



(11)

EP 4 524 049 A1

(12)

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

(43) Date of publication:
19.03.2025 Bulletin 2025/12

(51) International Patent Classification (IPC):
B65D 30/16 (2006.01) **B65D 33/06** (2006.01)
B65D 33/38 (2006.01)

(21) Application number: **23826862.7**

(52) Cooperative Patent Classification (CPC):
B65D 29/00; B65D 33/06; B65D 75/5861

(22) Date of filing: **23.05.2023**

(86) International application number:
PCT/JP2023/019043

(87) International publication number:
WO 2023/248674 (28.12.2023 Gazette 2023/52)

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

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(30) Priority: **21.06.2022 JP 2022099413**

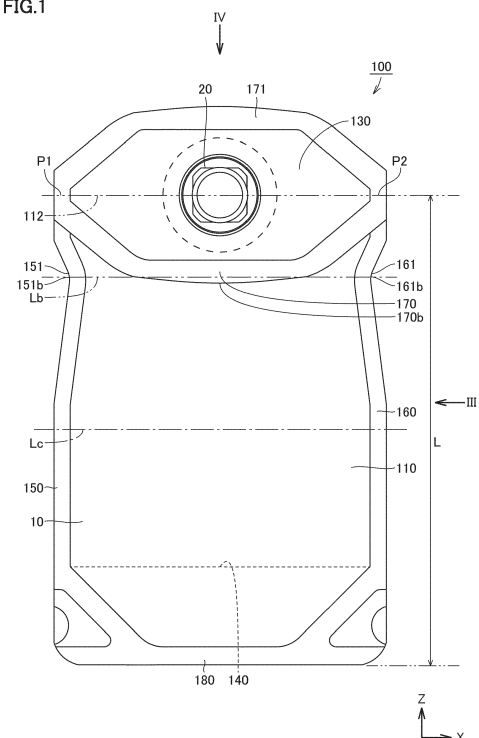
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(54) **POUCH**

(57) To make a pouch provided with a spout on a top surface be easily gripped. At least one of a left side seal portion 150 or a right side seal portion 160 includes recessed portions 151 and 161 recessed toward the inside of packaging bag 10 so that an outer edge of the packaging bag 10 is constricted in a width direction in a state in which the packaging bag 10 is folded so that a top gusset sheet 130 overlaps each of a folded portion where a part of the front surface sheet 110 closer to a top gusset sheet 130 is folded and a back surface sheet while the front surface sheet 110 is located on the back surface sheet in a state of including the folded portion.

FIG.1



EP 4 524 049 A1

Description

Technical Field

[0001] The present invention relates to a pouch.

Background Art

[0002] JP 5946406 B (Patent Document 1) is a related art document that discloses a configuration of a pouch provided with a spout. The pouch described in Patent Document 1 is provided with the spout on a top surface.

Citation List

Patent Literature

[0003] Patent Document 1: JP 5946406 B

Summary of Invention

Technical Problem

[0004] When contents are dispensed from a pouch provided with a spout on a top surface, it is necessary to tilt the pouch while holding the pouch. Therefore, the pouch needs to be easily gripped.

[0005] The present invention has been made in view of the above-described problem, and an object thereof is to provide a pouch provided with a spout on a top surface and easily gripped.

Solution to Problem

[0006] A pouch according to the present invention includes a packaging bag and a spout. The packaging bag includes a front surface sheet, a back surface sheet, and a top gusset sheet, and can accommodate contents. The spout is fixed to the top gusset sheet and is provided for dispensing the contents from the packaging bag. The packaging bag includes a left side seal portion, a right side seal portion, a front side top gusset seal portion, and a back side top gusset seal portion. In the left side seal portion and the right side seal portion, an end portion of the front surface sheet and an end portion of the back surface sheet in a width direction are sealed to each other and extend in a height direction. In the front side top gusset seal portion, the front surface sheet and the top gusset sheet are sealed to each other. In the back side top gusset seal portion, the back surface sheet and the top gusset sheet are sealed to each other. At least one of the left side seal portion or the right side seal portion includes a recessed portion recessed toward the inside of the packaging bag so that the outer edge of the packaging bag can be constricted in the width direction in a state in which the packaging bag is folded so that the top gusset sheet overlaps each of a folded portion where a part of the front surface sheet closer to the top gusset sheet is folded

and the back surface sheet while the front surface sheet is located on the back surface sheet in a state of including the folded portion.

[0007] In one embodiment of the present invention, a bottom portion of the recessed portion located on the innermost side of the packaging bag is located closer to the top gusset sheet than a center in the height direction in a range between a folding line along which the folded portion is folded and a lower edge of the packaging bag in the above folded state.

[0008] In one embodiment of the present invention, the bottom portion of the recessed portion located on the innermost side of the packaging bag is located side by side with a lowermost portion of the front side top gusset seal portion in the height direction along a virtual straight line extending in the width direction in the above folded state.

[0009] In one embodiment of the present invention, in a state in which the contents are accommodated in the packaging bag, at least one of the front surface sheet, the back surface sheet, or the top gusset sheet includes an extending portion extending farther away from the top surface formed by the top gusset sheet than a remaining sheet of the front surface sheet, the back surface sheet, and the top gusset sheet.

[0010] In one embodiment of the present invention, an outer edge of the extending portion has an arc shape.

Advantageous Effects of Invention

[0011] According to the present Invention, a pouch provided with a spout on a top surface can be made easily gripped.

Brief Description of Drawings

[0012]

FIG. 1 is a front view illustrating a state in which a packaging bag of a pouch according to a first embodiment of the present invention is folded.

FIG. 2 is a rear view illustrating a state in which the packaging bag of the pouch according to the first embodiment of the present invention is folded.

FIG. 3 is a side view as viewed from an arrow III direction in FIG. 1.

FIG. 4 is a plan view as viewed from an arrow IV direction in FIG. 1.

FIG. 5 is a perspective view illustrating a state in which the packaging bag of the pouch according to the first embodiment of the present invention is filled with contents and a lid is attached to the spout.

FIG. 6 a front view illustrating a state in which a packaging bag of a pouch according to a second embodiment of the present invention is folded.

FIG. 7 is a perspective view as viewed from a front side illustrating a state in which the packaging bag of the pouch according to the second embodiment of

the present invention is filled with contents.

