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(54) **WIPE PACKAGING BODY**

(57) The present invention provides a wipe packaging body in which a lid body can be closed securely even when a bulk of a stack of wipes stored in a storage container decreases, thereby preventing the wipes from drying out, and the wipes can be extracted more easily by picking up a tip end part of each wipe. The wipe packaging body according to the present invention is formed by storing a stack of wipes constituted by a plurality of overlapping wipes in a storage container of a container structural body. In the container structural body, an extraction port member having an extraction port for extracting the wipes from the storage container is hermetically joined to an

opening portion of the storage container, and an orifice member that applies two types of resistance in order to separate a wipe extracted initially from the stored stack of wipes from a following wipe is provided in a position further within the storage container than the extraction port of the extraction port member. The orifice member has a pressing portion that presses the stack of wipes so as to apply a first resistance to the wipes and an orifice that applies a second resistance generated by frictional force to the wipes. The container structural body has a lid body that can be opened and closed freely, and is capable of hermetically sealing the extraction port.

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DescriptionTECHNICAL FIELD

5 **[0001]** The present invention relates to a wipe packaging body in which a stacked body of overlapping wipes is stored in a container structural body.

BACKGROUND ART

10 **[0002]** A wipe packaging body is configured such that a stacked body formed from a plurality of stacked wipes is stored in a container structural body. The wipes are moist sheets obtained by impregnating sheets made of paper or nonwoven fiber, such as web sheets, with a chemical solution such as an antiseptic solution or a sterilization solution or the like, and are stored hermetically in the container structural body so as to remain moistened by the chemical solution or the like. The wipes can be extracted from the container structural body when required and used in a wide variety of applications, such as wiping the hands and wiping the posterior.

15 **[0003]** The container structural body is configured by forming a storage container using plastic, a flexible film material, or the like as appropriate, and hermetically joining an extraction port member having an extraction port for extracting the wipes one at a time to the outside from the stack of wipes stored in the storage container to an opening portion of the storage container. When a wipe is extracted to the outside from the stack of wipes stored in the container structural body, a resistance force is applied between a wipe that is extracted initially and a following wipe as the wipes pass through an orifice or the like in the vicinity of the extraction port such that the wipes are separated from each other at a separation portion, and as a result, the leading wipe is separated from the stack of wipes in the container structural body and extracted. At this time, a tip end part of the following wipe projects slightly toward the extraction port. Hence, during a subsequent use, the following wipe can be extracted from the continuous wipe body by gripping the projecting part of the following wipe and pulling the wipe in a direction leading out of the container structural body.

20 **[0004]** In this type of wipe packaging body, when the extraction port of the packaging body is left open, the projecting tip end part of the following wipe, and indeed the entire stack of wipes, are likely to dry out more quickly. The container structural body of the wipe packaging body is therefore typically provided with a lid body that is capable of hermetically sealing and opening the extraction port repeatedly (Patent Documents 1 and 2, for example). As a result, the interior of the container structural body in this type of packaging body can be maintained effectively in a hermetically sealed condition, thereby effectively preventing volatilization of the chemical solution or the like with which the wipes constituting the stack of wipes stored in the container structural body are impregnated.

[0005]

35 Patent Document 1: Japanese Patent Application Publication No. 2004-196303
Patent Document 2: Japanese Patent Application Publication No. 2010-173649

DISCLOSURE OF THE INVENTION

40 **[0006]** As the wipes stored in the wipe packaging body are consumed, the number of wipes constituting the stack of wipes in the container structural body gradually decreases, leading to a reduction in a bulk of the stack of wipes. Accordingly, since the orifice is typically provided in the vicinity of the extraction port, an interval between a surface of the stack of wipes in the container structural body and the orifice widens. When, in this condition, further wipes are extracted, the wipes pass through the orifice more easily, and as a result, a delay is more likely to occur in a timing at which the wipes are separated from each other at the separation portion. An excessively large part of the wipe that follows the initially extracted wipe may therefore be extracted, and as a result, the tip end portion may project to the outside from the extraction port by an excessively large amount.

45 **[0007]** When the tip end portion of the following wipe projects from the extraction port by an excessively large amount, it becomes difficult to close the extraction port securely with the lid body, and therefore the interior of the container structural body cannot be hermetically sealed reliably. As a result, a serious problem arises in that it becomes impossible to maintain the stack of wipes in a moistened condition.

50 **[0008]** Furthermore, when the number of wipes constituting the stack of wipes decreases such that the interval between the surface of the stack of wipes and the orifice widens, the tip end of the wipe that remains in the container structural body after being separated at the separation portion may not be held by the orifice, and as a result may fall back into the container structural body. In this case, picking up the tip end part of the fallen wipe in order to extract the wipe again is difficult, laborious, and so on.

55 **[0009]** In a case where the storage container of the container structural body is a bag-shaped body formed from a flexible film material or the like, the following wipe can be prevented from escaping through the orifice by crushing the

storage container so as to narrow the interval between the surface of the stack of wipes and the extraction port. When the storage container is crushed, however, a crease may form in the storage container such that the storage container becomes more likely to split along the crease. When the storage container splits even slightly, the hermetic seal applied to the container structural body may greatly deteriorate such that the wipes dry out even more quickly.

5 **[0010]** An object of the present invention is to provide a wipe packaging body with which wipes can be separated from each other and extracted reliably from a container structural body storing a moistened stack of wipes, the wipes can be prevented from drying out even when a bulk of the stack of wipes decreases without complicating a process for closing the container structural body using a lid body, and the wipes can be extracted more easily by picking up a tip end part of each wipe.

