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(54) OPENABLE AND CLOSABLE CONTAINER

(57) An openable and closable container 10 includes: a container body 11 having a take-out opening 24, and an opening-closing lid 23 provided on the container body 11 swingably about a swing axis X-X on a base end 23a side, the opening-closing lid opening and closing the take-out opening 24. Plate rubber (an elastic member) 50 is provided between the container body 11 and the opening-closing lid 23. The container body 11 has a housing portion 75 housing one end of the plate rubber 50 in a horizontal direction. The rear surface of an upper plate 27 of the container body 11 is generally made flat for allowing a sealed bag 40 storing wet tissue paper 41 to adhere to the rear surface of the upper plate 27.

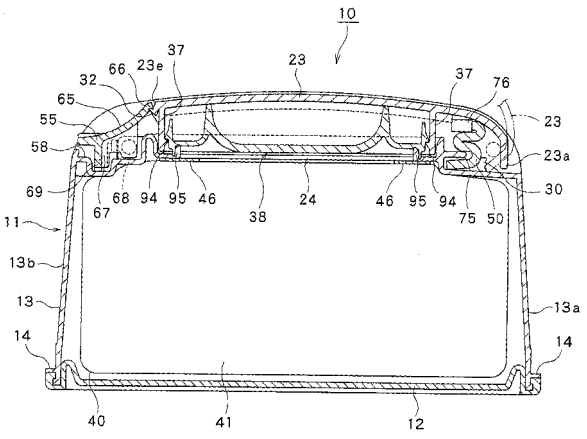

FIG.6

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Description

Technical Field

[0001] The present invention relates to an openable and closable container including, for example, a container body having an upper plate formed with a take-out opening, and an opening-closing lid openable and closable with respect to the container body. In particular, the invention relates to an openable and closable container having enhanced sealing performance of a container body with an opening-closing lid.

Background Art

[0002] In general, an openable and closable container for storing wet tissue paper or the like therein includes a container body and an opening-closing lid. The container body stores therein wet tissue paper or the like and has a take-out opening for taking out the wet tissue or the like. The opening-closing lid seals the take-out opening in an openable and closable manner.

[0003] To use wet tissue paper or the like, the opening-closing lid is opened with respect to the take-out opening of the container body and the wet tissue paper or the like is taken out one by one from the take-out opening of the container body.

Prior-art Document

Patent Document

[0004]

Patent Document 1: JP-A-2003-170950

[0005] As described above, the conventional openable and closable container includes the container body and the opening-closing lid swingably attached to the container body. When wet tissue paper or the like is not taken out for use, the opening-closing lid is closed to prevent the vaporization of a liquid component which is contained in the wet tissue paper stored in the container body.

[0006] However, the openable and closable container mentioned above is configured such that a sealed bag storing wet tissue paper communicates with the inside of the container body. Therefore, if the wet tissue paper contains, especially, a highly volatile liquid component such as alcohol, the liquid component such as alcohol may vaporize after a lapse of a long time.

[0007] On the other hand, as illustrated in Fig. 14, a conventional openable and closable container 100 is such that one end of an elastic member 102 biasing an opening-closing lid 101 is vertically inserted into and attached to an upper plate 104 of a container body 103. Therefore, a housing portion 104b housing the elastic member 102 projects downward from the upper plate 104, so that a rear surface 104a of the upper plate 104 will not be flat. In this case, since a sealed bag storing wet tissue paper therein is disposed below the housing portion 104b in the container body 103, a space occurs between the sealed bag and the upper plate 104.

Disclosure of Invention

[0008] The present invention has been made in view of such drawbacks and aims to provide an openable and closable container that can suppress the vaporization of a liquid component in wet tissue paper and suppress the overall height of the openable and closable container to a low level.

[0009] The present invention is an openable and closable container comprizing: a container body having an upper plate formed with a take-out opening, the container body housing therein a sealed bag that has an opening; an opening-closing lid provided on the container body swingably about a swing axis on a base end side, the opening-closing lid opening and closing the take-out opening; an elastic member provided between the container body and the opening-closing lid; and a wet tissue paper stored in the sealed bag; wherein the sealed bag is allowed to adhere to an rear surface of the upper plate, the container body has a housing portion housing one end of the elastic member in a horizontal direction, and a rear surface of the housing portion of the container body is made flat so that the rear surface of the housing portion will not obstruct operation required when the sealed bag storing the wet tissue paper is made to adhere to the rear surface of the upper plate.

[0010] The present invention is the openable and closable container, wherein an adhesive layer is formed on a circumferential edge of an opening of the sealed bag and allows the circumferential edge of the opening of the sealed bag to adhere to the rear surface of the upper plate.

[0011] The present invention is the openable and closable container, wherein the adhesive layer formed on the circumferential edge of the opening of the sealed bag is exposed outwardly by previously peeling off a lid piece.

[0012] The present invention is the openable and closable container, wherein the wet tissue paper is impregnated with alcohol.

[0013] According to the present invention, the circumferential edge of the opening of the sealed bag storing the wet tissue paper is allowed to adhere to the rear surface of the upper plate of the container body. Therefore, the liquid component of the wet tissue paper stored in the sealed bag can be prevented from vaporizing inside the container body.

[0014] According to the present invention, the sealed bag is allowed to adhere to the rear surface of the upper plate of the container body and the container body has the housing portion housing one end of the elastic member in the horizontal direction. In this way, the rear surface of the housing portion included in the container body does not project downward so that nothing prevent the sealed

bag storing the wet tissue paper from being housed suitably in the container body. Therefore, the circumferential edge of the opening of the sealed bag can be allowed to adhere to the rear surface of the upper plate. Since the rear surface of the upper plate of the container body can be brought into close contact with the sealed bag, a type of openable and closable container that is thin can be provided.

Brief Description of Drawings

[0015]

[Fig. 1]
Fig. 1 is a perspective view of an opening and closing container according to an embodiment of the present invention.
[Fig. 2]
Fig. 2 is a plan view of the opening and closing container according to the embodiment of the present invention.
[Fig. 3]
Fig. 3 is a front view of the opening and closing container according to the embodiment of the present invention.
[Fig. 4]
Fig. 4 is a rear view of the opening and closing container according to the embodiment of the present invention.
[Fig. 5]
Fig. 5 is a lateral view of the opening and closing container according to the embodiment of the present invention.
[Fig. 6]
Fig. 6 is a vertical cross-sectional view of the opening and closing container according to the embodiment of the present invention (a cross-sectional view taken along line VI-VI in Fig. 2).
[Fig. 7]
Fig. 7 is an enlarged view of a denting step portion.
[Fig. 8]
Fig. 8 is a plan view of an operating body (an operation button).
[Fig. 9]
Fig. 9 is a bottom view of the operating body (the operation button).
[Fig. 10]
Fig. 10 is a front view of the operating body (the operation button).
[Fig. 11]
Fig. 11 is a lateral view of the operating body (the operation button).
[Fig. 12]
Fig. 12 is a partial enlarged view of Fig. 6.
[Fig. 13]
Figs. 13(a) and (b) are lateral cross-sectional views of a sealed bag storing wet tissue paper.
[Fig. 14]
Fig. 14 illustrates an elastic member used in a conventional openable and closable container.