FIG. 8 is a perspective view as viewed from a rear side illustrating a state in which the packaging bag of the pouch according to the second embodiment of the present invention is filled with the contents.

FIG. 9 is a perspective view as viewed from a rear side illustrating a state in which the packaging bag of the pouch according to a modification of the second embodiment of the present invention is filled with the contents.

Description of Embodiments

[0013] Hereinafter, a pouch according to each embodiment of the present invention will be described with reference to the drawings. Note that in the embodiments described below, identical or corresponding portions are denoted by the same reference signs in the drawings, and description thereof will not be repeated.

First Embodiment

[0014] FIG. 1 is a front view illustrating a state in which a packaging bag of a pouch according to a first embodiment of the present invention is folded. FIG. 2 is a rear view illustrating a state in which the packaging bag of the pouch according to the first embodiment of the present invention is folded. FIG. 3 is a side view as viewed from an arrow III direction in FIG. 1. FIG. 4 is a plan view as viewed from an arrow IV direction in FIG. 1. FIG. 5 is a perspective view illustrating a state in which the packaging bag of the pouch according to the first embodiment of the present invention is filled with contents and a lid is attached to the spout. In the drawings, a width direction of the pouch is indicated as an X-axis direction, a depth direction of the pouch is indicated as a Y-axis direction, and a height direction of the pouch is indicated as a Z-axis direction.

[0015] As illustrated in FIGS. 1 to 5, a pouch 100 according to the first embodiment of the present invention includes a packaging bag 10 and a spout 20. The packaging bag 10 includes a front surface sheet 110, a back surface sheet 120, and a top gusset sheet 130, and can accommodate contents. As illustrated in FIGS. 1 and 2, in the present embodiment, the packaging bag 10 further includes a bottom gusset sheet 140.

[0016] Examples of the contents accommodated in the packaging bag 10 include beverages such as sports drinks, foods such as ice cream and jelly, liquid medicines, and liquids such as shampoo, rinse, conditioner, cosmetic liquid, and body soap.

[0017] As illustrated in FIG. 1, the spout 20 is fixed to the top gusset sheet 130 and is provided for dispensing the contents from the packaging bag 10. As illustrated in FIG. 5, after the packaging bag 10 is filled with the contents, a cap 30 for closing a spout port is attached to a tip portion of the spout 20.

[0018] Each of the front surface sheet 110, the back surface sheet 120, the top gusset sheet 130, and the

bottom gusset sheet 140 is constituted by a layered body layered with at least two types of material sheets of polyethylene terephthalate, aluminum, nylon, polyethylene, or polypropylene.

[0019] As illustrated in FIGS. 1 to 5, the packaging bag 10 includes a left side seal portion 150, a right side seal portion 160, a front side top gusset seal portion 170, and a back side top gusset seal portion 171. In the present embodiment, the packaging bag 10 further includes a front side bottom gusset seal portion 180 and a back side bottom gusset seal portion 181.

[0020] As a method of sealing together the sheets when forming the packaging bag 10 and a method of sealing the sheets when fixing the spout 20 to the packaging bag 10, various known methods may be used, with examples including fusing methods, such as heat sealing, ultrasonic wave sealing, and high frequency sealing and an adhesion method using an adhesive.

[0021] In the left side seal portion 150 and the right side seal portion 160, end portions of the front surface sheet 110 and end portions of the back surface sheet 120 in the width direction (X-axis direction) are sealed to each other and extend in the height direction (Z-axis direction).

[0022] In the front side top gusset seal portion 170, the front surface sheet 110 and the top gusset sheet 130 are sealed to each other. In the back side top gusset seal portion 171, the back surface sheet 120 and the top gusset sheet 130 are sealed to each other.

[0023] As illustrated in FIGS. 1 and 3, in the front side bottom gusset seal portion 180, the front surface sheet 110 and the bottom gusset sheet 140 are sealed to each other. As illustrated in FIGS. 2 and 3, the back surface sheet 120 and the bottom gusset sheet 140 are sealed to each other at the back side bottom gusset seal portion 181. In the present embodiment, the packaging bag 10 includes the bottom gusset, but the bottom gusset need not necessarily be provided, and the front surface sheet 110 and the back surface sheet 120 may be sealed to each other to form the bottom of the packaging bag 10.

[0024] As illustrated in FIGS. 1 to 4, at least one of the left side seal portion 150 or the right side seal portion 160 includes recessed portions 151 and 161 recessed toward the inside of packaging bag 10 so that the outer edge of the packaging bag 10 can be constricted in the width direction (X-axis direction) as illustrated in FIGS. 1 and 2 in a state in which the packaging bag 10 is folded so that the top gusset sheet 130 overlaps each of the folded portion 111 where a part of the front surface sheet 110 closer to top gusset sheet 130 is folded and the back surface sheet 120 while the front surface sheet 110 is located on the back surface sheet 120 in a state of including a folded portion 111. The folded portion 111 of the front surface sheet 110 is a portion where the front surface sheet 110 is folded with a folding line 112 illustrated in FIG. 5 as a boundary. In the state in which the packaging bag 10 is folded as illustrated in FIG. 1, the folding line 112 is a straight line connecting a first intersection P1 at which the left side seal portion 150, the front

side top gusset seal portion 170, and the back side top gusset seal portion 171 intersect with each other to a second intersection P2 at which the right side seal portion 160, the front side top gusset seal portion 170, and the back side top gusset seal portion 171 intersect with each other.

[0025] In the present embodiment, the recessed portion 151 is formed in the left side seal portion 150, and the recessed portion 161 is formed in the right side seal portion 160. However, the configuration is not limited to the case where the recessed portions 151 and 161 are formed in the left side seal portion 150 and the right side seal portion 160, respectively, and the recessed portion may be formed in only one of the left side seal portion 150 and the right side seal portion 160.

[0026] In the above folded state, the recessed portions 151 and 161 each have a shape curved toward the inside of the packaging bag 10. In the present embodiment, the packaging bag 10 has a bilaterally symmetrical shape, and the recessed portion 151 and the recessed portion 161 have shapes symmetrical to each other. However, the recessed portion 151 and the recessed portion 161 may have shapes asymmetrical to each other.