10 **[0011]** The present invention is

(1) a wipe packaging body formed by storing a stack of wipes constituted by a plurality of overlapping wipes in a storage container of a container structural body, wherein

15 in the container structural body, an extraction port member having an extraction port for extracting the wipes from the storage container is hermetically joined to an opening portion of the storage container, and an orifice member that applies two types of resistance in order to separate a wipe extracted initially from the stored stack of wipes from a following wipe is provided in a position further within the storage container than the extraction port of the extraction port member, the orifice member having a pressing portion that presses the stack of wipes so as to apply a first resistance to the wipes and an orifice that applies a second resistance generated by frictional force to the wipes, and the container structural body has a lid body that can be opened and closed freely, and is capable of hermetically sealing the extraction port,

(2) the wipe packaging body described in (1), wherein the orifice member is supported by the extraction port member,

(3) the wipe packaging body described in (1) or (2), wherein the orifice member is configured to move toward a rear of the storage container while pressing the stack of wipes in accordance with an amount by which a bulk of the stack of wipes decreases as the wipes are extracted,

(4) the wipe packaging body described in any of (1) to (3), wherein a force required to separate the wipes from each other is between 20 and 800 mN/cm,

(5) the wipe packaging body described in any of (1) to (3), wherein the orifice member is constituted by an elastic member,

(6) the wipe packaging body described in any of (1) to (3), wherein the orifice member includes a base end and a free end, the orifice member is supported within the storage container in a cantilevered fashion at the base end, and the pressing portion is provided in a part of the orifice member other than the base end,

(7) the wipe packaging body described in any of (1) to (3), wherein the orifice member is supported within the storage container at both of two base ends sandwiching the orifice, and the pressing portion is provided in a part of the orifice member other than the two base ends,

(8) the wipe packaging body described in any of (1) to (3), wherein the orifice member includes a curved portion that projects toward the rear of the storage container, and the orifice is formed in the curved portion, and

(9) the wipe packaging body described in any of (1) to (3), wherein, when a force required to separate the wipes from each other is F_0 , the first resistance, which serves as a pressing force applied to the wipes by the orifice member, is F_1 , and the second resistance, which serves as the frictional force applied to the wipes by the orifice member, is F_2 , a relationship of $F_1 < F_0 < F_1 + F_2$ is established between F_0 , F_1 , and F_2 .

45 **[0012]** The wipe packaging body according to the present invention is provided with the orifice member including the pressing portion that applies the first resistance by pressing the stack of wipes and the orifice that applies the second resistance generated by frictional force. Hence, when a wipe is to be extracted, two types the resistance are applied to separate the leading wipe from the following wipe, and therefore the wipe extracted initially from the stack of wipes can be separated from the following wipe reliably and extracted. Further, even when the bulk of the stack of wipes stored in the storage container decreases, the tip end of the following wipe is not extracted by an excessive amount, and therefore the interior of the container structural body can be hermetically sealed reliably by the lid body so that the wipes are prevented from drying out. Moreover, the wipes can be extracted more easily by picking up the tip end part of the wipe.

BRIEF DESCRIPTION OF THE DRAWINGS

55 **[0013]**

Fig. 1 is a schematic perspective view showing an outer configuration of a wipe packaging body according to a first embodiment of the present invention;

Fig. 2 is a schematic longitudinal sectional view showing a condition of a cross-section taken along an A-A line in Fig. 1; Fig. 3A is a schematic perspective view showing an outer configuration of a structural part of the wipe packaging body, the structural part being constituted by an extraction port member, an orifice member, and a lid body, and Fig. 3B is a schematic perspective view showing an outer configuration of the structural part constituted by the extraction port member, the orifice member, and the lid body from a lower surface side;

Fig. 4A is an illustrative view showing a condition in which a wipe is extracted through an extraction port, Fig. 4B is an illustrative view showing a condition in which the wipe has been extracted, and Fig. 4C is an illustrative view showing a condition in which the extraction port is closed by the lid body after extracting the wipe;

Fig. 5 is an illustrative view showing a condition in which a wipe is extracted through the extraction port in a case where a bulk of a stack of wipes has decreased;

Fig. 6 is a side view showing an example of a stack of wipes that can be stored in the wipe packaging body;

Fig. 7 is a side view showing another example of a stack of wipes that can be stored in the wipe packaging body;

Fig. 8 is a schematic illustrative view showing an outer configuration of the orifice member removed from the wipe packaging body in a condition where a wipe on a surface of the stack of wipes is extracted through an orifice of the orifice member;

Fig. 9 is an illustrative view showing an example of a case in which the wipe packaging body is used upright;

Fig. 10 is an illustrative view showing another example of a case in which the wipe packaging body is used upright;

Fig. 11 is an illustrative view showing a case in which an elastic body is attached to the orifice member;

Fig. 12 is a schematic perspective view showing an outer configuration of an orifice member removed from a wipe packaging body according to a second embodiment;

Fig. 13 is an illustrative view showing a condition in which the orifice member is provided in the wipe packaging body according to the second embodiment, and depicting orifice member forming pieces forming the orifice member in a case where the bulk of the stack of wipes has decreased;

Fig. 14 is an illustrative view showing an example of a case in which an orifice member is attached to an extraction portion according to a third embodiment;

Fig. 15 is an illustrative view showing an example of a case in which a rib is attached to the orifice member;

Fig. 16 is an illustrative view showing an example of a case in which a curved portion is formed on the orifice member and the curved portion is formed so as to curve in two directions;

Fig. 17 is an illustrative view showing a wipe packaging body according to a fourth embodiment and a schematic longitudinal sectional view showing a longitudinal section that corresponds to Fig. 2; and

Fig. 18 is a view showing various shapes of the orifice.

