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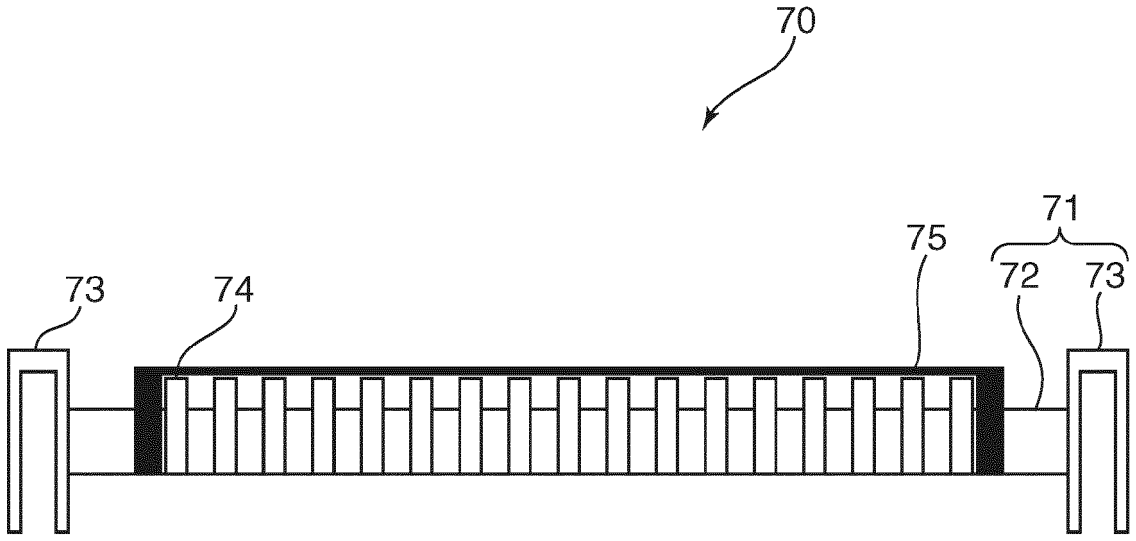
(54) **RETURNABLE BOX**

(57) There is provided a returnable box, which is capable of conveying clothes under a state of being hung from a hanger, and prevents falling of the hanger during conveyance without requiring a complicated operation. A returnable box according to the present invention includes: a box main body configured to store clothes therein-side; and a hanger hooking member attached inside the box main body. The hanger hooking member includes a fixing member and a hanger hooking main body including a hanger bar on which a hook of a hanger is hooked, and the fixing member is attached to the hanger hooking main body under a state of being extended along a longitudinal direction of the hanger bar above the hanger bar.

FIG. 2



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Description

Technical Field

[0001] The present invention relates to a box to be used for conveyance of products or the like, and to a returnable box, which is repeatedly used by returning, to a conveyance source, the box that has become empty after products or the like are conveyed to a destination.

Background Art

[0002] There has been proposed a returnable box capable of storing clothes under a state of being hung from a hanger. As such returnable box, for example, in Patent Literature 1, there is described a foldable container for carrying clothes, which includes a horizontal rail for hooking a hanger and a fixture main body. The horizontal rail for hooking a hanger is provided in the vicinity of a ceiling portion of a storage portion. The fixture main body includes an elastic member on a lower surface thereof. According to the foldable container for carrying clothes in Patent Literature 1, the fixture main body is inserted between the horizontal rail on which the hanger is hooked and a lower surface of the ceiling portion of the storage portion so that a top surface portion of the hook of the hanger can be pressed by the elastic member. With this, falling of the hanger due to vibration of the container can be prevented during conveyance.

Citation List

Patent Literature

[0003] [PTL 1] JP 2006-213355 A

Summary of Invention

Technical Problem

[0004] However, in the foldable container for carrying clothes in Patent Literature 1, in order to press the top surface portion of the hook of the hanger by the elastic member, it is required that the fixture main body have a thickness substantially equal to a gap between the lower surface of the ceiling portion and the horizontal rail. Thus, an operation of inserting the fixture main body between the lower surface of the ceiling portion and the horizontal rail is not easy.

[0005] The present invention has been made to solve the above-mentioned problems inherent in the related art, and an object of the present invention is to provide a returnable box, which is capable of conveying clothes under a state of being hung from a hanger, and prevents falling of the hanger during conveyance without requiring a complicated operation.

Solution to Problem

[0006] A returnable box according to an embodiment of the present invention includes: a box main body configured to store clothes thereinside; and a hanger hooking member attached inside the box main body. The hanger hooking member includes a fixing member and a hanger hooking main body including a hanger bar on which a hook of a hanger is hooked, and the fixing member is attached to the hanger hooking main body under a state of being extended along a longitudinal direction of the hanger bar above the hanger bar.

[0007] In one embodiment of the present invention, the fixing member has elasticity.

[0008] In one embodiment of the present invention, the fixing member includes a belt-shaped member having rubber elasticity.

[0009] In one embodiment of the present invention, the fixing member is held in contact with an upper surface of the hanger bar.

[0010] In one embodiment of the present invention, a projecting portion is formed on an upper surface of the hanger bar.

[0011] In one embodiment of the present invention, the projecting portion includes a plurality of projecting portions.

[0012] In one embodiment of the present invention, a locking part configured to fix the fixing member by being hooked on the projecting portion is provided on an end portion of the fixing member.

[0013] In one embodiment of the present invention, the fixing member is held in contact with an upper surface of the projecting portion.

[0014] In one embodiment of the present invention, the hanger hooking member is removably attached inside the box main body.

[0015] In one embodiment of the present invention, the box main body is foldable.

Advantageous Effects of Invention

[0016] According to the present invention, clothes can be conveyed under a state of being hung from a hanger, and falling of the hanger during conveyance can be prevented without requiring a complicated operation.

Brief Description of Drawings

[0017]

FIG. **1** is a perspective view for illustrating an example of a configuration of a returnable box according to an embodiment of the present invention.

FIG. **2** is a front view for illustrating an example of a configuration of a hanger hooking member.

FIG. **3** is a perspective view for illustrating an exam-

ple of a configuration of a hanger hooking main body.

FIG. **4** is a plan view for illustrating an example of a configuration of a fixing member in a state of being removed from the hanger hooking main body.

FIG. **5** is a perspective view for illustrating a state in which a box main body in the embodiment of the present invention is open.

FIG. **6** is a perspective view for illustrating a step of a procedure of folding the box main body.

FIG. **7** is a perspective view for illustrating a step of the procedure of folding the box main body.

FIG. **8** is a perspective view for illustrating a step of the procedure of folding the box main body.

FIG. **9** is a perspective view for illustrating a step of the procedure of folding the box main body.