Mode for Carrying Out the Invention

[0016] One embodiment of the present invention will hereinafter be described with reference to the drawings. Figs. 1 to 13 illustrate the embodiment of the present invention.

[0017] The entire configuration of a wet tissue paper storing container (an openable and closable container) is described with reference to Figs. 1 to 6. As illustrated in Figs. 1 to 6, the openable and closable container 10 includes a downside opening container body (a main body) 11 storing e.g. wet tissue paper 41 as contents therein, and a bottom lid 12 sealing the downside opening of the container body 11.

[0018] As illustrated in Fig. 1, the container body 11 includes an upper plate 27 formed with a take-out opening 24 used to take out wet tissue paper 41, and a lateral plate 13 extending downward from the upper plate 27. An opening-closing lid 23 sealing the take-out opening 24 of the upper plate 27 is attached to the lateral plate 13 of the container body 11 so as to be swingable about a swing axis X-X on a base end 23a side of the lid.

[0019] The container body 11 is formed, on the base end 23a side of the opening-closing lid 23, with a rear step portion 25 extending parallel to the swing axis X-X and denting inwardly. A stopper 30 is provided in the vicinity of each of both ends of the rear step portion 25 so as to project upwardly from the bottom surface of the rear step portion 25. The stopper portions 30 are adapted to stop the base end 23a of the opening-closing lid 23 when the opening-closing lid 23 comes into a fully opened state. The stopper 30 stops the opening-closing lid 23 biased by plate rubber 50 (described later) at a predetermined position.

[0020] Further, the lateral plate 13 is formed at its lower portion with an outwardly projecting flange 14 in contact with the bottom lid 12. Incidentally, the bottom lid 12 is provided with a finger-putting piece 12d which projects outwardly from the lateral plate 13 and on which a user's finger is put. A pair of opposite lateral plates 13a, 13b projects outwardly in an Rounded-shape.

[0021] The upper plate 27 of the container body 11 includes a first upper plate (a first thin plate) 27a and a second upper plate (a second thin plate) 27b. The first upper plate 27a is located at a generally central portion of the plate 27. The second upper plate 27b is provided on the outside of the first upper plate 27a via a central step portion 28 and located at a portion higher than the first upper plate 27a. The take-out opening 24 described above is provided in the first upper plate 27a.

[0022] The first upper plate 27a is formed with a recessed portion 94, in which an annular rib 95 is provided in the recessed portion 94 to surround the take-out opening 24. In short, the take-out opening 24 described above is disposed within the annular rib 95. The opening-closing

lid 23 is formed, on the rear surface thereof, with a frame body 37. A packing member (an elastic sealing body) 38 is attached to the inside of the frame body 37. The frame body 37 is set inside the recessed portion 94 and outside the annular rib 95 when the opening-closing lid 23 is closed.

[0023] As described above, the packing member 38 formed like a dome is attached to the inside of the frame body 37. The packing member 38 is formed separately from the opening-closing lid 23. The packing member 38 is made of an elastic, soft synthetic resin material, such as low-density polyethylene (LDPE) or the like. The packing member 38 is removably fitted into the frame body 37.

[0024] Referring to Figs. 1 and 6, a free end 23e of the opening-closing lid 23 is provided with a retaining piece 32. The container body 11 is formed with a denting step portion 58 denting from the upper plate 27 is formed, on the free end 23e side of the opening-closing lid 23 and in the vicinity of the upper end of the lateral plate 13. An operating body (an operation button) 55 is provided in the denting step portion 58.

[0025] The operation button 55 is next described. The operation button 55 is attached to the denting step portion 58 of the container body 11. Fig. 7 is an enlarged plan view illustrating an attachment portion included in the container body 11 for attaching the operation button 55. Figs. 8 to 11 illustrate details of the operation button 55.

[0026] Referring to Figs. 8 to 11, the operation button 55 has a top plate portion 65. The top plate portion 65 is formed with an operation surface 65a on which a user's finger is put. The operation surface 65a is formed to draw a centrally dented curve. An outer circumference 65b, on a rear end side (on the upper side in Fig. 8), of the top plate portion 65 is curved arcuately. An outer circumference 65c, on a front end side, of the top plate portion 65 is formed linearly. As illustrated in Fig. 9 and 11, the top plate portion 65 is formed at the center of the rear end portion with a claw portion 66, which comes into engagement with the retaining piece 32 of the opening-closing lid 23.

[0027] A pair of attachment ribs 67, 67 is provided to project from the rear surface of the top plate portion 65. The attachment ribs 67, 67 are formed with respective hinge shafts 68, 68, which are coaxial with each other. Further, an arcuate spring portion 69 is formed on the front end side of the rear surface of the top plate portion 65.

[0028] As illustrated in Fig. 7, the denting step portion 58 of the container body 11 is surrounded by a bottom plate 71, a lateral plate 72 disposed between the bottom plate 71 and the recessed portion 94, and a lateral plate 73 disposed between the bottom plate 71 and the second upper plate 27b. A pair of step portions 74, 74 projecting inward is formed in the vicinity of both corresponding ends of the lateral plate 73. The step portions 74, 74 are formed with respective hinge-receiving holes 78, 78 adapted to receive the corresponding hinge shafts 68, 68 of the operation button 55. The bottom plate 71 is provided with a spring-receiving groove 79 adapted to receive the spring portion 69 of the operation button 55. A rib 80 is provided in the spring-receiving groove 79 in order to hold the center of the spring portion 69 at a predetermined position in a vertical direction.

[0029] The spring portion 69 of the operation button 55 is fitted to the spring-receiving groove 79 and the hinge shaft 68 is fitted to each of the hinge-receiving holes 78, 78. Thus, the operation button 55 is attached to the inside of the denting step portion 58 turnably about the hinge shaft 68. The claw portion 66 of the operation button 55 is biased, by the resilience of the spring portion 69, about the hinge shaft 68 in a direction (downward in Fig. 6) in which the claw portion 66 approaches the recessed portion 94.

