the pouch container packaging body and the pouch container package according to the present invention can be freely redesigned.

REFERENCE SIGNS LIST

[0131] A**1** Pouch container packaging body
[0132] B**1** Pouch container package
[0133] **1** Container body
[0134] **2** Spout
[0135] **3** Fixed portion
[0136] **4** Rotating portion
[0137] **5** Cap portion
[0138] **6** Band-like portion
[0139] **7** Packaged material
[0140] **11** Body sheet
[0141] **12** Top sheet
[0142] **17** Seal portion
[0143] **21** Dispensing space
[0144] **31** Flange portion
[0145] **32** Second cylindrical portion
[0146] **33** Fourth cylindrical portion
[0147] **40** Rotation path

[0148] **41** First cylindrical portion
[0149] **42** Rim portion
[0150] **43** Outer cylinder portion
[0151] **44** Nozzle portion
[0152] **45** Third cylindrical portion
[0153] **61** Tab portion
[0154] **101** Base film layer
[0155] **102** Sealant film layer
[0156] **103** Sealant film layer
[0157] **104** Barrier film layer
[0158] **120** Easy-cut line
[0159] **121** Cut line
[0160] **122** Cut piece
[0161] **125** Flat portion
[0162] **171** Side seal portion
[0163] **172** Top seal portion
[0164] **173** Bottom seal portion
[0165] **321** Second thread portion
[0166] **322** Thick portion
[0167] **323** Tapered surface
[0168] **324** Recessed portion
[0169] **410** Cutting portion
[0170] **411** First thread portion
[0171] **412** Inclined edge
[0172] **413** Projected portion
[0173] **421** Protruding portion
[0174] **451** First thread portion
[0175] **1201**, **1202** Outer guide portion

1. A pouch container packaging body, comprising:
a container body including a top sheet covering the container body at a top side; and
a spout fixed to an outer surface of the top sheet and including a dispensing space extending in an axial direction,
wherein the spout includes a fixed portion fixed to the top sheet, a rotating portion configured to rotate relative to the fixed portion, and a cutting portion configured to cut the top sheet,
the top sheet includes a flat portion that is flat in a state where the fixed portion is fixed, and
the cutting portion is positioned away from the flat portion in an initial state and moves while rotating in a direction from an external surface to an internal surface of the flat portion in response to rotation of the rotating portion, and cuts the flat portion.

2. The pouch container packaging body according to claim **1**, wherein
the fixed portion includes a flange portion having a flat and annular shape, and
the flange portion is fixed to an outer surface of the top sheet.

3. The pouch container packaging body according to claim **1**, wherein
the spout includes a rotation angle regulator configured to regulate rotation of the rotating portion to less than 360° after the cutting portion starts to cut the top sheet.

4. The pouch container packaging body according to claim **1**, wherein
the rotating portion includes a first cylindrical portion configured to screw into the fixed portion, and
the cutting portion is formed on an endmost side in the axial direction of the first cylindrical portion.

5. The pouch container packaging body according to claim **4**, wherein
the cutting portion is inclined and protrudes further in a rotation direction closer to a tip end in the axial direction.

6. The pouch container packaging body according to claim **4**, wherein
the endmost side in the axial direction of the first cylindrical portion is formed into an inclined edge, the inclined edge increasing in inclination, from a tip end side of the cutting edge to a base end in the axial direction, along a direction opposite to a rotation direction.

7. The pouch container packaging body according to claim **1**, wherein
the top sheet is formed with an easy-cut line configured to be easier to cut than adjacent portions, and
the easy-cut line overlaps at least a portion of a rotation path of the cutting portion when viewed along the axial direction.

8. The pouch container packaging body according to claim **7**, wherein
the easy-cut line includes an outer guide portion located radially outward from the rotation path of the cutting portion and provided near a terminal of the rotation path of the cutting portion as viewed along the axial direction.

9. The pouch container packaging body according to claim **1**, wherein
the spout includes a band-like portion being removable and configured to prevent rotation of the rotating portion relative to the fixed portion.

10. A pouch container package comprising:
the pouch container packaging body of claim **1**; and
a packaged material stored in the container body in a sealed state.

* * * * *