BEST MODE FOR CARRYING OUT THE INVENTION

[First Embodiment]

[0014] A configuration of a wipe packaging body 1 according to a first embodiment of the present invention will be described below with reference to Fig. 1 and so on.

[0015] In this specification, upward, downward, frontward, rearward, leftward, and rightward directions are, unless specified otherwise, defined as follows. When the wipe packaging body 1 is disposed such that an extraction port 12 faces an opposite side to a disposal surface side, a direction heading from a stacked body 6 toward the extraction port 12 is defined as an upward direction. In this case, a direction corresponding to a thickness direction of the stacked body 6 is defined as an up-down direction. In the wipe packaging body 1, as shown in Fig. 1, when an xyz three-dimensional space defined by three mutually orthogonal axes, namely an x axis, a y axis, and a z axis, is envisaged, a z axis direction and a y axis direction correspond respectively to the up-down direction and a front-rear direction. In this case, an x axis direction corresponds to a left-right direction. Further, in the wipe packaging body 1, a direction heading away from the extraction port 12 of a container structural body 3 and heading toward an interior of the container structural body 3 is defined as a rearward direction. Furthermore, a case in which the wipe packaging body 1 is seen from above corresponds to a case in which the wipe packaging body 1 is viewed in a downward direction from the upward direction.

[0016] As shown in Figs. 1 and 2, the wipe packaging body 1 according to the present invention is formed by hermetically joining an extraction port member 17 including the extraction port 12 to an opening portion 16 of a storage container 15. The opening portion 16 of the storage container 15 and the extraction port member 17 joined to the opening portion 16 together constitute an extraction portion 11, and a wipe 7 is extracted to the outside of the container structural body 3 through the extraction port 12 of the extraction portion 11. The stack of wipes 6 (referred to hereafter simply as the stacked body 6) is formed from a plurality of overlapping wipes 7 and stored in the storage container 15. An orifice member 4 that applies two types of resistance in order to separate a wipe extracted initially from the stacked body 6 stored in the packaging container from a following wipe is provided in the container structural body 15 in a position located further within the storage container 15 than the extraction port 12 of the extraction port member 17.

(Storage container 15)

5 [0017] The storage container 15 may be formed in any shape as long as the shape in which the storage container 15 is formed includes an interior space in which the stacked body 6 can be stored. The storage container 15 may be a bag-shaped body obtained by forming a flexible film material or the like into a bag shape, or a box-shaped body formed from a resin material such as plastic. When the storage container 15 is a bag-shaped body, a hermetically sealed bag is used as the bag-shaped body. More specifically, the bag-shaped body is preferably formed from a flexible plastic film or the like in the shape of a pillow-shaped bag such as that shown in Fig. 1 and so on, for example.

10 (Opening portion 16)

15 [0018] A shape and a size of the opening portion 16 formed in the storage container 15 may be selected appropriately as long as the wipes 7 can be extracted through the opening portion 16. In the example shown in Figs. 1, 2, and so on, the opening portion 16 is formed as a substantially square-shaped opening in a predetermined region on an upper surface side of the storage container 15. However, the size and shape of the opening portion 16 are not limited to this example.

(Extraction port member 17)

20 [0019] The extraction port member 17 is attached to the storage container 15 so that when the wipe packaging body 1 is seen from above, at least a part of the extraction port 12 is positioned within the region of the storage container 15 in which the opening portion 16 is formed. To ensure that the wipes 7 can be extracted easily, however, the extraction port member 17 is more preferably attached to the storage container 15 so that when the wipe packaging body 1 is seen from above, the entire extraction port 12 is positioned within the region of the storage container 15 in which the opening portion 16 is formed. There are no particular limitations on a material of the extraction port member 17, and a thermoplastic resin material such as polyethylene or polypropylene or the like may be selected. However, the extraction port member 17 is preferably formed from a harder material than the storage container 15. In the container structural body 3, the opening portion 16 and a periphery thereof can be effectively strengthened by hermetically joining the extraction port member 17 to the opening portion 16 of the storage container 15.

30 (Extraction port 12)

35 [0020] The extraction port 12 of the extraction port member 17 may be formed in any shape and size as long as the wipes 7 can be extracted to the outside of the container structural body 3 from the stacked body 6 stored in the interior of the container structural body 3.

(Extraction portion 19)

40 [0021] As shown in Figs. 3A, 3B, and so on, the extraction port member 17 is formed to have a substantially square outline when the wipe packaging body 1 is seen from above and a lid body 5 is closed. The extraction port member 17 may be attached so as to face an outer surface side of the opening portion 16 of the storage container 15, or so as to face an inner surface side of the opening portion 16 of the storage container 15. In the example shown in Figs. 1, 2, 3, and so on, an upper side surface of the extraction port member 17 serves as an extraction portion 19, and the extraction port member 17 is attached such that the extraction portion 19 faces the inner surface side of the opening portion 16 of the storage container 15. Hot-melt adhesion, welding, and so on may be cited as examples of methods of attaching the extraction port member 17 to the storage container 15, but the present invention is not limited thereto, and various methods selected as desired may be used.