Description of Embodiments

[0018] A returnable box according to one embodiment of the present invention is described in detail with reference to FIG. **1** to FIG. **9**. FIG. **1** is a perspective view for illustrating an example of a configuration of the returnable box according to the embodiment of the present invention. As illustrated in FIG. **1**, a returnable box **100** includes a box main body **1** and a hanger hooking member **70.** The hanger hooking member **70** is attached inside the box main body **1.** A shape of the box main body **1** is not particularly limited, and is a rectangular parallelepiped shape in the illustrated example.

[0019] As described later, the hanger hookingmember **70** includes a hanger hooking main body and a fixing member. The hanger hooking main body includes a hanger bar. The fixing member is attached to the hanger hooking main body under a state of being extended along a longitudinal direction of the hanger bar above the hanger bar. With this, a hanger that is hooked on the hanger bar can be easily fixed without requiring a complicated operation, thereby being capable of achieving the returnable box **100** that prevents falling of a hanger during conveyance.

<Hanger Hooking Member>

[0020] As illustrated in FIG. **1**, the hanger hooking member **70** is arranged substantially horizontally inside the box main body **1.** A hanger with clothes hung therefrom can be hooked on the hanger hooking member **70**. With this, clothes can be conveyed under a state of being hung from a hanger through use of the returnable box **100.** As a configuration for arranging the hanger hooking member **70** inside the box main body **1**, any appropriate configuration may be employed. As the above-mentioned configuration, there is given, for example, a configuration in which attaching parts **53** configured to hook and fix the hanger hooking member **70** are provided on an inner surface of the box main body **1.**

[0021] FIG. **2** is a front view for illustrating an example of a configuration of the hanger hooking member. As illustrated in FIG. **2**, the hanger hooking member **70** includes a hanger hooking main body **71** and a fixing member **75.** The fixing member **75** is attached to the hanger hooking main body **71** so as to cover an entirety or a part of a hanger bar **72** under a state of being extended along a longitudinal direction of the hanger bar **72.** More specifically, under a state in which the hanger hooking member **70** is attached inside the box main body **1,** the fixing member **75** is located above the hanger bar **72**, and is attached to the hanger hooking main body **71** under the state of being extended along the longitudinal direction of the hanger bar **72.**

[0022] FIG. **3** is a perspective view for illustrating an example of a configuration of the hanger hooking main body. As illustrated in FIG. **2** and FIG. **3**, the hanger hooking main body **71** includes the hanger bar **72** and mounting parts **73.** The hanger bar **72** is a portion on which a hook of a hanger is hooked. The mounting parts **73** are provided on both ends of the hanger bar **72.** The hanger bar **72** is a bar-like member, and a shape of the hanger bar **72** is not particularly limited. The hanger bar **72** has a thickness or a diameter large enough to hook a hook of a general hanger. In the example illustrated in FIG. **3,** the hanger bar **72** schematically has a semi-cylindrical shape having a curved surface portion in an upper half. Further, a length of the hanger bar **72** may be appropriately set in accordance with a size of the box main body. The length of the hanger bar **72** is, for example, from 300 mm to 600 mm, and is typically about 480 mm. The mounting parts **73** each have a U-shape that is open on the lower side in FIG. **3**. The hanger hookingmember **70** can be removably attached inside the box main body **1** by hooking the mounting parts **73** on the attaching parts **53** provided on the inner surface of the box main body **1.** The hanger hooking main body **71** may be made of any appropriate material, and is typically made of polyethylene terephthalate resin.

[0023] FIG. **4** is a plan view for illustrating an example of a configuration of the fixing member in a state of being removed from the hanger hooking main body. The fixing member **75** typically has rubber elasticity. The fixing member **75** may be removably attached to the hanger hooking main body **71**, or unremovably fixed to the hanger hooking main body **71.** Further, a configuration for mounting the fixing member **75** to the hanger hooking main body **71** is not particularly limited, and any appropriate configuration may be employed. As a specific example of the above-mentioned configuration, there is given a configuration in which a snap button, a hook-and-loop fastener, or the like is provided to the fixing member **75.** In the example illustrated in FIG. **4**, the fixing member **75** includes an extension band **76** and locking parts **77.**

The extension band **76** has a belt-like shape and rubber elasticity. The locking parts **77** are provided on both ends of the extension band **76** and configured to mount the fixing member **75** to the hanger hooking main body **71.** Snap buttons **78** are provided to each of the locking parts **77,** and the fixing member **75** can be attached to the hanger hooking main body **71** by fastening the snap buttons **78** under a state in which the locking parts **77** are wound around the hanger bar **72.**

[0024] Further, in the example illustrated in FIG. **2**, a plurality of projecting portions **74** arrayed along the longitudinal direction are formed on an upper surface of the hanger bar **72.** The snap buttons **78** are fastened on an outer side of any projecting portion **74** of the plurality of projecting portions **74** (typically, endmost projecting portion) under a state in which the locking parts **77** are wound around the hanger bar **72.** In this manner, the fixing member **75** can be attached to the hanger bar **72** by hooking the fixing member **75** on the projecting portions **74.**

[0025] In the example illustrated in FIG. **2**, the fixing member **75** is attached to the hanger bar **72.** However, the fixing member **75** may be attached to the mounting parts **73.**

[0026] As described above, in the hanger hooking member **70**, the fixing member **75** is located above the hanger bar **72** under the state of being extended along the longitudinal direction of the hanger bar **72.** With this, a hanger that is hooked on the hanger bar **72** is pressed from above by the fixing member **75** by a force in accordance with an elastic modulus of the fixing member **75.** As a result, even when the returnable box **100** is vibrated during conveyance, falling of a hanger can be prevented.

[0027] Falling of a hanger during conveyance can be further reliably prevented as a gap between the fixing member **75** and the hanger bar **72** is reduced. Therefore, it is preferred that the fixing member **75** be fixed to the hanger hooking main body **71** so as to reduce the gap between the fixing member **75** and the hanger bar **72**, and it is more preferred that the fixing member **75** be fixed to the hanger hooking main body **71** under a state of being held in contact with the upper surface of the hanger bar **72** (upper surfaces of the projecting portions **74** in a case in which the projecting portions **74** are formed).

[0028] Further, when a hanger is to be hooked on the hanger bar **72**, a worker can hook a hook of the hanger on the hanger bar **72** by inserting the hook into the gap between the hanger bar **72** and the fixing member **75** under a state in which the gap is widened by pulling the fixing member **75** upward. Therefore, a hanger can be hooked on the hanger bar **72** without requiring a complicated operation.

[0029] As a material and a shape of each of the extension band **76** and the locking parts **77**, any appropriate material and shape may be employed. As the material of the extension band **76**, there are given, for example, natural rubber and polyurethane, and, as the material of the locking parts **77**, there are given, for example, polypropylene, polyester, and nylon. Further, as the extension band **76**, there may be employed an extension band having, for example, a length of from 280 mm to 380 mm, a width of from 25 mm to 50 mm, and a thickness of from 0.1 mm to 2 mm. As each of the locking parts **77**, there may be employed a locking part having a length of from 110 mm to 120 mm and a width of 25 mm.