[0030] When the opening-closing lid 23 is closed, the operation button 55 turns in such a manner as to yield to the retaining piece 32 of the opening-closing lid 23. When the retaining piece 32 overrides the claw portion 66, the operation button 55 turns based on the force exerted by the spring portion 69. As a result, the retaining piece 32 and the claw portion 66 come into engagement with each other to keep the opening-closing lid 23 in the closed state.

[0031] In contrast, if a user depresses the operation surface 65a of the operation button 55 with the opening-closing lid 23 closed, the claw portion 66 of the operation button 55 turns about the hinge shaft 68 in a direction in which it is spaced apart from the recessed portion 94. As a result, the retaining piece 32 is disengaged with the claw portion 66.

[0032] Incidentally, as illustrated in Figs. 1 and 6, elongated plate rubber (an elastic member) 50 biasing the opening-closing lid 23 in the opening direction is provided between the container body 11 and the opening-closing lid 23. Specifically, the container body 11 is provided with a housing portion 75 horizontally and insertably housing one end of the plate rubber 50 and the opening-closing lid 23 is provided with a securing portion 76 horizontally securing the other end of the plate rubber 50.

[0033] As illustrated in Figs. 6 and 12, the housing portion 75 is configured to open in a rear surface direction of the container so that one end of the plate rubber 50 can be housed by being inserted into the housing portion horizontally. Therefore, the rear surface of the housing portion 75 included in the first upper plate 27a of the container body 11 is made generally flat without projecting downward; thereby the rear surface of the housing portion 75 is adapted not to obstruct operation required when a sealed bag 40 (described later) is made to adhere to the rear surface of the first upper plate 27a.

[0034] Incidentally, the container main body 11 and the opening-closing lid 23 described above are each obtained by injection molding by use of polypropylene (PP). However, they may be molded by use of another material, such as PE, PS, ABS, elastomer, PET, PVC, or polycarbonate. The bottom lid 12 preferably uses linear low-density polyethylene (LLDPE). Further, as the plate rubber

50, uses silicon rubber is used. The securing portion 76 is made of polypropylene (PP).

[0035] The wet tissue paper 41 stored in the container body 11 is next described with reference to Figs. 13(a) and (b). As illustrated in Fig. 13(a), the wet tissue papers 41 folded back, i.e., are located in a stacked manner in a sealed bag 40 made of a soft sheet and are sealed within the sealed bag 40. Each piece of the wet tissue paper 41 is generally doubled up to form a folded portion 42. Each of the folded portions 42 of the wet tissue papers 41 are alternately changed in direction. A lower half portion 41b of a wet tissue paper 41 doubled up is inserted between an upper portion 41a of a wet tissue paper 41 located on the lower side and an upper half portion 41a of a wet tissue paper 41 located on a further lower side. Therefore, when the wet tissue paper 41 is pinched and taken out one by one, the lower half portion 41b of a wet tissue paper 41 taken out will pull up the upper portion 41a of a wet tissue paper 41 located on the lower side. Incidentally, how to fold the wet tissue paper 41 needs only to dispose the wet tissue paper 41 in a stacked manner so that the wet tissue paper 41 may continuously be taken out. However, how to fold the wet tissue paper 41 is not particularly restrictive. For example, also a folding method as illustrated in Fig. 13(b) may be acceptable. The sealed bag 40 is provided at its upper end with an opening 40a for taking out wet tissue paper 41 therefrom. The opening 40a is sealed by a lid piece 45 removably attached to the upper surface of the sealed bag 40, before time of initiating the use of the openable and closable container 10.

[0036] In this case, the lid piece 45 is made to adhere to the upper surface of the sealed bag 40 by means of an adhesive layer 46 formed on the circumferential edge of the opening 40a. The adhesive layer 46 is used also when the circumferential edge of the opening 40a of the seated bag 40 is made to adhere removably to the rear surface of the first upper plate 27a as described later (see Fig. 12). The sealed bag 40 is designed such that the adhesive layer 46 is exposed outwardly by previously peeling the lid piece 45.

[0037] Material of the wet tissue paper 41 used includes a fiber material such as nonwoven fabric, paper, gauze, a sheet-like foam, or a paper-based soft material. Conceivable examples of liquid impregnated into the wet tissue paper 41 include cosmetics such as a wetting agent containing a bactericidal agent, disinfectant, a cleaning agent, etc., lotion, and skin milk. The present embodiment enhances the sealing performance of the container body 11 with the opening-closing lid 23 and the sealing performance of the container body 11 with the sealed bag 40. Therefore, wet tissue paper 41 impregnated with, especially, alcohol or other highly volatile liquid can preferably be used.

[0038] A description is next given of the operation of the present embodiment configured as described above.

[0039] First, a description is given of the operation encountered when the use of an unused openable and closable container 10 is started. The bottom lid 12 is removed from the container body 11 and the sealed bag 40 storing the wet tissue paper 41 in the container body 11 is taken out. Next, the opening 40a of the sealed bag 40 is opened by peeling the lid piece 45 from the adhesive layer 46 on the circumferential edge of the opening 40a.

[0040] Subsequently, the circumferential edge of the opening 40a of the sealed bag 40 and the rear surface of the first upper plate 27a are made to adhere to each other via the adhesive layer 46. In this way, the sealed bag 40 storing the wet tissue paper 41 is removably attached to the rear surface of the first upper plate 27a.

[0041] Next, the bottom lid 12 is attached to the container body 11 to seal the downside-opening of the container body 11.

[0042] A description is next given of the operation encountered when the wet tissue paper 41 stored in the container body 11 is taken out for use. A user first depresses the top plate portion 65 of the operation button 55. This releases the engagement between the retaining piece 32 and the claw portion 66. In this case, the resilience of the plate rubber 50 opens the opening-closing lid 23.

[0043] Specifically, the opening-closing lid 23 is biased by the plate rubber 50 and turned about the swing axis X-X in the opening direction (in the clockwise direction in Fig. 6). Thereafter, when the opening-closing lid 23 reaches the fully opened position, the base end 23a of the opening-closing lid 23 is retained by the stopper 30 to stop the opening-closing lid 23.

[0044] The wet tissue paper 41 is next pinched with user's fingers and pulled out upward from the take-out opening 24 of the container body 11 for use.

[0045] In this way, the wet tissue paper 41 is taken out and thereafter the opening-closing lid 23 is closed. In this case, a user depresses the opening-closing lid 23 downward with her or his hand. This turns the opening-closing lid 23 about the swing axis X-X in the closing direction (the counterclockwise direction in Fig. 6) against the biasing force of the plate rubber 50. Thereafter, when the opening-closing lid 23 reaches the fully closed position, the retaining piece 32 of the opening-closing lid 23 comes into engagement with the claw portion 66 of the operating body (the operation button) 55 to secure the opening-closing lid 23 at the fully closed position.