50 (Lid body 5)

[0022] The lid body 5 is provided on the container structural body 3 so as to be opened and closed freely, and is capable of hermetically sealing the extraction port 12. In the example shown in Figs. 1, 2, 3, and so on, the lid body 5 is attached to the extraction port member 17 via a hinge portion 5a.

55 [0023] The lid body 5 may be molded integrally with the extraction port member 17 via the hinge portion 5a. Alternatively, the hinge portion 5a and the extraction port member 17 may be formed separately and then joined integrally. When the lid body 5 is molded integrally with the hinge portion 5a and the extraction port member 17, the orifice member 4, to be described below, may also be molded integrally with the lid body 5, the hinge portion 5a, and the extraction port member 17. The lid body 5 may be molded integrally with the hinge portion 5a but formed separately to the extraction port member

17. The lid body 5 may be formed from a similar material to the extraction port member 17, for example a thermoplastic resin material such as polyethylene or polypropylene. As shown in Fig. 4C, by providing the wipe packaging body 1 with the lid body 5, a situation in which the wipes 7 are exposed from the container structural body 3 can be reliably prevented from occurring using the lid body 5, and as a result, drying out of the stored stacked body 6, and therefore the wipes 7, can be suppressed effectively.

(Wipe 7)

[0024] The wipe 7 is a moist sheet that is molded using paper, woven fabric, non-woven fabric, or the like constituted by synthetic or natural fibers, for example, and impregnated with a chemical solution or the like. Examples of the chemical solution or the like include alcohol, water, or a mixture thereof. Further, a perfume, an antibacterial agent, a deodorant, a surfactant, an antiseptic, a dye, an antifoaming agent, an antioxidant, a clarifier, a solubilizing agent, a pH regulating agent, or the like may be selected as desired and blended into the chemical solution. Note that the materials cited above are examples of the sheets, chemical solutions, and so on constituting the stacked body 6, and other materials may be selected and used as desired. In the present invention, the wipe 7 refers to both a sheet-shaped member separated from the stacked body 6 and a sheet-shaped member within the stacked body constituting the stacked body 6.

(Stacked body 6)

[0025] The stacked body 6, as shown schematically by a dotted line in Fig. 2, is a structural body formed by stacking the plurality of wipes 7. The stacked body 6 may be formed as a folded structure or wound into a roll structure. Note that when the stacked body 6 is a folded structure, the stacked body 6 is less likely to become wrinkled and lose its shape following repeated operations to extract the wipes 7 from the container structural body 3 of the wipe packaging body 1, and therefore a folded structure is preferable.

[0026] The stacked body 6, when formed as a folded structure, may be a stacked body (referred to hereafter simply as a sheet-type stacked body) formed by partially overlapping and stacking a plurality of independent wipes, or a stacked body (referred to hereafter simply as a perforated stacked body) formed by stacking adjacent wipes connected via perforations. Further, when wound into a roll structure, the stacked body 6 may be a stacked body (referred to hereafter simply as a perforated roll-type stacked body) formed by stacking adjacent wipes connected by perforations into a roll shape.

[0027] As shown in Figs. 6 and 7, the overlapping parts or perforations of the wipes 7 in the stacked body 6 form separation portions 10, and when the operation to extract the wipe 7 from the wipe packaging body 1 is performed, the wipe 7 that is extracted from the stacked body 6 through the extraction port 12 initially and the following wipe 7 are pulled apart from each other by the separation portion 10.

[0028] According to the present invention, in the case of the sheet-type stacked body, the wipe 7 is separated from the stacked body 6 when the leading wipe 7 is pulled away from the stacked body 6 and separated from the following wipe in a part where the two wipes 7, 7 contact each other. Further, in the case of the perforated stacked body and the perforated roll-type stacked body, the wipe 7 is separated from the stacked body 6 when the leading wipe 7 is torn apart from the following wipe 7 in the position of the perforations or the like.

(Orifice member 4)

[0029] The orifice member 4 includes a pressing portion 18 and an orifice 13 for respectively applying a first resistance to the wipe 7 by pressing the stacked body 6 and applying a second resistance generated by frictional force to the wipe 7 when the wipe 7 is extracted from the stacked body 6. The orifice member 4 moves toward a rear of the storage container 15 while pressing the stacked body 6 in accordance with an amount by which a bulk of the stacked body 6 decreases as the wipes 7 are extracted through the extraction port 12. Accordingly, the orifice 13 likewise moves toward the rear side (in the direction of an arrow K in Fig. 2) of the storage container 15. The pressing portion 18 of the orifice member 4 contacts the stacked body 6 so as to press the stacked body 6, and as the orifice member 4 moves in accordance with the amount by which the bulk of the stacked body 6 decreases, the position of the pressing portion 18 serving as a contact portion between the orifice member 4 and the stacked body 6 also moves. There are no particular limitations on a material of the orifice member 4, and a thermoplastic resin material such as polyethylene or polypropylene or the like may be used.