[0030] An extension rate of the extension band **76** under a state of being attached to the hanger bar **72** (rate of a length in an attached state to a length in an unattached state) may be set to, for example, from 120% to 160%. Further, a breakage length of the extension band **76** may be set to from 180% to 200%. The length of the hanger bar **72**, the length of the extension band **76**, and the extension rate of the extension band **76** are set so that the fixing member **75** can apply an appropriate force to a hook of a hanger in a vertically downward direction when the fixing member **75** is attached to the hanger hooking main body **71.** More specifically, the length of the hanger bar **72**, the length of the extension band **76**, and the extension rate of the extension band **76** are set so that a required force can be applied to a hook of a hanger so as to prevent falling of the hanger, and that a worker can easily pull the fixing member **75** upward so as to hook the hanger on the hanger bar **72.**

[0031] Further, in the example illustrated in FIG. **3**, the plurality of projecting portions **74** arrayed in the longitudinal direction are formed on the upper surface of the hanger bar **72.** A hanger is hooked between the projecting portion **74** and the projecting portion **74**, thereby being capable of preventing lateral slipping of the hanger on the hanger bar **72**. With this, even when the returnable box **100** is inclined during conveyance of a plurality of clothes so that the hanger bar **72** is inclined, an interval between the clothes can be kept. As a result, occurrence of, for example, wrinkles, deformation, or creases due to overlapping of clothes can be prevented. The number of the projecting portions **74** and an interval between the adjacent projecting portions **74** are not particularly limited, and can be appropriately set. The number of the projecting portions **74** is, for example, from five to thirty, and is typically seventeen. The interval between the projecting portions **74** is, for example, from 5 mm to 50 mm, and is typically 20 mm.

[0032] Further, when the interval between the fixing member **75** and the upper surface of the hanger bar **72** at a portion at which the projecting portion **74** is not formed is excessively large, a movable range of a hanger in an up-and-down direction is increased. Thus, there is a concern in that a hook of a hanger drops off the hanger bar **72.** Therefore, it is preferred that the above-mentioned interval be appropriately set so as to be able to limit the movable range of a hanger to such a degree as to prevent a hook of the hanger from dropping off, and be set to, for example, from 3 mm to 30 mm.

<Box Main Body>

[0033] As described above, the box main body **1** has substantially a rectangular parallelepiped shape. As illustrated in FIG. **1**, an outer surface of the box main body **1** includes a top surface portion **10** and a bottom surface portion **20** that are opposed to each other, a front wall portion **30** and a rear wall portion **40** that are opposed to each other, and a right wall portion **50** and a left wall portion **60** that are opposed to each other.

[0034] The box main body **1** is openable and closable at a part of the outer surface so that clothes or the like can be taken in and out. FIG. **5** is a perspective view for illustrating a state in which the box main body in the embodiment of the present invention is open. In the example illustrated in FIG. **5**, there is illustrated a state in which an entirety or a part of the front wall portion **30** is open, and the hanger hooking member **70** is removed from the box main body **1.**

[0035] As a configuration for enabling an entirety or a part of the front wall portion **30** to be opened and closed, any appropriate configuration may be employed. In the example illustrated in FIG. **1**, a fastener **31** is provided along a side shared with the top surface portion **10**, along a side shared with the right wall portion **50**, and along a side shared with the left wall portion **60** among sides of the front wall portion **30**. The fastener **31** is openable and closable with sliders **32**. The fastener is used for opening and closing the front wall portion **30** so that excellent sealability is achieved, and intrusion of dust or water into the box main body can be prevented.

[0036] In the example illustrated in FIG. **5**, the attaching parts **53** configured to mount the hanger hooking member **70** to the box main body **1** are each a member having a belt-like shape in which both ends are sewn on the inner surface of the box main body so as to be open upward and downward. The attaching parts **53** are sewn on the vicinities of upper portions of inner surfaces of the right wall portion **50** and the left wall portion **60**, respectively. According to the above-mentioned configuration, the mounting parts **73** of the hanger hooking member **70** are hooked on openings of the attaching parts **53** so that the hanger hooking member **70** can be removably attached inside the box main body **1**.

[0037] Further, in the example illustrated in FIG. **1** and FIG. **5**, handles **52** each having a belt-like shape are provided on outer surfaces of the right wall portion **50** and the left wall portion **60.** With this, during conveyance of the returnable box **100**, conveyance of the returnable box **100** can be facilitated by gripping the handles **52.**

[0038] It is preferred that the box main body **1** be foldable. With this, when it is not required to store clothes or the like, the box main body **1** can be stored while being folded compactly. As a configuration for enabling the box main body **1** to be folded, any appropriate configuration may be employed. Now, an example of the above-mentioned configuration is described.

[0039] The right wall portion **50** and the left wall portion **60** are bendable toward an inside of the box main body **1.** As the above-mentioned configuration, any appropriate configuration may be employed. In the illustrated example, the left wall portion **60** is made of a deformable sheet material, and includes therein two divided reinforcing plates **61a** each having sufficient rigidity so that the box main body **1** stands upright. The two divided reinforcing plates **61a** are arranged so as to be arrayed in a right-and-left direction in the sheet material, and the sheet material is sewn along a dividing line **61b** between the two divided plates **61a.** Although not illustrated, the right wall portion **50** has a similar configuration. According to the above-mentioned configuration, each of the right wall portion **50** and the left wall portion **60** can be bent along the dividing line **61b** easily. As the sheet material, any appropriate sheet material is used, and, for example, woven cloth and/or non-woven cloth is used. As each of the divided reinforcing plates **61a**, any appropriate plate member is used, and, for example, a plastic cardboard plate is used.

[0040] The top surface portion **10** and the bottom surface portion **20** are deformable when the box main body **1** is to be folded. As the above-mentioned configuration, any appropriate configuration may be employed. In the illustrated example, the bottom surface portion **20** is made of a deformable sheet material, and one reinforcing plate **21** is laid on an inner surface side of the bottom surface portion **20.** As in the illustrated example, the bottom surface portion **20** and the reinforcing plate **21** have substantially the same shape, and may be bonded to each other with a hook-and-loop fastener **22.** Further, a grip **23** may be provided on an inner surface side of the reinforcing plate **21.** Similarly, the top surface portion **10** is made of a deformable sheet material, and one reinforcing plate **11** is laid on an inner surface side of the top surface portion **10.** As in the illustrated example, the top surface portion **10** and the reinforcing plate **11** have substantially the same shape, and may be bonded to each other with a hook-and-loop fastener **12**. Further, although not illustrated, a grip may be provided on an inner surface side of the reinforcing plate **11.** As the sheet material, any appropriate sheet material is used, and, for example, woven cloth and/or non-woven cloth is used. As each of the reinforcing plate **11** and the reinforcing plate **21**, any appropriate plate member is used, and, for example, a plastic cardboard plate is used.