[0046] In this case, the packing member 38 comes into close contact with the annular rib 95; therefore, the packing member 38 seals the take-out opening 24 of the container body 11. In addition, as described above, the circumferential edge of the opening 40a of the sealed bag 40 adheres to the rear surface of the first upper plate 27a via the adhesion layer 46. Thus, the liquid component of the wet tissue paper 41 does not vaporize through the take-out opening 24 and does not vaporize also inside the container body 11.

[0047] According to the present embodiment described above, the circumferential edge of the opening 40a of the sealed bag 40 is allowed to adhere to the rear

surface of the first upper plate 27a of the container body 11. Therefore, the liquid component of the wet tissue paper 41 stored in the sealed bag 40 can be prevented from vaporizing inside the container body 11.

[0048] According to the present embodiment, the housing portion 75 housing one end of the plate rubber 50 faces in the horizontal direction; therefore, the rear surface of the housing portion 75 of the container body 11 can generally be made flat. Thus, the housing portion 75 will not obstruct operation required when the sealed bag 40 is made to adhere to the rear surface of the first upper plate 27a. Since a space does not occur between the sealed bag 40 and the first upper plate 27a, a wasted space in the container body 11 can be eliminated, thereby making thin the openable and closable container 10.

Claims

1. An openable and closable container comprising:

a container body having an upper plate formed with a take-out opening, the container body housing therein a sealed bag that has an opening;
an opening-closing lid provided on the container body swingably about a swing axis on a base end side, the opening-closing lid opening and closing the take-out opening;
an elastic member provided between the container body and the opening-closing lid; and
a wet tissue paper stored in the sealed bag;
wherein the sealed bag is allowed to adhere to an rear surface of the upper plate,
the container body has a housing portion housing one end of the elastic member in a horizontal direction,
a rear surface of the housing portion of the container body is made flat so that the rear surface of the housing portion will not obstruct operation required when the sealed bag storing the wet tissue paper is made to adhere to the rear surface of the upper plate.

2. The openable and closable container according to claim 1, wherein
an adhesive layer is formed on a circumferential edge of an opening of the sealed bag and allows the circumferential edge of the opening of the sealed bag to adhere to the rear surface of the upper plate.

3. The openable and closable container according to claim 2,
wherein the adhesive layer formed on the circumferential edge of the opening of the sealed bag is exposed outwardly by previously peeling off a lid piece.

4. The openable and closable container according to claim 1,
wherein the wet tissue paper is impregnated with alcohol.

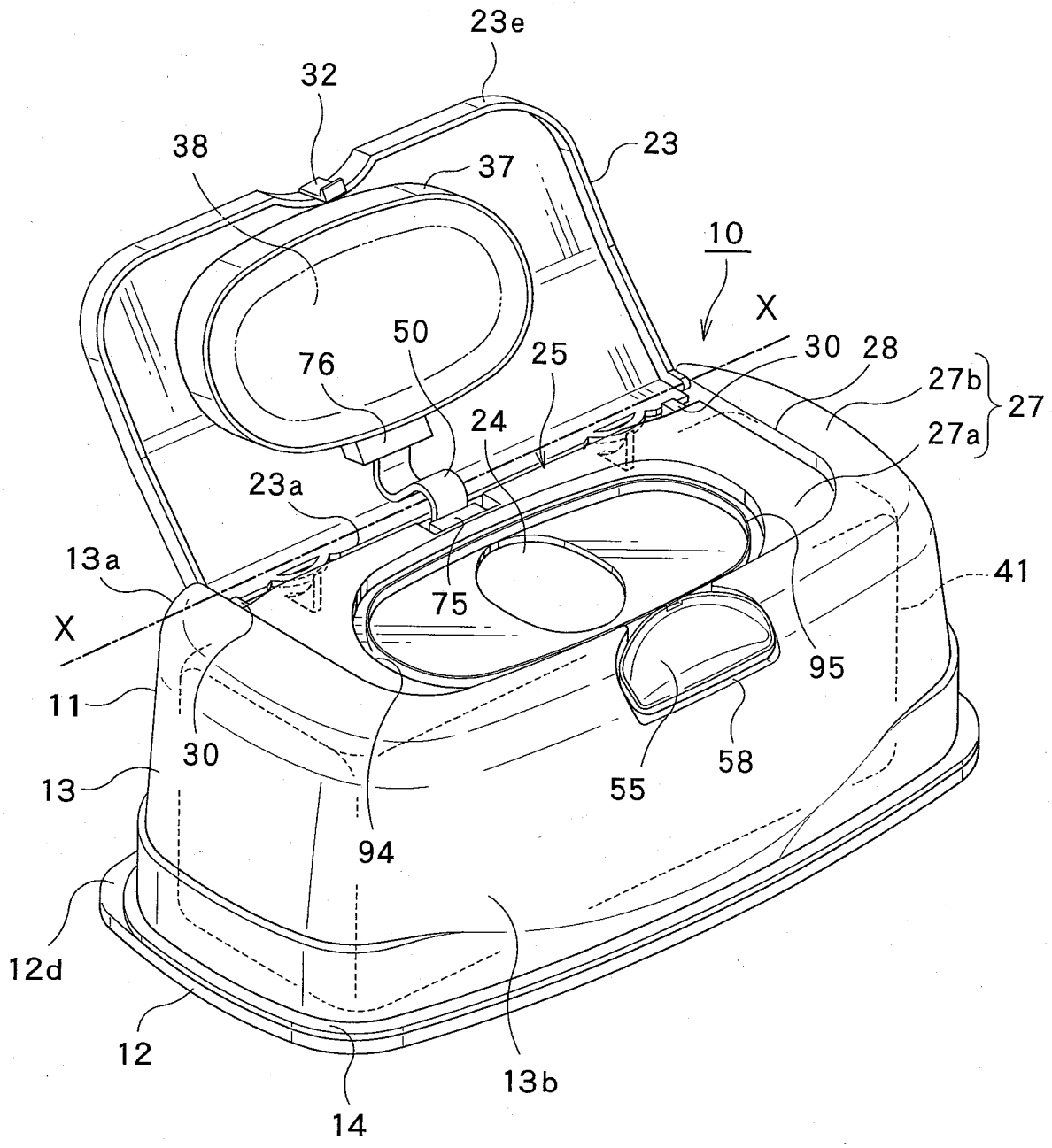
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FIG.1