[0030] In the example shown in Fig. 1, the orifice member 4 is supported in a cantilevered fashion by the extraction portion 11 of the extraction port member 17 at a base end 21 thereof. The orifice member 4 is formed from a material possessing elasticity, for example, and the orifice member 4 shown in this example extends so as to tilt diagonally toward the rear side of the storage container 15 from a predetermined position on the base end 21 side toward a free end 22 side. The free end 22 side of the orifice member 4 is moved toward the rear side of the storage container 15 by an elastic

force of the material constituting the orifice member 4 or a biasing force generated by a spring or the like, and as shown by dotted lines in Fig. 2, the orifice member 4 (T0) is shaped such that in a natural condition not pressing the stacked body 6, the free end 22 is positioned below a bottom portion of the storage container 15 (in an imaginary condition where the bottom portion of the storage container 15 does not exist). In a condition where the orifice member 4 presses the surface of the stacked body 6, as shown in Fig. 2, the orifice member 4 deforms elastically from this imaginary condition so as to rotate about the base end 21 in accordance with the amount by which the bulk of the stacked body 6 has decreased, and as a result, the free end 22 moves toward the rear side of the storage container 15. Note that although the orifice member 4 does not have to be attached to the extraction portion 11, the orifice member 4 is preferably supported by the extraction port member 17 on a peripheral portion of the extraction portion 11 or the like.

(Pressing portion 18)

[0031] The pressing portion 18 of the orifice member 4 is a site that presses the stacked body 6 in order to apply the first resistance to the wiper. Hence, the pressing portion 18 of the orifice member 4 serves as the part that contacts and presses the stacked body 6, and therefore any site of the orifice member 4 other than the base end 21 supported by the extraction portion 11 may function as the pressing portion 18. The orifice member 4 is configured to move toward the rear side of the storage container 15 as the bulk of the stacked body 6 decreases, and therefore the pressing portion 18 of the orifice member 4 remains pressed against the surface of the stacked body 6 so as to press the stacked body 6 even when the bulk of the stacked body 6 decreases. As a result, the first resistance is applied to the stacked body 6 continuously.

(Orifice 13)

[0032] As shown in Figs. 4A, 4B, 8, and so on, when the wipe 7 is extracted through the extraction port 12, the wipe 7 is pulled through the orifice 13. Accordingly, the orifice 13 applies the second resistance generated by frictional force to the wipe 7 while holding a tip end portion of the following wipe 7 (a tip end 6a of the stacked body 6). The second resistance applied to the wipe 7 by the orifice 13 as frictional force acts together with the first resistance generated by the pressing portion 18 as a force for separating the leading wipe 7 from the following wipe 7. The orifice 13 is provided in a part of the cantilever-supported orifice member 4 other than the base end 21 of the orifice member 4, and a formation position thereof may be selected appropriately as desired. However, the orifice 13 is preferably formed in a central position of the orifice member 4 to ensure that even when the frictional resistance between the orifice 13 and the wipe 7 increases to a certain extent, unintended deformation of the orifice member 4 caused by the frictional resistance can be suppressed easily.

[0033] There are no particular limitations on a shape and a structure of the orifice 13, but in the example shown in Fig. 8, the orifice 13 is formed to include an elongated hole-shaped gripping hole portion 28 that extends in the left-right direction (the x axis direction).

[0034] The orifice 13 may be formed from the gripping hole portion 28 alone, but instead, as shown in Fig. 8, thin, elongated auxiliary holes 33, 34 may be formed at intervals so as to extend in a width direction (a short diameter direction) of the gripping hole portion 28 in positions slightly removed from the gripping hole portion 28, and the orifice 13 may be constituted by slits 37 connecting the gripping hole portion 28 to the auxiliary holes 33 and slits 38 connecting the auxiliary holes 33 to the auxiliary holes 34. When the orifice 13 is configured thus, and an attempt is made to extract the tip end portion 6a of the stacked body 6 through the orifice 13, the tip end portion 6a of the stacked body 6 and a peripheral part thereof pass through the auxiliary holes 33, 34 and the slits 37, 38 as well as the gripping hole portion 28, and therefore friction can be applied to the wipe 7 from the auxiliary holes 33, 34 and the slits 37, 38 as well as the gripping hole portion 28. When the orifice 13 is configured to include the auxiliary holes provided in the width direction of the gripping hole portion 28 and the slits in addition to the gripping hole portion 28, as shown in Fig. 8, and the stacked body 6 is formed by folding and overlapping the plurality of wipers 7, the width direction (the short diameter direction) of the gripping hole portion 28 is preferably provided parallel to a width direction of the wipers 7. Note that the gripping hole portion 28 is not limited to being formed in the elongated hole shape shown in Fig. 8, and there are no particular limitations on the shape thereof. However, the gripping hole portion 28 is preferably large enough to insert a finger therein. The gripping hole portion 28 may be a narrow slit-shaped opening, and by forming the orifice 13 from a flexible sheet, the orifice 13 can be configured to open widely only when the wipe 7 is extracted and to be returned to the narrow slit shape by elastic force thereafter so as to apply frictional resistance to the extracted wipe 7. Furthermore, the gripping hole portion 28 of the orifice 13 may be partitioned by a linear or planar elastic member.