[0041] The front wall portion **30** may be made of, for example, a sheet material so as to facilitate opening and closing. Further, the rear wall portion **40** may be made of a sheet material, or may be made of a sheet material including therein a plate member that is the same as that of the above-mentioned reinforcing plate **11.** A winding portion **34** configured to wind the returnable box **100** in a folded state is provided on the inner surface of the front wall portion **30.** The winding portion **34** is preferably a rubber band. Further, accommodating portions **33** configured to accommodate the hanger hooking member **70** are provided on the inner surface of the front wall portion

30.

[0042] The reinforcing plate **11** is attached to an upper side of the rear wall portion **40** so as to be pivotable, and the reinforcing plate **21** is attached to a lower side of the rear wall portion **40** so as to be pivotable.

[0043] FIG. **6** to FIG. **9** are perspective views for illustrating steps of a procedure of folding the box main body. When the box main body 1 is to be folded, first, as illustrated in FIG. **6**, under a state in which the front wall portion **30** is open, the hanger hooking member **70** is accommodated in the accommodating portions **33**, and the grip **23** is pulled so that the reinforcing plate **11** and the reinforcing plate **21** are turned toward an inner surface of the rear wall portion **40.**

[0044] Next, as illustrated in FIG. **7**, the reinforcing plate **11** and the reinforcing plate **21** are turned to be brought into a state in which a lower surface of the reinforcing plate **11** and an upper surface of the reinforcing plate **21** are held in contact with the inner surface of the rear wall portion **40.**

[0045] Next, as illustrated in FIG. **8**, each of the right wall portion **50** and the left wall portion **60** is bent to the inner side along the dividing line **61b** so that the divided plates **61a** are overlapped with each other.

[0046] Finally, as illustrated in FIG. **9,** the front wall portion **30** is lifted up so that the front wall portion **30** is opposed to the rear wall portion **40**, and the rear wall portion **40**, the right wall portion **50**, and the left wall portion **60** are bundled with the winding portion **34.** With the procedure above, the box main body **1** can be folded with an extremely simple operation.

Industrial Applicability

[0047] The returnable box according to the present invention is suitably used for conveyance of products or the like, in particular, conveyance of clothes.

Reference Signs List

[0048]

1 box main body

70 hanger hooking member
71 hanger hooking main body
72 hanger bar
74 projecting portion
75 fixing member
77 locking parts
100 returnable box

Claims

1. A returnable box, comprising:

a box main body configured to store clothes thereinside; and

a hanger hooking member attached inside the box main body,

wherein the hanger hooking member includes a fixing member and a hanger hooking main body including a hanger bar on which a hook of a hanger is hooked, and

wherein the fixing member is attached to the hanger hooking main body under a state of being extended along a longitudinal direction of the hanger bar above the hanger bar.

2. The returnable box according to claim 1, wherein the fixing member has elasticity.

3. The returnable box according to claim 2, wherein the fixing member includes a belt-shaped member having rubber elasticity.

4. The returnable box according to any one of claims 1 to 3, wherein the fixing member is held in contact with an upper surface of the hanger bar.

5. The returnable box according to any one of claims 1 to 3, wherein a projecting portion is formed on an upper surface of the hanger bar.

6. The returnable box according to claim 5, wherein the projecting portion comprises a plurality of projecting portions.

7. The returnable box according to claim 5 or 6, wherein a locking part configured to fix the fixing member by being hooked on the projecting portion is provided on an end portion of the fixing member.

8. The returnable box according to any one of claims 5 to 7, wherein the fixing member is held in contact with an upper surface of the projecting portion.

9. The returnable box according to any one of claims 1 to 8, wherein the hanger hooking member is removably attached inside the box main body.