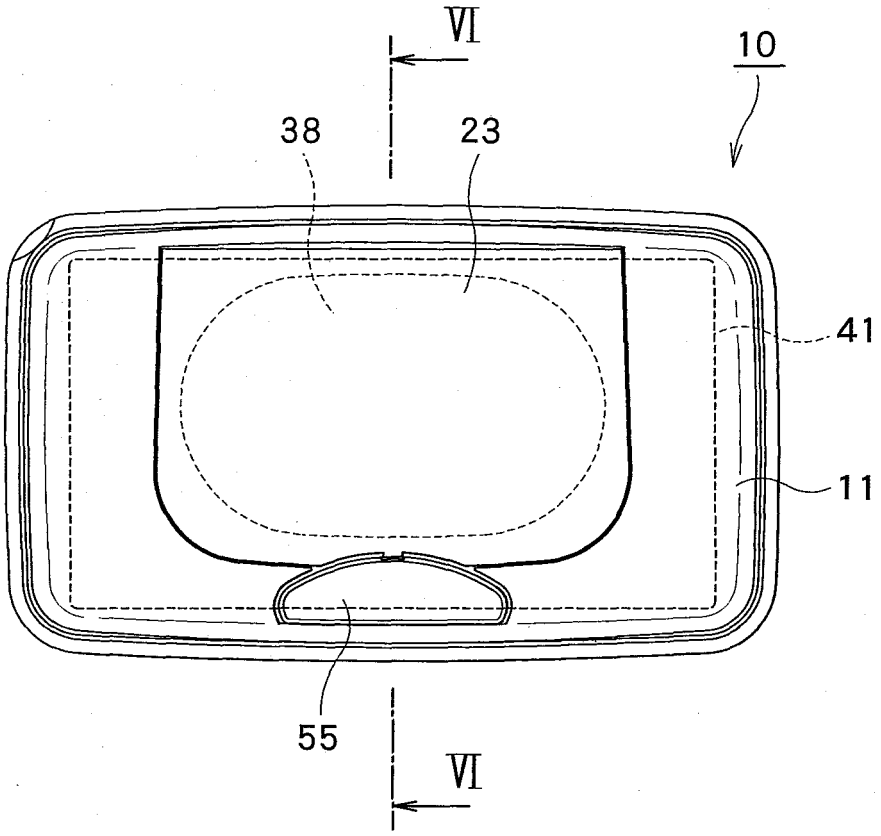

FIG.2

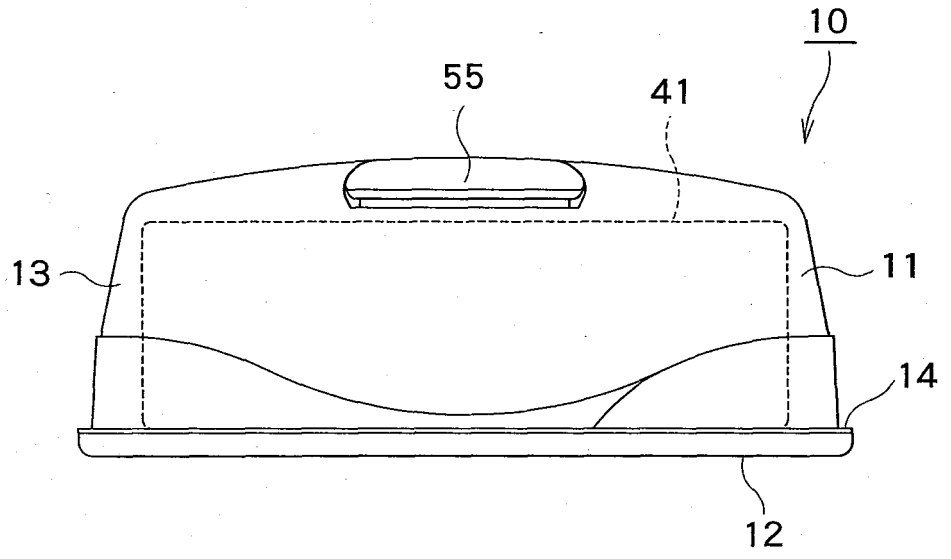

FIG.3

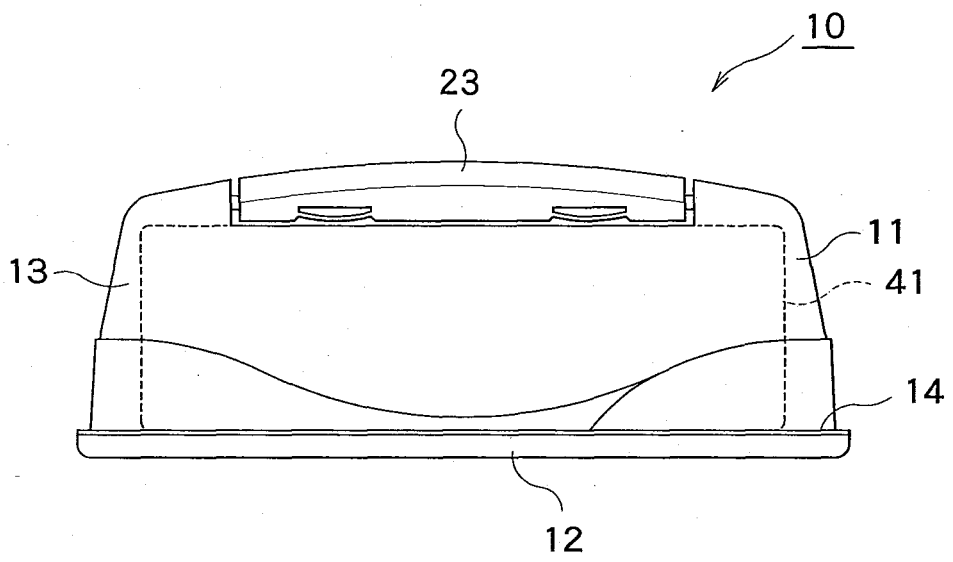

FIG.4