[0035] The orifice 13 is not limited to the shape shown in Fig. 8, and may take various forms, such as those shown in Figs. 18A to 18D. Moreover, the gripping hole portion 28, the auxiliary holes 33, 34 provided in the width direction thereof, and the slits 37, 38 are not limited to a symmetrical arrangement such as that shown in Fig. 8, and instead, the auxiliary holes 33 and the slits 37 may be disposed asymmetrically relative to the gripping hole portion 28, as shown in Figs. 18A

and 18B, or the auxiliary holes 33, 34 and the slits 37, 38 may be disposed asymmetrically relative to the gripping hole portion 28, as shown in Fig. 18D. With these arrangements, the wipe 7 can be extracted from the stacked body 6 through only the auxiliary holes 33, 34 and slits 37, 38, which have a smaller hole diameter than the gripping hole portion 28. As a result, frictional force can be applied to the wipe 7 in a larger amount than when the auxiliary holes 33, 34 and the slits 37, 38 are disposed symmetrically relative to the gripping hole portion 28, and therefore the leading wipe 7 can be separated from the following wipe 7 more reliably. Fig. 8 shows the orifice 13 having a structure in which the gripping hole portion 28 and the auxiliary holes provided in the width direction thereof are connected by the slits. When the width direction of the gripping hole portion 28 is set to correspond to the width direction of the wipes, the wipe 7 is less likely to be wrinkled when friction is applied thereto by the orifice 13 during the extraction process, which is preferable in terms of the outer appearance of the wipe 7. The orifice is not limited to the orifice shape shown in Fig. 8, and may be formed in any shape that can prevent the wipe 7 from being tightly squeezed by the orifice 13. As a result, wrinkles can be prevented from forming on the extracted wipe 7.

[0036] In the orifice member 4 supported in cantilevered fashion by the extraction portion 11 as described above, the pressing portion 18 exerts a force for pressing the stacked body 6 as the free end 22 side of the orifice member 4 moves toward the rear side of the container structural body 3. Accordingly, the free end 22 side of the orifice member 4 rotates about the base end 21 side in accordance with the reduction in the bulk of the stacked body 6 so that the pressing portion 18 contacts the top surface of the stacked body 6 and presses the stacked body 6 at all times, and as a result, the first resistance is applied by the pressing portion 18 continuously.

[0037] As shown in Figs. 2 and 5, the orifice member 4 is configured such that as the bulk of the stacked body 6 decreases, the orifice 13 moves toward the rear side of the storage container 15 while the pressing portion 18 presses the stacked body 6 so as to apply the first resistance thereto. In Fig. 2, a reference symbol 4 (T1) indicated by dot-dash lines denotes the orifice member 4 in a condition where the bulk of the stacked body 6 has decreased, and a reference symbol 4 (T2) indicated by dot-dot-dash lines denotes the orifice member 4 in a condition where the bulk of the stacked body 6 has decreased further. A reference symbol 13 (T1) indicated by dot-dash lines denotes the orifice 13 of the orifice member 4 (T1), and a reference symbol 13 (T2) indicated by dot-dot-dash lines denotes the orifice 13 of the orifice member 4 (T2). Furthermore, in Fig. 5, a reference symbol 7 (N2) denotes the wipe 7 following an extracted wipe 7 (N1). Note that in the example of Fig. 2, the orifice member 4 bends in a predetermined position during elastic deformation thereof so as to form a bent portion 23, but this is merely an example, and the bent portion 23 need not be formed during elastic deformation of the orifice member 4.

[0038] When the wipe 7 is extracted such that the leading wipe and the following wipe are separated from each other, the first resistance is applied by the pressing portion 18 and the second resistance is applied by the orifice 13. The leading wipe 7 and the following wipe 7 are separated by these two types of resistance, and as a result, tip end of the following wipe 7 is held by the frictional force exerted thereon by the orifice 13 so as to project from the orifice 13. The leading wipe 7 and the following wipe 7 are separated at a favorable timing by the action of the two types of resistance, namely the first resistance applied by the pressing portion 18 and the second resistance applied by the orifice 13, with the result that the following wipe 7 is held in the orifice 13 by the frictional force such that the tip end portion thereof projects by an appropriate amount. Hence, the tip end of the following wipe is not extracted in an excessively large amount, and does not fall back through the orifice 13. The lid body 5 can therefore be closed securely so as to prevent the remaining wipes 7 from drying out, and the following wipes can be extracted without difficulty.

[0039] When a force required to separate the wipes from each other is F0, the first resistance applied to the stacked body 6 by the orifice member 4 is F1, and the second resistance generated by the frictional force applied to the wipe by the orifice 13 of the orifice member 4 is F2, a relationship of

$$F1 < F0 < F1 + F2 \quad (1)$$

is preferably established between F0, F1, and F2. When the inequality shown in (1) is established between F1 and F2 in relation to the force F0 required to separate the wipes from each other, the wipe 7 that is extracted from the stacked body 6 initially can be separated from the following wipe 7 reliably and extracted, while the tip end portion of the following wipe 7 can be pulled up to the orifice 13 and held reliably in the orifice 13. When F0 < F1, on the other hand, the leading wipe 7 can be separated from the following wipe 7 and extracted, but the tip end of the following wipe may not be pulled up to the position of the orifice 13, and it may therefore be difficult to hold the tip end of the following wipe 7 in the orifice 13. As a result, it becomes difficult and laborious to extract the following wipe 7. Furthermore, when F1 + F2 < F0, the leading wipe 7 may not be separated from the following wipe 7, and as a result, the wipes 7 may be extracted while still connected. Note that the first resistance F1 corresponds mainly to the pressing force generated by the pressing portion of the orifice member 4, while the second resistance F2 is the frictional force 18 generated between the wipe and the orifice 13. However, the first resistance F1 serves as a pressing force for pressing the wipes 7 when the wipes 7 are

stacked, and includes both the pressing force and the frictional force generated by the pressing force and applied to the wipes 7 when the wipes 7 are extracted.