10. The returnable box according to any one of claims 1 to 9, wherein the box main body is foldable.

FIG. 1

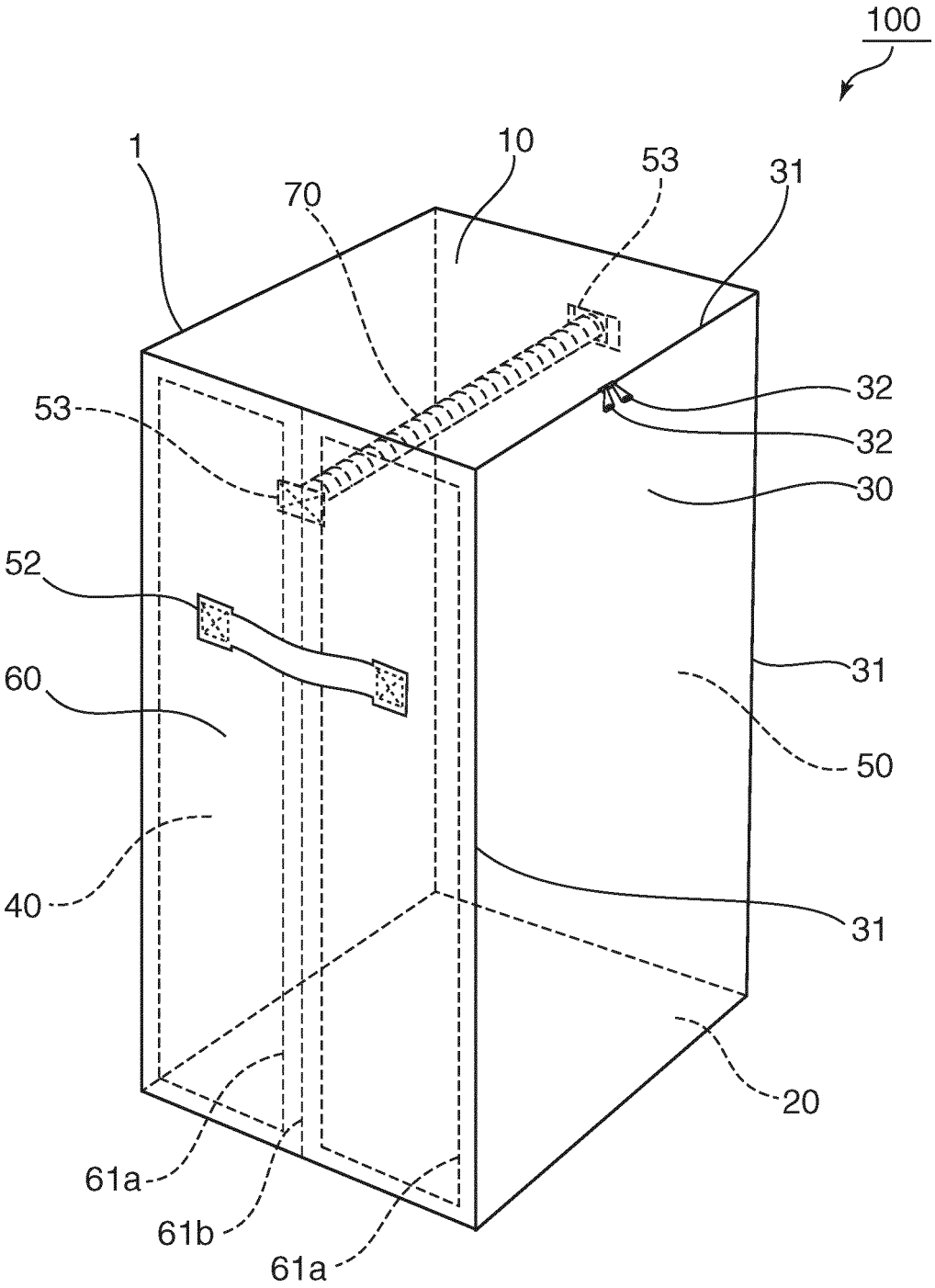


FIG. 2

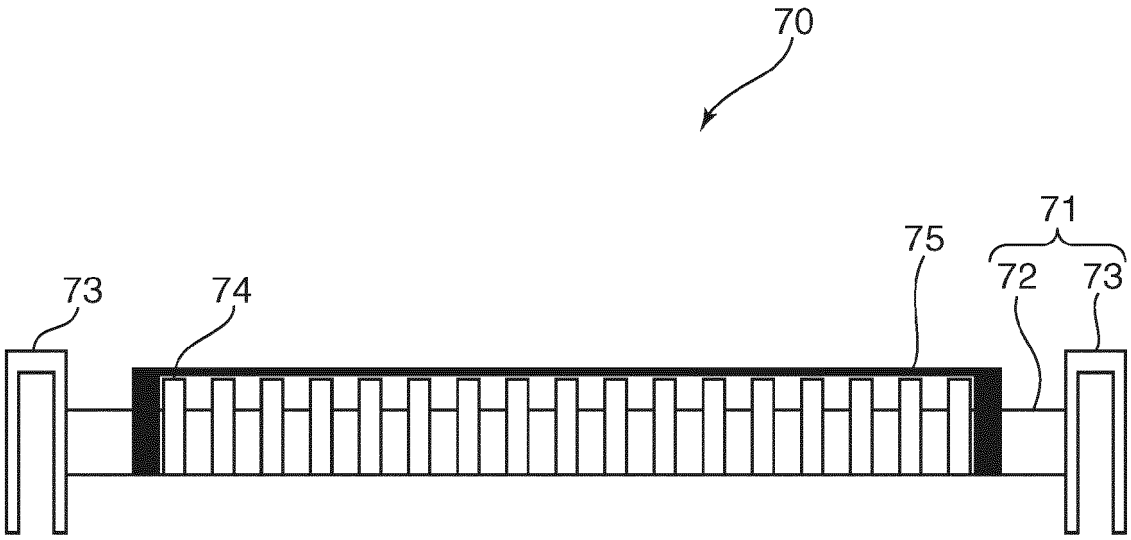


FIG. 3

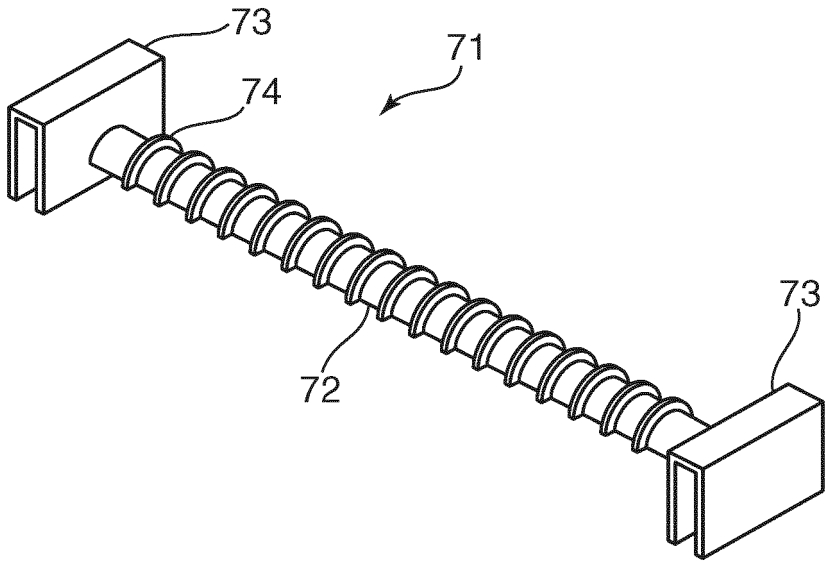


FIG. 4

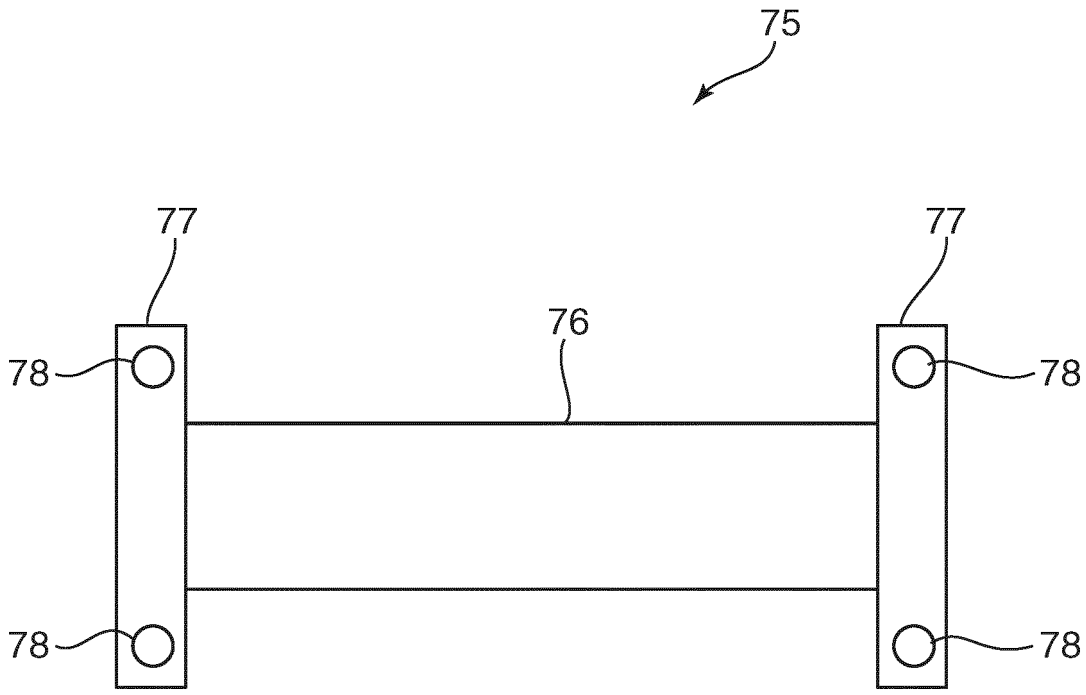


FIG. 5

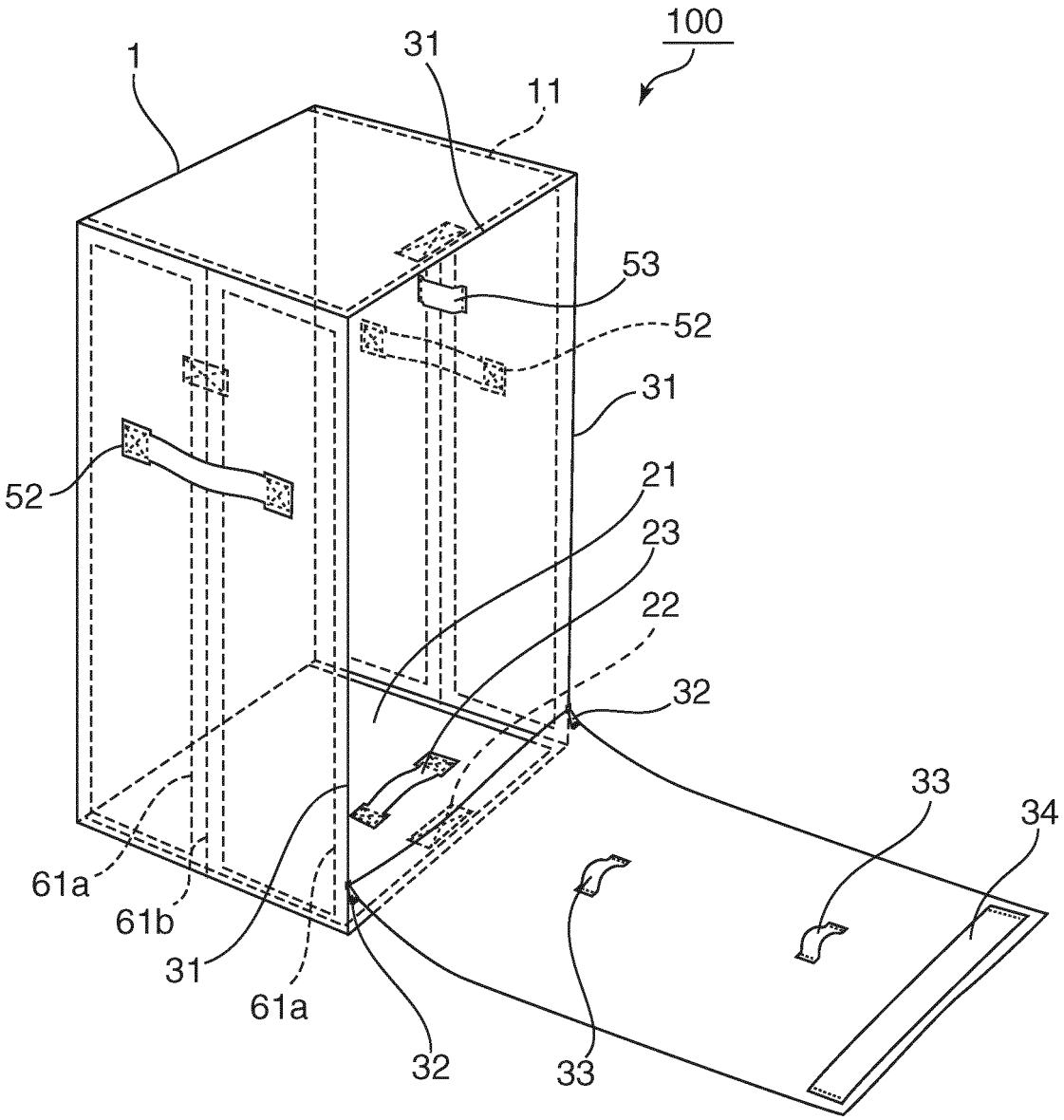


FIG. 6

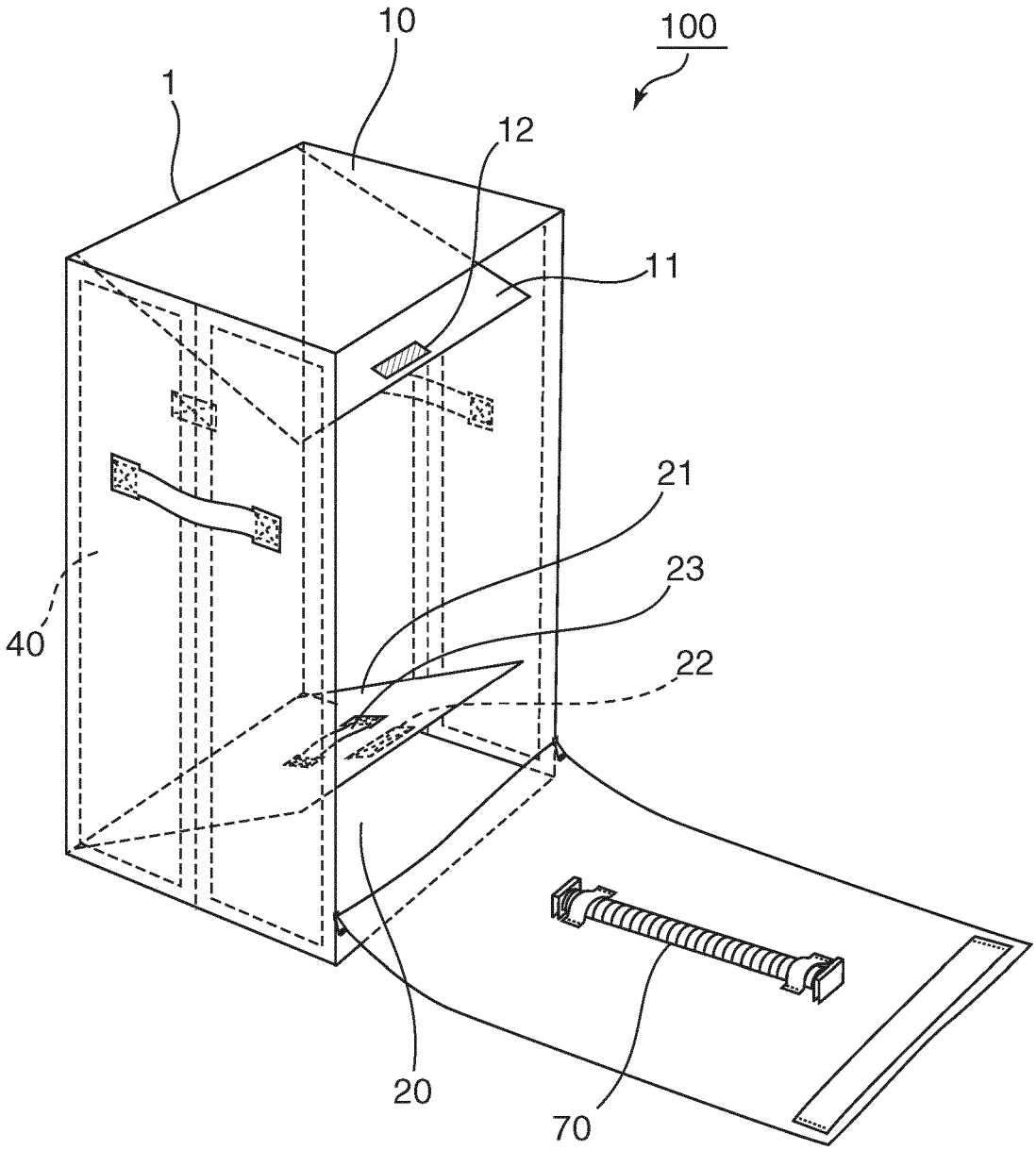


FIG. 7

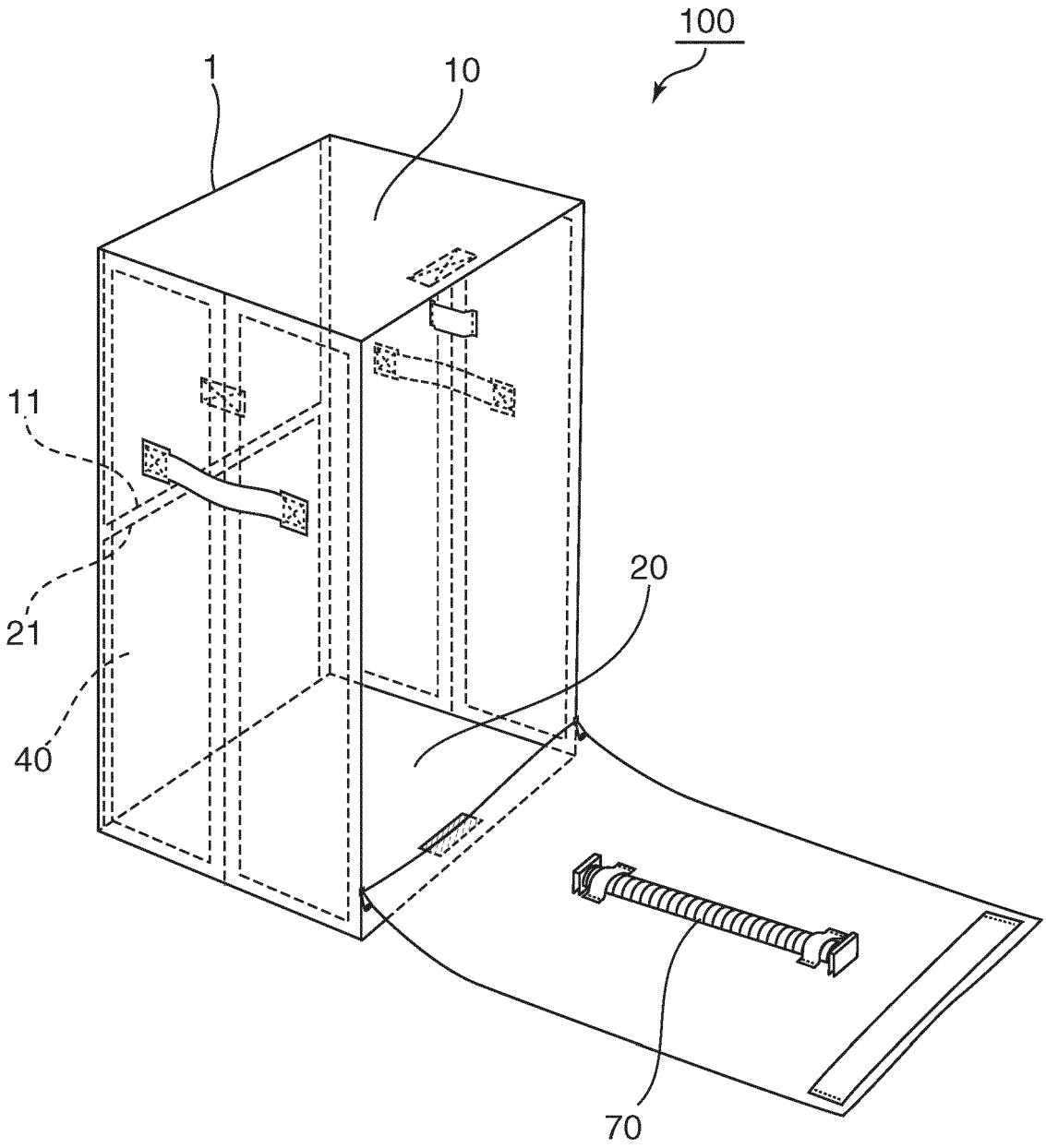


FIG. 8

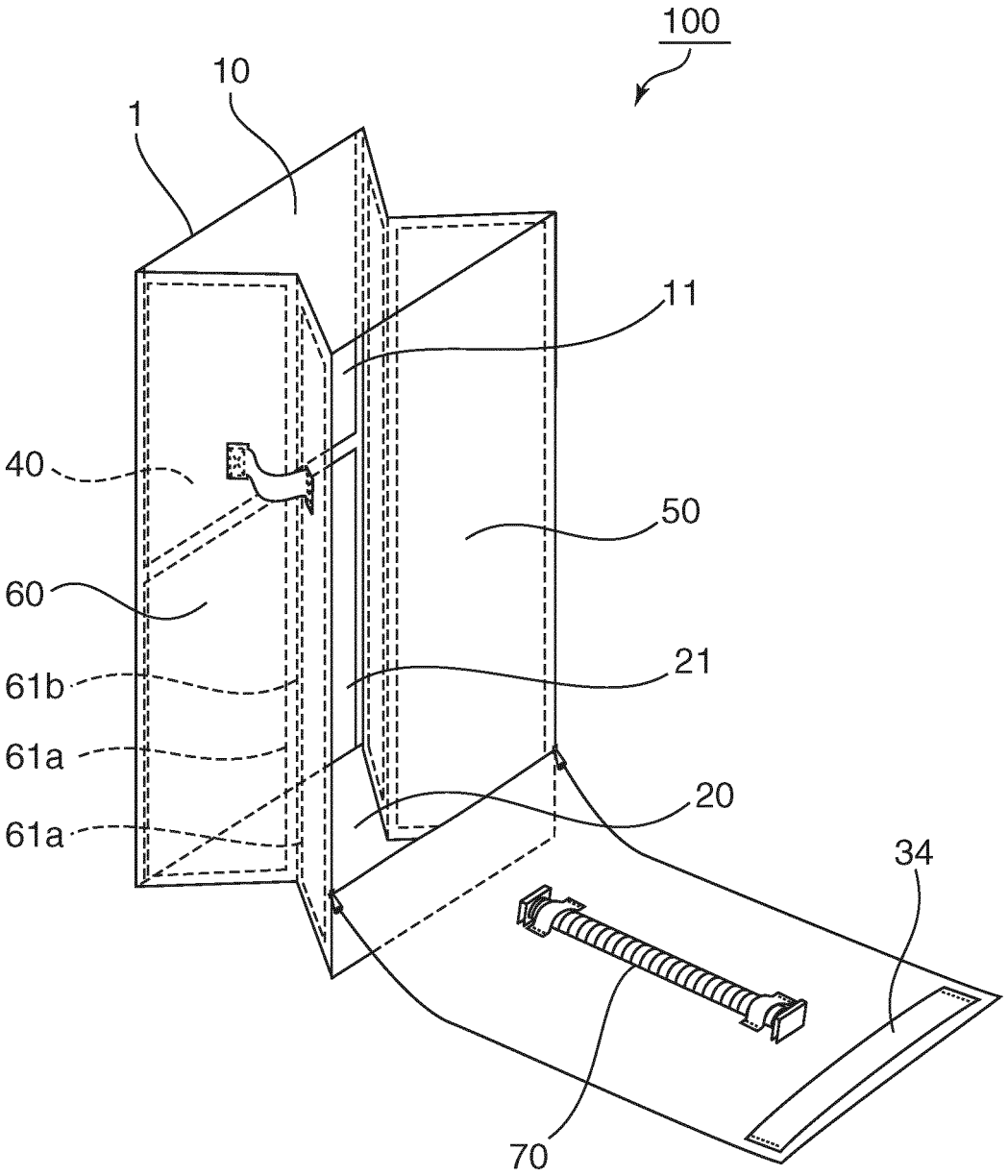
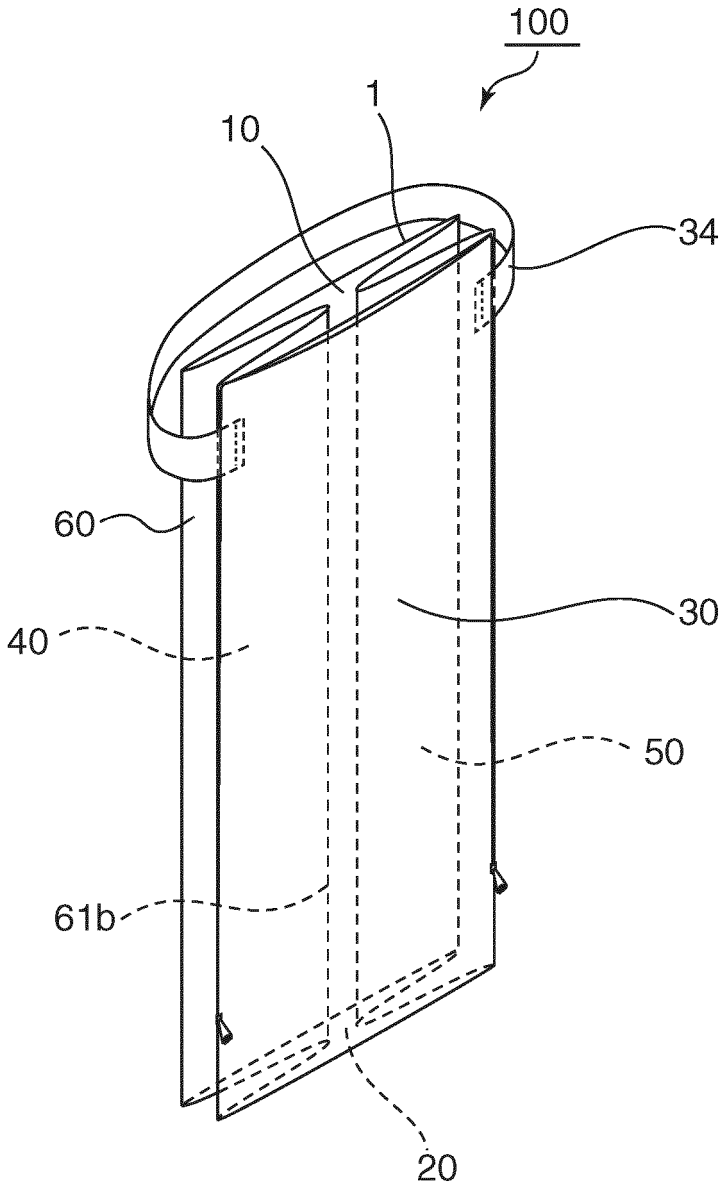


FIG. 9



INTERNATIONAL SEARCH REPORT

International application No.
PCT/JP2016/066835

A. CLASSIFICATION OF SUBJECT MATTER