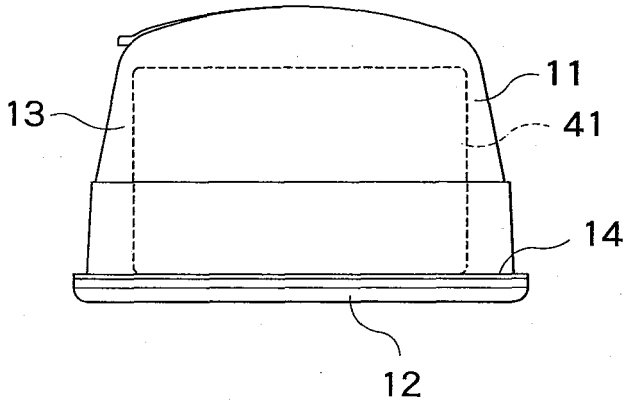

FIG.5

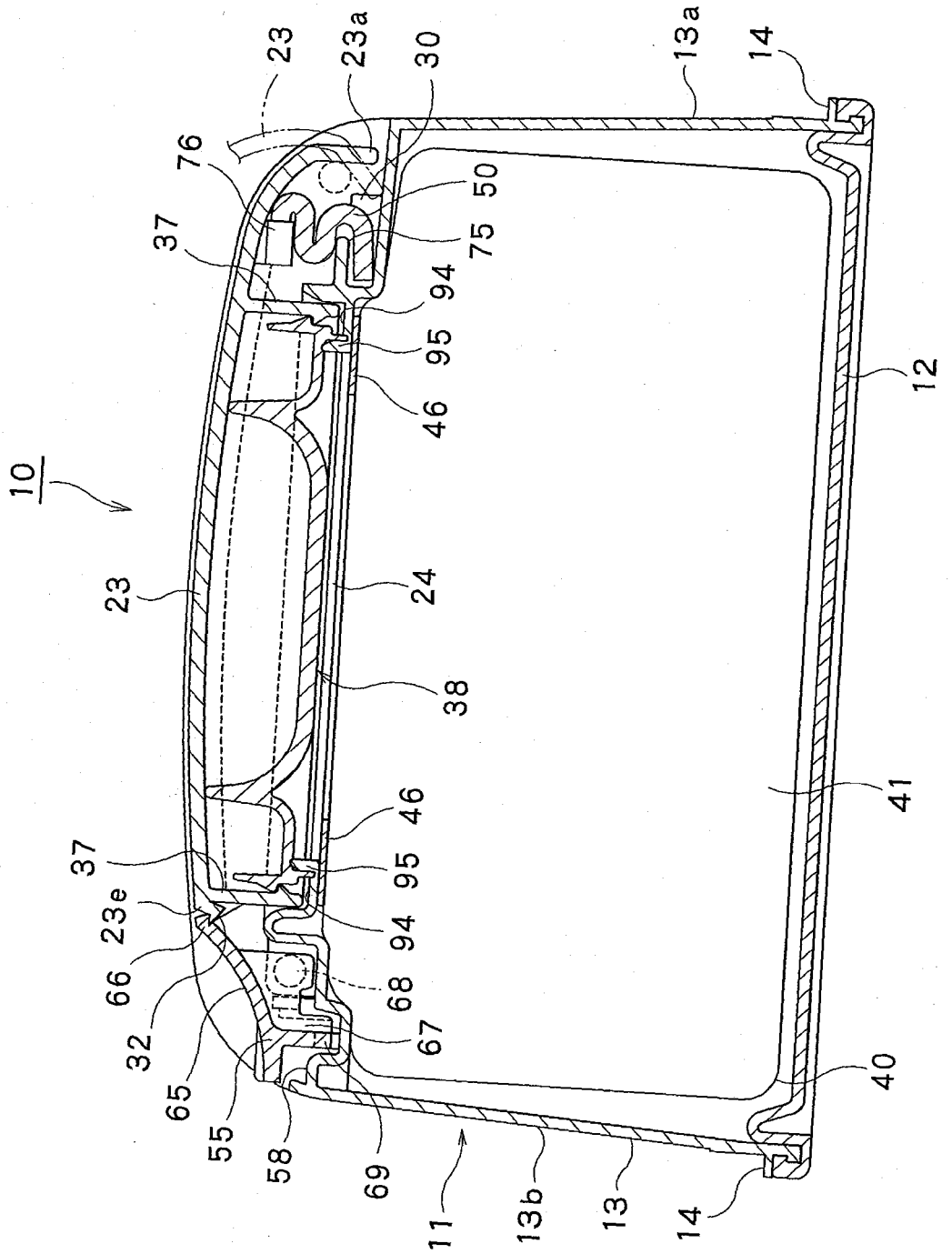
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FIG.6