[0027] Since the recessed portions 151 and 161 are formed, as illustrated in FIG. 5, the packaging bag 10 can be gripped by placing the fingers on the recessed portions 151 and 161 of the packaging bag 10 filled with the contents, and the pouch 100 provided with the spout 20 on the top surface can be easily gripped. In addition, since the recessed portions 151 and 161 are formed, the packaging bag 10 has a visually remarkable characteristic and can be visually easily distinguished from other products.

[0028] As illustrated in FIG. 1, bottom portions 151b and 161b of the recessed portions 151 and 161 located on the innermost side of the packaging bag 10 are located closer to the top gusset sheet 130 than a center Lc in the height direction (Z-axis direction) in a range L between the folding line 112 along which the folded portion 111 is folded and the lower edge of the packaging bag in the above folded state. As a result, the pouch 100 can be stably tilted and the contents can be dispensed in a state in which the packaging bag 10 is gripped by placing the fingers on the recessed portions 151 and 161.

[0029] In the present embodiment, the bottom portions 151b and 161b of the recessed portions 151 and 161 located on the innermost side of the packaging bag 10 are located side by side with a lowermost portion 170b of the front side top gusset seal portion 170 in the height direction (Z-axis direction) along a virtual straight line Lb extending in the width direction (X-axis direction) in the above folded state. That is, a distance in the height direction (Z-axis direction) from the folding line 112 to the virtual straight line Lb and a distance in the height direction (Z-axis direction) from the folding line 112 to the bottom portions 151b and 161b of the recessed portions 151 and 161 are substantially equal to each other. As a result, the pouch 100 can be further stably tilted and the

contents can be dispensed in a state in which the packaging bag 10 is gripped by placing the fingers on the recessed portions 151 and 161.

5 Second Embodiment

[0030] Hereinafter, a pouch according to a second embodiment of the present invention will be described with reference to the drawings. Since the pouch according to the second embodiment of the present invention is different from the pouch 100 according to the first embodiment mainly in that an extending portion is provided, description of the same configuration as that of the pouch 100 according to the first embodiment will not be repeated.

[0031] FIG. 6 is a front view illustrating a state in which a packaging bag of the pouch according to the second embodiment of the present invention is folded. FIG. 7 is a perspective view as viewed from a front side illustrating a state in which the packaging bag of the pouch according to the second embodiment of the present invention is filled with contents. FIG. 8 is a perspective view as viewed from a rear side illustrating a state in which the packaging bag of the pouch according to the second embodiment of the present invention is filled with the contents.

[0032] As illustrated in FIGS. 6 to 8, in a pouch 200 according to the second embodiment of the present invention, in a state in which the contents are accommodated in the packaging bag 10, at least one of the front surface sheet 110, a back surface sheet 220, or the top gusset sheet 130 includes an extending portion 290 extending in the height direction (Z-axis direction) farther away from the top surface formed by the top gusset sheet 130 than the remaining sheets of the front surface sheet 110, the back surface sheet 220, and the top gusset sheet 130.

[0033] In the present embodiment, the extending portion 290 is formed by extending both the back surface sheet 220 and the top gusset sheet 130 and sealing the extending portions thereof to each other. That is, the back surface sheet 220 and the top gusset sheet 130 of the portion constituting the extending portion 290 extend in the height direction (Z-axis direction) so as to be farther away from the top surface formed by the top gusset sheet 130 than the front surface sheet 110.

[0034] Only one of the back surface sheet 220 and the top gusset sheet 130 may be extended and the extended portion may form the extending portion 290. However, when the extending portion 290 is formed by extending both the back surface sheet 220 and the top gusset sheet 130 and sealing the extending portions thereof to each other, the strength of the extending portion 290 is increased, and the self-standing property of the pouch 200 can be improved. In the present embodiment, the back surface sheet 220 is included in the extending portion 290, but the configuration is not limited to this, and the front surface sheet 110 may be included in the extending portion.

[0035] It is preferable that the extending portion 290 extends to a position higher than the cap attached to the spout 20 in the height direction (Z-axis direction), and the extending portion 290 extends so as to cover the cap attached to the spout 20 as viewed from the back surface side.

[0036] As illustrated in FIG. 8, when a design printing or the like indicating a product content is applied to the back surface sheet 220, a display area can be enlarged by the extending portion 290. Since the extending portion 290 is located at the upper part of the pouch 200 and is noticeable, for example, by displaying the pouch with the back surface sheet 220 facing the front, it is possible to easily attract attention to the display printed on the extending portion 290.

[0037] In the pouch 200 according to the second embodiment of the present invention, the outer edge of the extending portion 290 has an arc shape. As a result, as illustrated in FIG. 8, it is possible to form a display region T2 that bulges out in a three dimensional and integrated rounded balloon shape defined by a ridge line R of the portion above the recessed portions 151 and 161 in the pouch 200 and the outer edge of the extending portion 290, and it is possible to easily attract consumers' attention.

[0038] The outer edge of the extending portion is not limited to the arc shape. FIG. 9 is a perspective view as viewed from a rear side illustrating a state in which the packaging bag of the pouch according to a modification of the second embodiment of the present invention is filled with the contents.

[0039] As illustrated in FIG. 9, the outer edge of an extending portion 390 of a pouch 300 according to the modification of the second embodiment of the present invention has a rectangular shape. In the present modification, when the design printing or the like indicating the product content is applied to a back surface sheet 320, it is possible to form a three dimensional display region T3 defined by the ridge line R of the portion above the recessed portions 151 and 161 in the pouch 300 and the outer edge of the extending portion 390, and it is possible to enlarge the display area. Since the extending portion 390 is located at the upper portion of the pouch 300 and is noticeable, it is possible to easily attract attention to the display printed on the extending portion 390. In the case of the extending portion 390 including the outer edge of the rectangular shape, since both ends of the extending portion 390 in the width direction (X-axis direction) are easily curved or bent as illustrated in FIG. 9, it is preferable that the both ends in the width direction (X-axis direction) are rounded as in the extending portion 290 illustrated in FIG. 8.

[0040] According to the configuration of the pouch in each of the embodiments described above, the amount of resin used can be significantly reduced as compared to a container made of molded resin. Further, the pouch can be folded compactly to a smaller volume before being discarded.