B65D85/18(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)
B65D85/18, D06F57/00

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
Jitsuyo Shinan Koho 1922-1996 Jitsuyo Shinan Toroku Koho 1996-2016
Kokai Jitsuyo Shinan Koho 1971-2016 Toroku Jitsuyo Shinan Koho 1994-2016

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 2003-52520 A (Ryutaro OISHI), 25 February 2003 (25.02.2003), paragraphs [0024] to [0032]; fig. 1 to 9 (Family: none)	1-10
Y	US 6568545 B2 (RHE CONTAINER CO., INC.), 27 May 2003 (27.05.2003), column 2, line 19 to column 3, line 30; fig. 1 to 3 & CA 2381481 A1	1-10
Y	US 4811853 A (SPARTAN CONTAINER CORP.), 14 March 1989 (14.03.1989), column 2, line 33 to column 5, line 9; fig. 1 to 4 (Family: none)	1-10

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

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"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
05 August 2016 (05.08.16)	16 August 2016 (16.08.16)

Name and mailing address of the ISA/	Authorized officer
Japan Patent Office 3-4-3,Kasumigaseki,Chiyoda-ku, Tokyo 100-8915,Japan	Telephone No.

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INTERNATIONAL SEARCH REPORT

International application No.
PCT/JP2016/066835

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 2002-85895 A (Creatic Japan, Inc.), 26 March 2002 (26.03.2002), paragraphs [0006] to [0011]; fig. 1 to 2 (Family: none)	1-10
Y	JP 2006-213355 A (Aoyama Trading Co., Ltd.), 17 August 2006 (17.08.2006), paragraphs [0011] to [0018] (Family: none)	10
A	Microfilm of the specification and drawings annexed to the request of Japanese Utility Model Application No. 138700/1989(Laid-open No. 78792/1991) (Kabushiki Kaisha Arisumi 21), 09 August 1991 (09.08.1991), entire text; all drawings (Family: none)	1-10
A	JP 2009-39494 A (Takehisa GOTO), 26 February 2009 (26.02.2009), entire text; all drawings (Family: none)	1-10

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REFERENCES CITED IN THE DESCRIPTION

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Patent documents cited in the description

- JP 2006213355 A **[0003]**