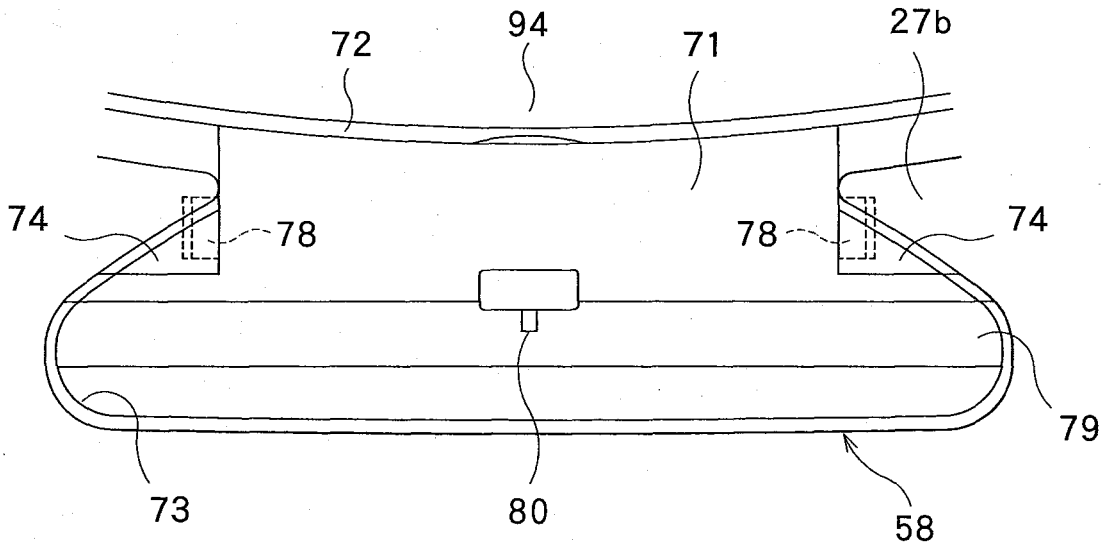


FIG.7

FIG.8

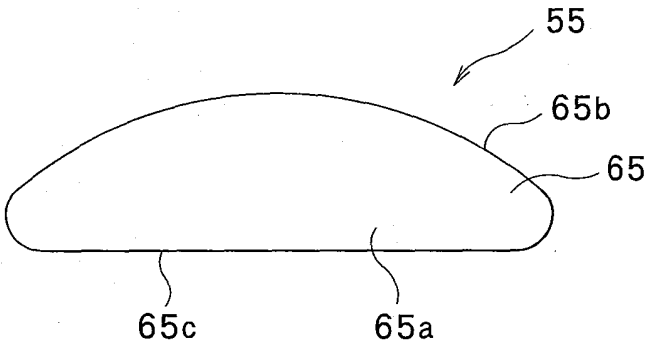


FIG.9

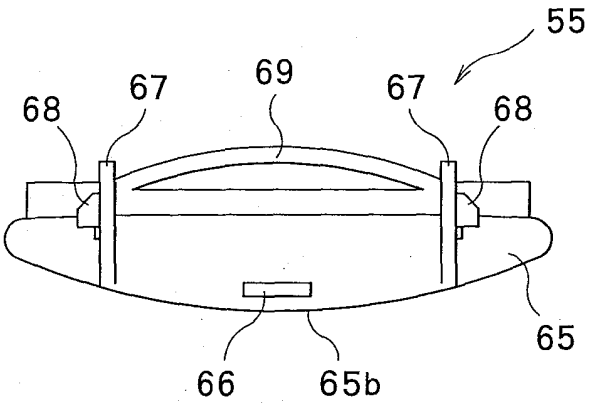


FIG.10

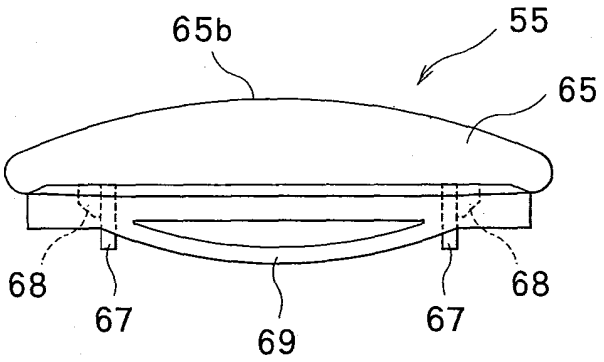
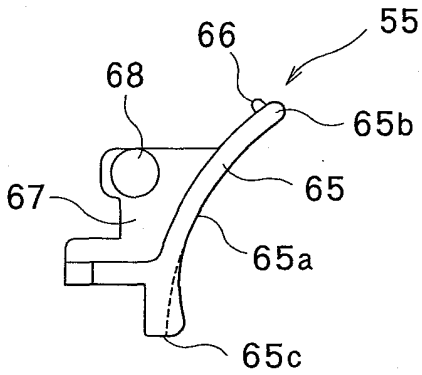