[0041] Note that the embodiments disclosed herein are illustrative, and do not serve as a basis for limited interpretation. Therefore, the technical scope of the present invention is not interpreted only by the above-described embodiments, but is defined based on the description of the claims. Further, meanings equivalent to those of the claims and all modifications made within the claims are included.

10 Reference Signs List

[0042] 10 Packaging bag, 20 Spout, 30 Cap, 100, 200, 300 Pouch, 110 Front surface sheet, 111 Folded portion, 112 Folding line, 120, 220, 320 Back surface sheet, 130 Top gusset sheet, 140 Bottom gusset sheet, 150 Left side seal portion, 151, 161 Recessed portion, 151b, 161b Bottom portion, 160 Right side seal portion, 170 Front side top gusset seal portion, 170b Lowermost portion, 171 Back side top gusset seal portion, 180 Front side bottom gusset seal portion, 181 Back side bottom gusset seal portion, 290, 390 Extending portion

25 Claims

1. A pouch comprising:

a packaging bag including a front surface sheet, a back surface sheet, and a top gusset sheet and configured to accommodate contents; and
a spout fixed to the top gusset sheet and configured to dispense the contents from the packaging bag, wherein
the packaging bag includes

a left side seal portion and a right side seal portion in which an end portion of the front surface sheet and an end portion of the back surface sheet in a width direction are sealed to each other and extend in a height direction,
a front side top gusset seal portion in which the front surface sheet and the top gusset sheet are sealed to each other, and
a back side top gusset seal portion in which the back surface sheet and the top gusset sheet are sealed to each other, and

at least one of the left side seal portion or the right side seal portion includes a recessed portion recessed toward an inner side of the packaging bag, so that an outer edge of the packaging bag is configured to be constricted in the width direction in a state in which the packaging bag is folded, so that the top gusset sheet overlaps each of a folded portion where a part of the front surface sheet closer to the top gusset sheet is folded and the back surface sheet while the front

surface sheet is located on the back surface sheet in a state of including the folded portion.

2. The pouch according to claim 1, wherein a bottom portion of the recessed portion located on the innermost side of the packaging bag is located closer to the top gusset sheet than a center in the height direction in a range between a folding line along which the folded portion is folded and a lower edge of the packaging bag in the above folded state. 5 10
3. The pouch according to claim 2, wherein a bottom portion of the recessed portion located on the innermost side of the packaging bag is located side by side with a lowermost portion of the front side top gusset seal portion in the height direction along a virtual straight line extending in the width direction in the above folded state. 15
4. The pouch according to any one of claims 1 to 3, wherein in a state in which the contents are accommodated in the packaging bag, at least one of the front surface sheet, the back surface sheet, or the top gusset sheet includes an extending portion extending farther away from the top surface formed by the top gusset sheet than a remaining sheet of the front surface sheet, the back surface sheet, and the top gusset sheet. 20 25 30
5. The pouch according to claim 4, wherein an outer edge of the extending portion has an arc shape. 35