(Force required to separate wipes from each other)

5 [0040] In the present invention, when the wipe 7 is extracted from the stacked body 6, the force required to separate the wipes from each other so that the wipes 7 are separated reliably and extracted one at a time is preferably between 20 and 800 mN/cm, and more preferably between 54 and 399 mN/cm. The force for separating the wipes from each other takes a value measured in accordance with method A (a strip method) of JIS L 1096.

10 [0041] Results obtained by measuring the force required to separate the wipes from each other in the sheet-type stacked body and the perforated roll-type stacked body will be described below.

(Measurement of sheet-type stacked body)

15 [0042] With respect to nine types of sheet-type stacked bodies shown on Table 1, a force required to separate a first wipe (a wipe positioned on an uppermost surface of the stacked body) from the stacked body, a force required to separate a wipe positioned on the upper surface of the stacked body when a thickness of the stacked body has halved, and a force required to separate a wipe positioned on an upper surface side of the final two wipes of the stacked body were measured using a tension testing machine (a 50 N load cell having a constant rate of extension, manufactured by Orientec Co., Ltd.) at chuck intervals of 20 cm and a tension speed of 10 cm/minute. A strength P1 (N) upon separation of the wipes was then measured, whereupon a strength (mN/cm) per unit width (cm) of the wipe was determined and an arithmetic mean value of the strength determined from the measurements performed in the three locations was set as the force (a wipe separation force) required to separate the wipe from the stacked body. Results are shown on Table 1. The width of the wipe, a surface area of the overlapping portion, and a moistening ratio of the respective stacked bodies used in the test are also shown on Table 1. A similar measurement was performed on a stacked body of dry tissues having a width and an overlapping portion surface area shown on Table 1. However, the wipe separation force in this case was lower than 2 mN/cm, 2 mN/cm being a lower limit value that can be measured by the testing machine, and therefore the measurement could not be performed.

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[Table 1]

Test No.	Type of stack of wipes	Wipe separation force (mN/cm)	Width (cm)	Surface area of overlapping portion (cm ²)	Moistening ratio (%) *1
No. 1	Sheet-type stacked body	118	13.8	23.6	255.2
No. 2	Sheet-type stacked body	118	13.9	21.1	258.6
No. 3	Sheet-type stacked body	54	13.5	39.9	245.7
No. 4	Sheet-type stacked body	95	13.3	43.4	232.1
No. 5	Sheet-type stacked body	101	14.8	60.8	229.3
No. 6	Sheet-type stacked body	237	16.0	67.2	245.6
No. 7	Sheet-type stacked body	127	16.9	72.5	299.8
No. 8	Sheet-type stacked body	399	15.2	66.2	280.0
No. 9	Sheet-type stacked body	70	13.7	46.1	231.6
No. 10	Perforated roll-type stacked body	200	15.0	-	318.7
No. 11	Perforated roll-type stacked body	301	13.0	-	274.8
No. 12	Perforated roll-type stacked body	191	12.3	-	291.1
No. 13	Perforated roll-type stacked body	183	14.0	-	310.2
No. 14	Perforated roll-type stacked body	191	14.4	-	306.6
No. 15	Stacked body of dry tissues	Not measurable (less than 2 mN/cm)	23.4	189.9	8.2

*1 The moistening ratio was determined using a following equation from a mass (a pre-drying mass) of the moistened wipe prior to drying and a mass (an absolute dry mass) after the moist wipe is dried in a drier at 105°C ± 5°C until the wipe reaches a constant mass and then cooled to room temperature.

$$\text{Moistening ratio (\%)} = (\text{pre-drying mass} - \text{absolute dry mass}) / \text{absolute dry mass} \times 100$$

(Measurement of perforated roll-type stacked body)

5 [0043] With respect to the five types of perforated roll-type stacked bodies shown on Table 1, the force required to separate the first wipe (the wipe positioned on the uppermost surface of the stacked body) from the stacked body, the force required to separate the wipe positioned on the upper surface of the stacked body when a diameter of the roll has halved, and the force required to separate the wipe positioned on the upper surface side of the final two wipes of the stacked body were measured using a tension testing machine (a 50 N load cell having a constant rate of extension, manufactured by Orientec Co., Ltd.) at chuck intervals of 20 cm and a tension speed of 10 cm/minute. A strength P2 (N) upon separation of the wipes was then measured, whereupon the strength (mN/cm) per unit width (cm) of the wipe was determined and the arithmetic mean value of the strength determined from the measurements performed in the three locations was set as the force (the wipe separation force) required to separate the wipe from the stacked body. Results are shown on Table 1. The width and moistening ratio of the respective stacked bodies used in the test are also shown on Table 1.

15 (Rib 40)

20 [0044] As shown in Fig. 15, ribs 40 may be erected on the orifice member 4 on either side of the orifice 13. There are no particular limitations on the shape of the ribs 40, but in the example of Fig. 15, the ribs 40 are formed to extend in a direction heading from the base end 21 toward the free end 22. The orifice 13 includes an application point at which stress acts between the orifice 13 and the wipe 7, and therefore a load is more likely to be exerted on this point than on other parts of the orifice 13. When the applied load is large or a load is applied many times, the orifice 13 and the vicinity thereof may deform, but by forming the ribs 40 on the orifice member 4 as described above, the orifice 13 and the vicinity thereof can be increased in rigidity, and as a result, deformation of the orifice 13 and the vicinity thereof can be suppressed.