FIG.11



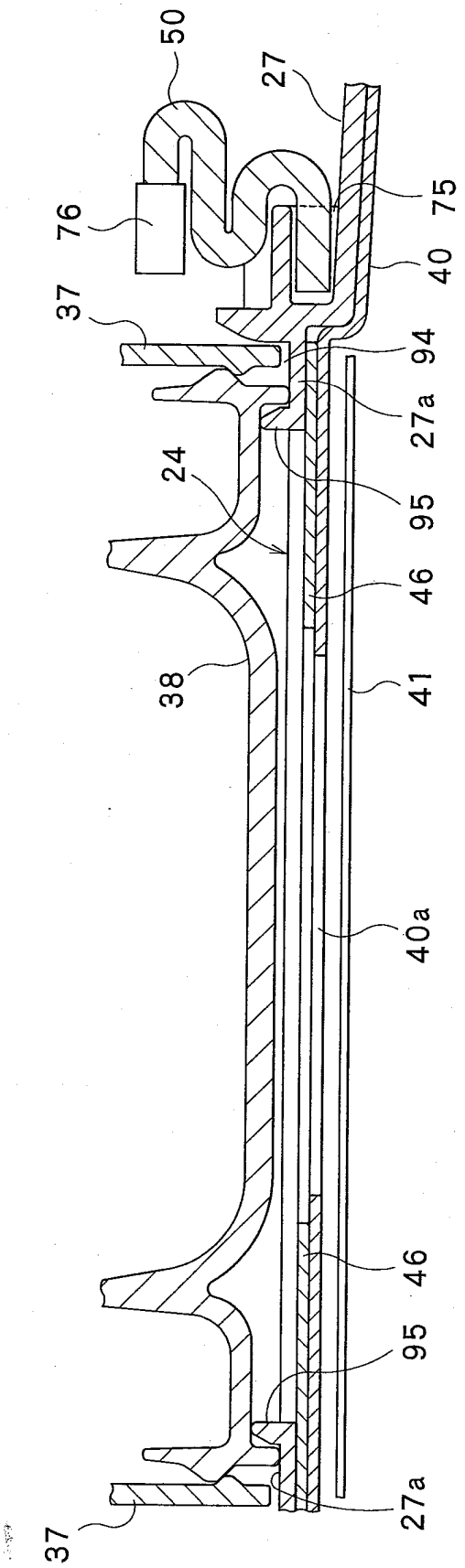


FIG.12

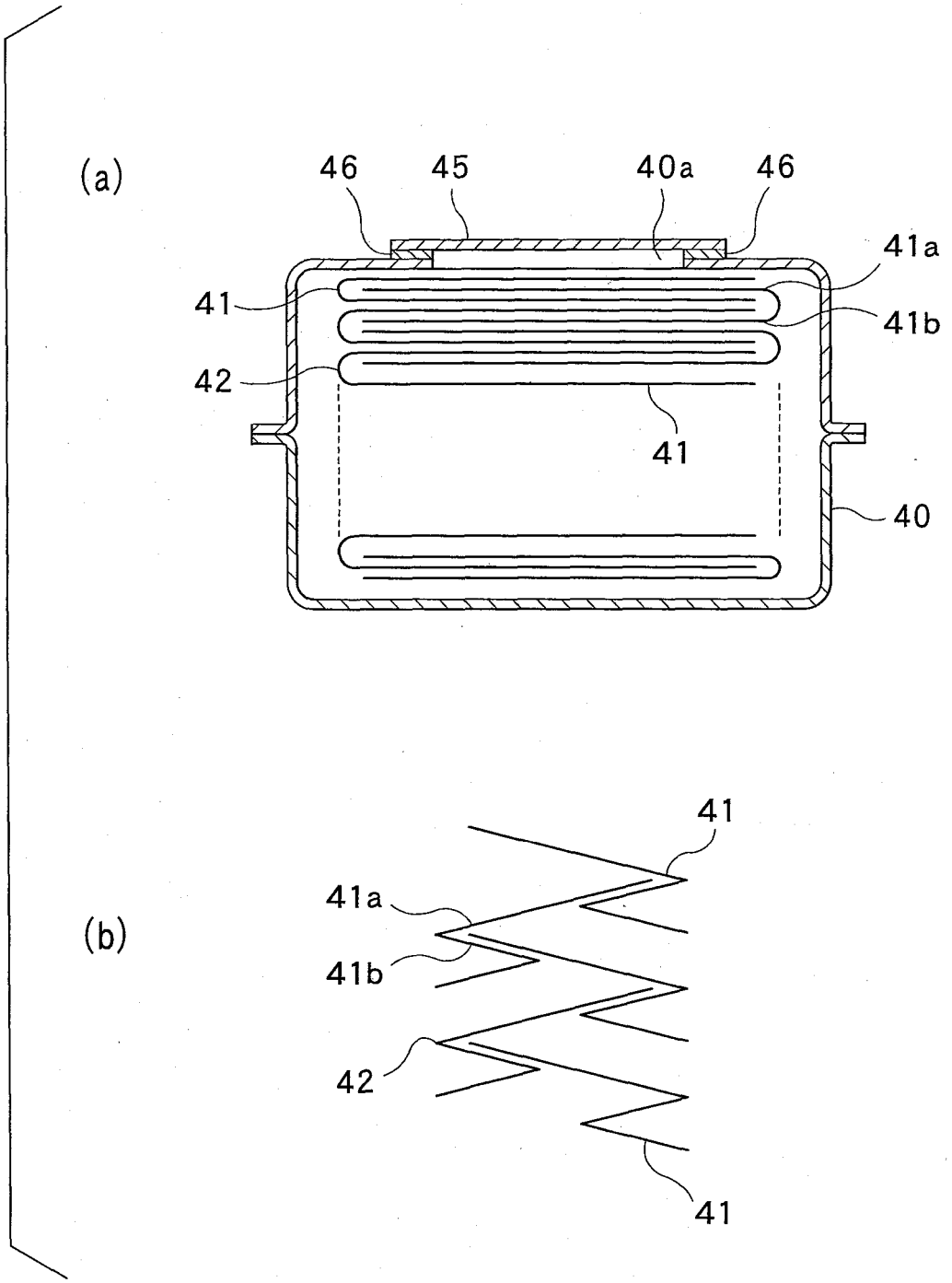


FIG.13

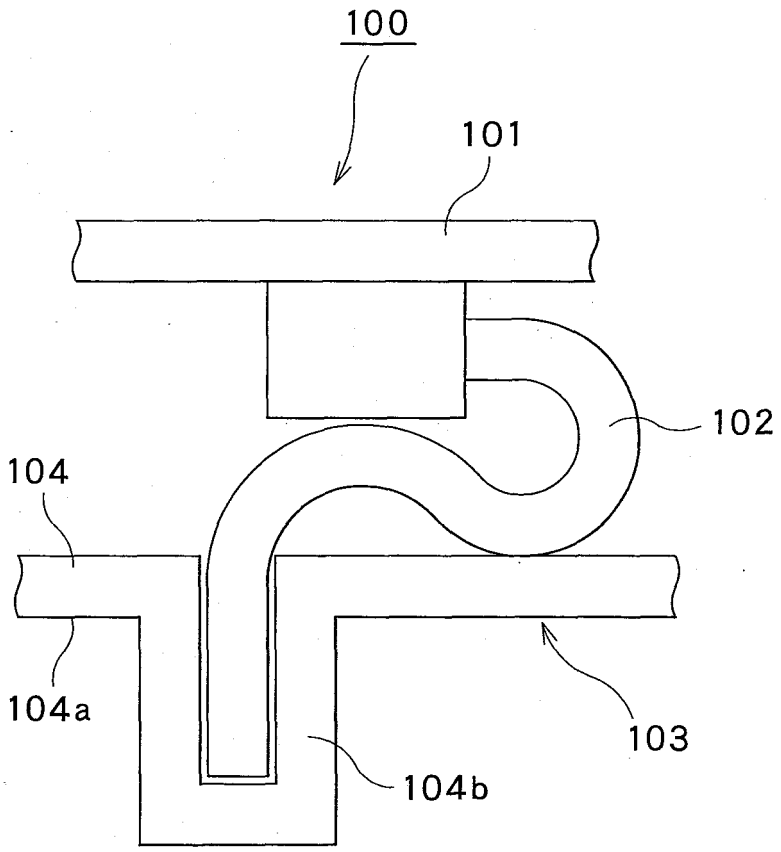


FIG.14

INTERNATIONAL SEARCH REPORT

International application No.
PCT/JP2009/068595

A. CLASSIFICATION OF SUBJECT MATTER
B65D83/08(2006.01)i, *B65D43/16*(2006.01)i, *B65D53/02*(2006.01)i, *B65D77/04*(2006.01)i

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

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
B65D83/08, B65D43/16, B65D53/02, B65D77/04

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

Jitsuyo Shinan Koho	1922-1996	Jitsuyo Shinan Toroku Koho	1996-2009
Kokai Jitsuyo Shinan Koho	1971-2009	Toroku Jitsuyo Shinan Koho	1994-2009

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

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	JP 2003-170950 A (Uni-Charm Corp.), 17 June 2003 (17.06.2003), paragraphs [0009] to [0061]; fig. 5, 8 (Family: none)	1-4
Y	JP 8-113268 A (Kenji NAKAMURA), 07 May 1996 (07.05.1996), paragraph [0034]; all drawings & US 4790436 A & EP 251103 A1 & DE 3761649 D & AU 7468587 A & CA 1292451 A & HK 94594 A & AT 50226 T & GR 3000455 T & KR 10-1995-0000593 B & AT 50226 E & AU 7468587 A1	1-4

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

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Date of the actual completion of the international search 17 November, 2009 (17.11.09)	Date of mailing of the international search report 01 December, 2009 (01.12.09)
Name and mailing address of the ISA/ Japanese Patent Office Facsimile No.	Authorized officer Telephone No.

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INTERNATIONAL SEARCH REPORT

International application No.
PCT/JP2009/068595

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	JP 2008-239208 A (Oji Nepia Co., Ltd.), 09 October 2008 (09.10.2008), paragraphs [0019], [0039]; fig. 9 (Family: none)	1-4
Y	JP 2001-97423 A (Toppan Printing Co., Ltd.), 10 April 2001 (10.04.2001), paragraph [0097]; fig. 8 (Family: none)	1-4

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REFERENCES CITED IN THE DESCRIPTION

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Patent documents cited in the description

- JP 2003170950 A **[0004]**