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FIG.1

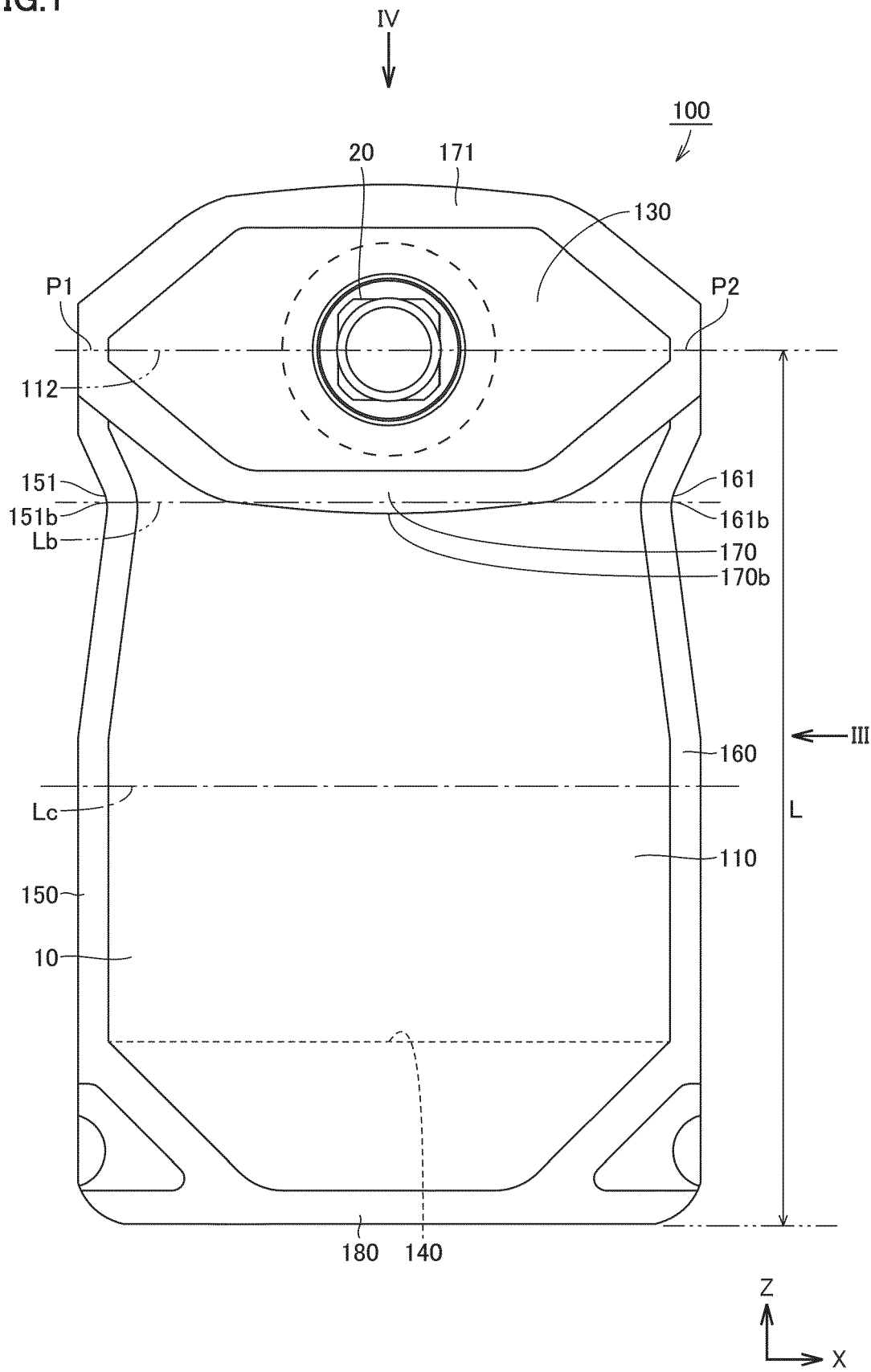


FIG.2

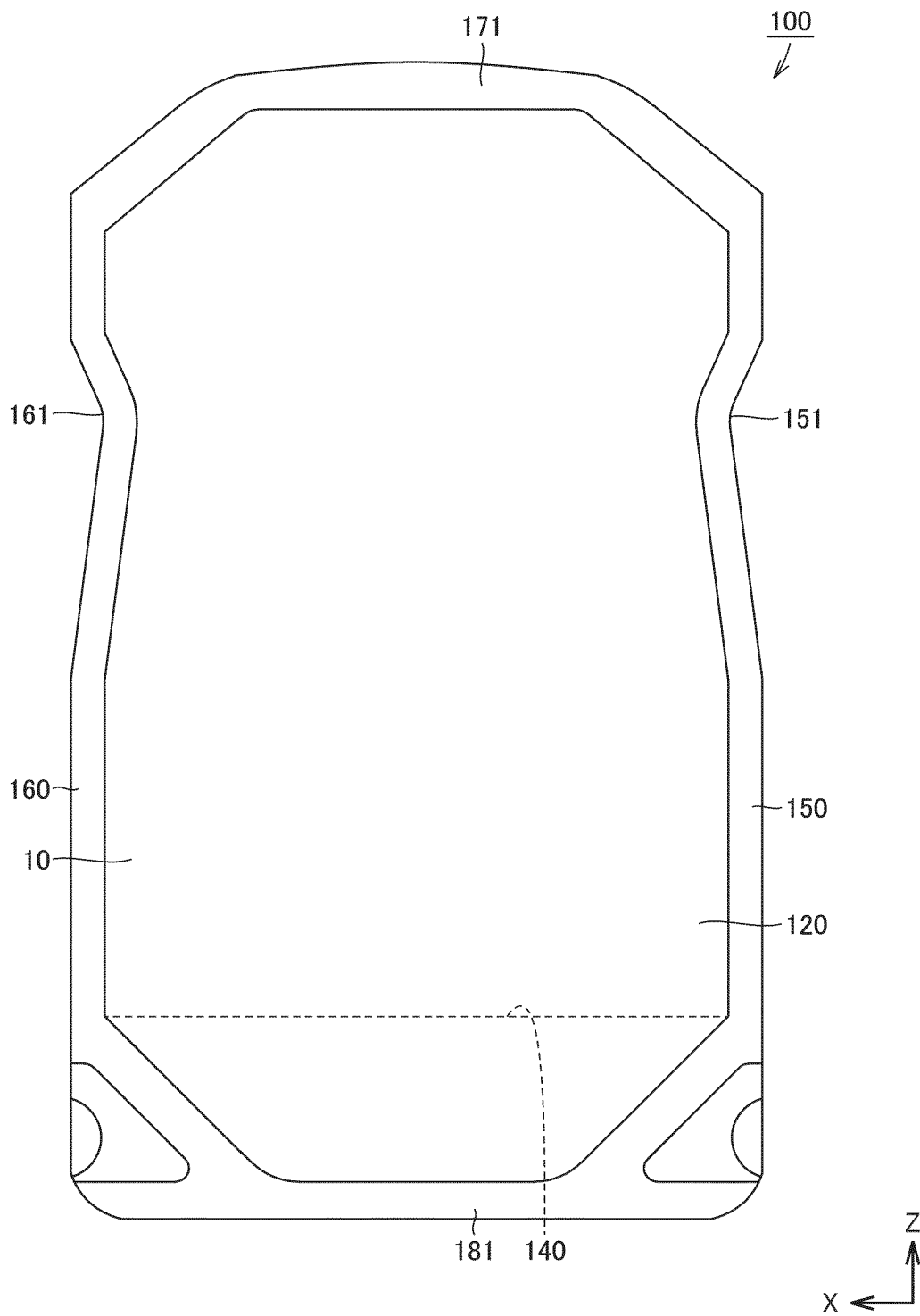


FIG.3

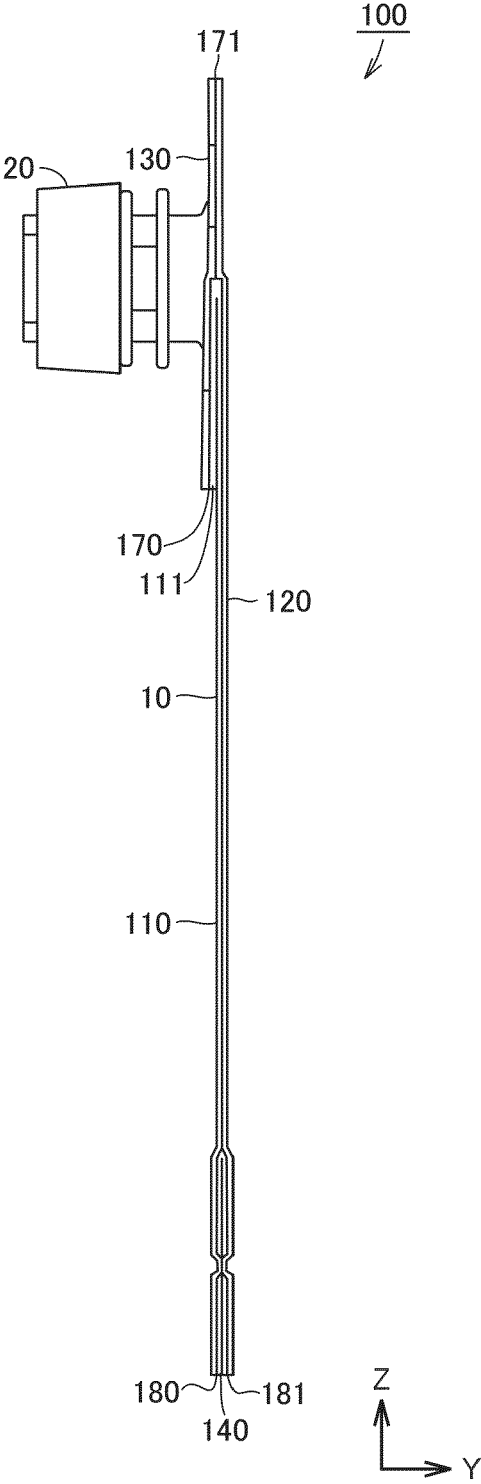


FIG.4

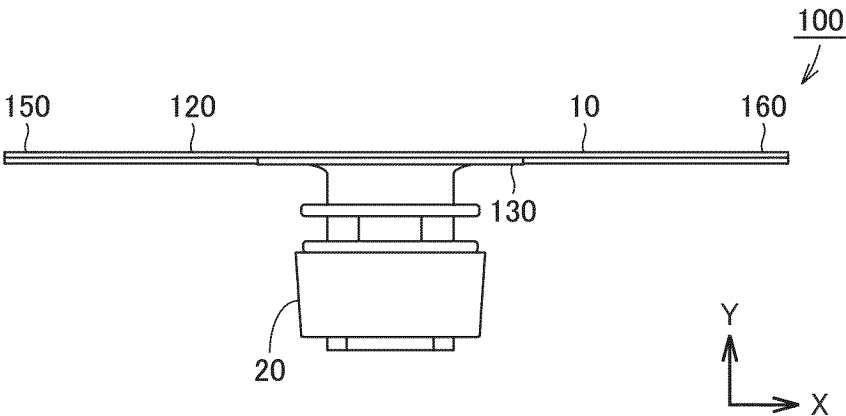


FIG.5

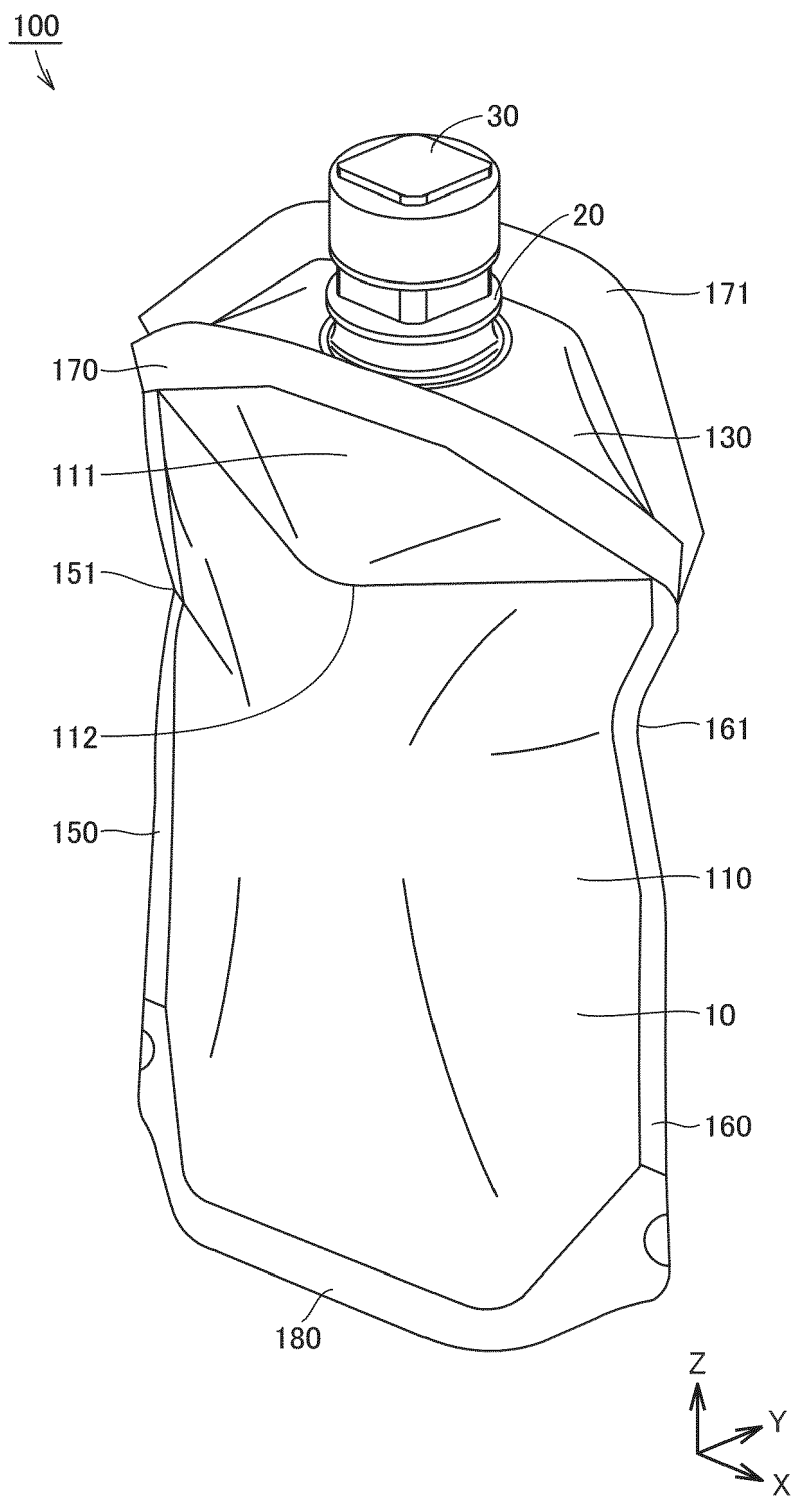


FIG.6

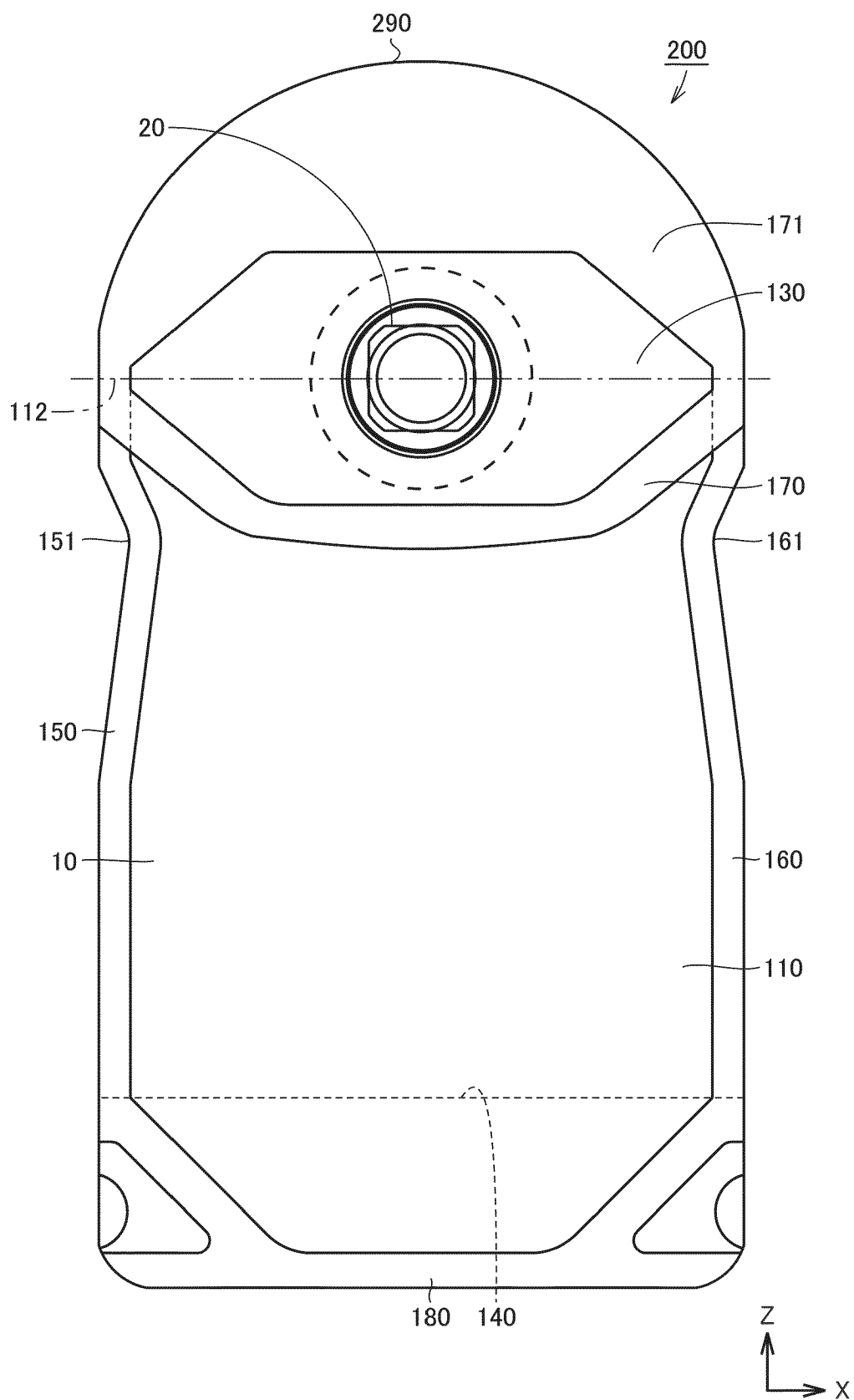


FIG.7

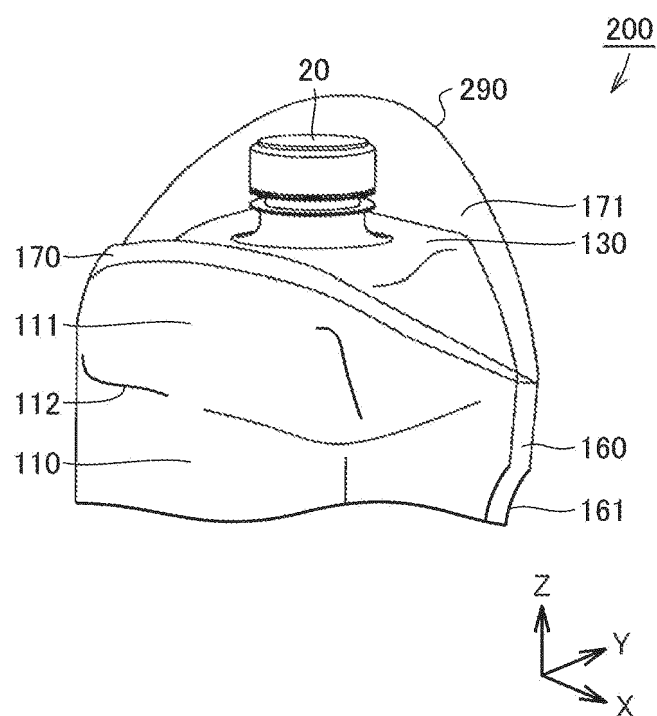


FIG.8

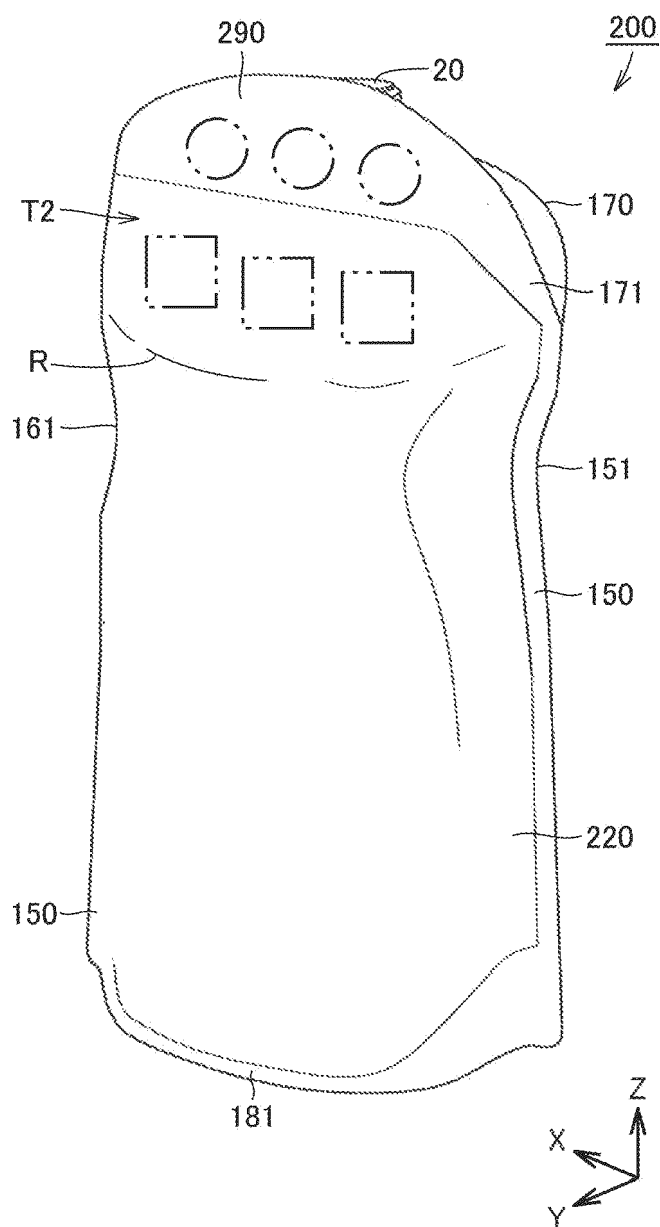
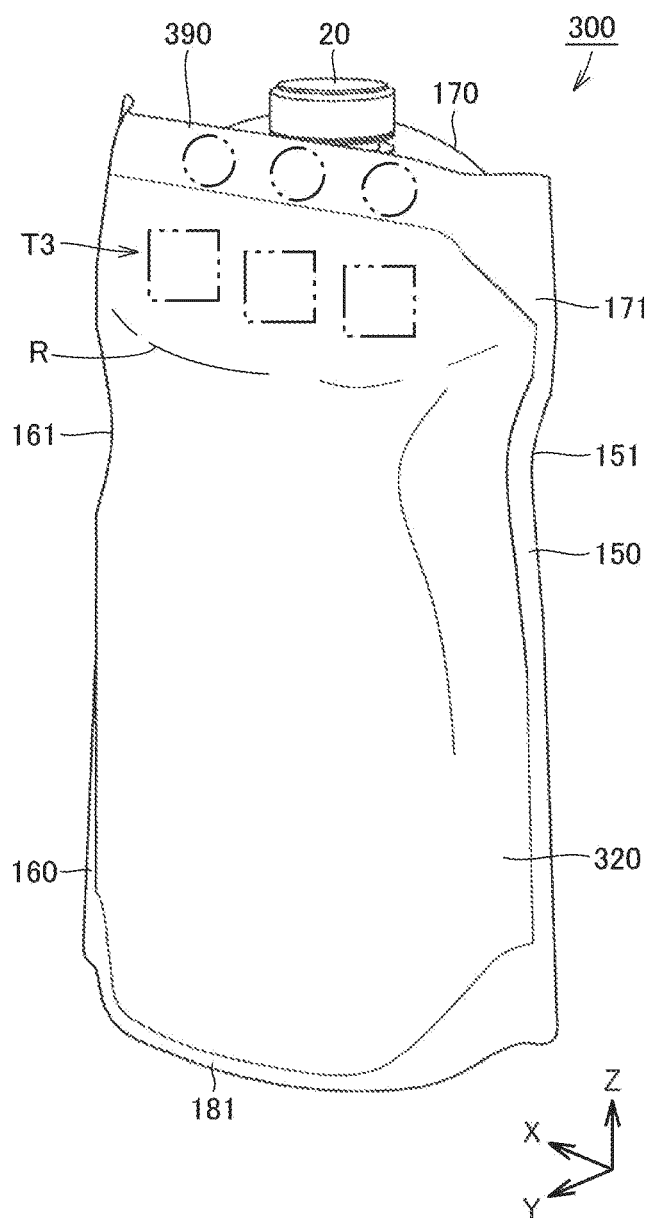


FIG.9



INTERNATIONAL SEARCH REPORT

International application No.

PCT/JP2023/019043

A. CLASSIFICATION OF SUBJECT MATTER

B65D 30/16(2006.01)i; **B65D 33/06**(2006.01)i; **B65D 33/38**(2006.01)i

FI: B65D30/16 Z; B65D33/38; B65D33/06

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)

B65D30/16; B65D33/06; B65D33/38

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

Published examined utility model applications of Japan 1922-1996
 Published unexamined utility model applications of Japan 1971-2023
 Registered utility model specifications of Japan 1996-2023
 Published registered utility model applications of Japan 1994-2023

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 2016-3056 A (KAO CORP, FUJI SEAL INT INC) 12 January 2016 (2016-01-12) paragraphs [0011], [0013]-[0015], fig. 2-4	1-5
Y	JP 2014-218261 A (POLYMER SYSTEMS KK) 20 November 2014 (2014-11-20) paragraphs [0027]-[0029], fig. 7	1-5
Y	JP 2009-137601 A (FUJI SEAL INT INC) 25 June 2009 (2009-06-25) paragraphs [0019]-[0020], [0025], fig. 5, 7	4-5

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

* Special categories of cited documents:

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Date of the actual completion of the international search

12 July 2023

Date of mailing of the international search report

01 August 2023

Name and mailing address of the ISA/JP

Japan Patent Office (ISA/JP)
 3-4-3 Kasumigaseki, Chiyoda-ku, Tokyo 100-8915
 Japan

Authorized officer

Telephone No.

INTERNATIONAL SEARCH REPORT
Information on patent family members

International application No.
PCT/JP2023/019043

Patent document cited in search report	Publication date (day/month/year)	Patent family member(s)	Publication date (day/month/year)
JP 2016-3056 A	12 January 2016	(Family: none)	
JP 2014-218261 A	20 November 2014	(Family: none)	
JP 2009-137601 A	25 June 2009	(Family: none)	

REFERENCES CITED IN THE DESCRIPTION

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Patent documents cited in the description

- JP 5946406 B [0002] [0003]