25 (Elastic body 24)

30 [0045] Fig. 11 shows a modified example of the first orifice member 4, in which an elastic body 24 that applies a force for pressing the stacked body 6 is attached to the orifice member 4 in a predetermined position on the base end 21 side of the orifice member 4. A spring material constituted by a plastic material, a metallic material, or the like, silicone rubber, and so on may be selected appropriately as the elastic body 24. By attaching the elastic body 24 to the orifice member 4, the force generated by the orifice member 4 in the direction of the rear side of the container structural body 3 can be increased effectively. Hence, the structure with which to apply a force for pressing the stacked body 6 can be formed on the orifice member 4 as desired.

35 (Distance between base end 21 and free end 22)

40 [0046] In the orifice member 4 according to the first embodiment, there are no particular limitations on a distance between the base end 21 and the free end 22. However, the distance between the base end 21 and the free end 22 in a condition where the free end 22 has moved to the rearmost side of the container structural body 3 preferably equals or exceeds a distance from the extraction portion 11 to a bottom position of the stacked body 6 so that the pressing portion 18 of the orifice member 4 can press the surface of the stacked body 6 until the final wipe 7 is extracted, thereby preventing the stacked structure of the stacked body 6 from collapsing.

45 [0047] The orifice member 4 may be molded integrally with the extraction port member 17 and the lid body 5 by injection molding or the like. Alternatively, the individually molded members may be combined and joined integrally by any desired joining means. When the orifice member 4 is molded integrally with the extraction port member 17 and the lid body 5, however, a process for manufacturing the wipe packaging body is simplified, and as a result, the wipe packaging body 1 can be manufactured easily and economically.

50 (Uses of wipe packaging body 1)

55 [0048] The wipe packaging body 1 is not limited to being disposed on a carrying surface 25 such that the extraction port 12 faces upwards, as shown in Figs. 1, 2, and so on. In a case where the wipe packaging body 1 is configured such that the stacked body 6 is stored in the container structural body 3 serving as a casing, as shown in Fig. 9, for example, the wipe packaging body 1 may be used while disposed on the carrying surface 25 in a condition where a formation surface of the extraction port 12 in the container structural body 3 is upright relative to a horizontal plane such that the extraction port 12 is oriented in a different direction to the up-down direction. This use will be referred to as upright use (vertical use) of the wipe packaging body 1. In this case, it may be thought that the stacked structure of the stacked body 6 in the wipe packaging body 1 will collapse more easily, but with the wipe packaging body 1 according to the first

embodiment, the free end 22 side of the orifice member 4 moves toward the rear side of the container structural body 3 such that the pressing portion 18 presses the stacked body 6, and therefore, as shown in Fig. 9, the stacked body 6 is pressed in the rearward direction of the container structural body 3 from the upper side of the stacked body 6. Hence, the stacked structure of the stacked body 6 is held reliably, thereby suppressing the danger of collapse.

[0049] Further, as shown by an example in Fig. 10, the wipe packaging body 1 may be used upright such that the base end 21 side of the orifice member 4 is positioned further toward the upper side than the free end 22 side. In this case, even when the stacked structure of the stacked body 6 starts to collapse, the stacked body 6 is supported by the orifice member 4, and therefore collapse of the stacked structure of the stacked body 6 is likewise suppressed.

[0050] Specific examples of the sheet-type stacked body and the perforated stacked body will be described below.

(Example of sheet-type stacked body 6)

[0051] As shown in Fig. 6, for example, a structure formed by partially overlapping a plurality of independent wipes 7 folded into a predetermined folding structure such that overlapping portions 10a are formed may be used as the sheet-form stacked body 6. In this case, the overlapping portion 10a serves as the separation portion 10. Fig. 6 shows a Z-folded stacked body 6 formed by stacking wipes 7 having a folding structure known as a Z fold, or in other words wipes 7 folded into a Z shape. The stacked body 6 is not limited to the Z fold, and a W fold obtained by folding the wipes 7 into a W shape or a WZ fold obtained by alternately stacking a Z-folded wipe 7 and a W-folded wipe 7 may also be used. The folding structure of the wipes 7 is not limited to the W fold and the Z fold, and as long as the stacked body 6 can be configured as shown in Figs. 4A to 4C such that when the leading wipe 7 is pulled up, the following wipes 7 are pulled up continuously in sequence, and when the leading wipe 7 is separated from the following wipe 7, as shown in Fig. 4B, the tip end portion of the following wipe 7 (i.e. the tip end portion 6a of the stacked body 6) projects from the orifice 13, to be described below, in the manner shown in Fig. 4C, or in other words is held by the orifice 13, the stacked body 6 may be formed from wipes 7 having another folding structure, or from a combination of W-folded wipes, Z-folded wipes, and wipes having another folding structure.

[0052] In the stacked body 6 shown in Fig. 6, the overlapping portion 10a is formed by overlapping wipes 7a, 7b such that a terminal end side upper surface 7c of the wipe 7a intended to be extracted first opposes a starting end side lower surface 7d of the following wipe 7b. When the leading wipe 7a is pulled out of the container structural body 3 storing the stacked body 6, the terminal end of the wipe 7a pulls up the starting end of the wipe 7b by an adhesive force that acts between the wipes 7a, 7b in the overlapping portion 10a such that the overlapping portion 10a on the terminal end side of the wipe 7a moves toward the orifice 13. As the wipe 7a is extracted, the overlapping portion 10a eventually passes through the orifice 13. At this time, the following wipe 7b receives the first resistance F1 from the pressing portion 18 of the orifice member 4 while the overlapping portion 10a receives the second resistance F2 in the form of frictional resistance from the orifice 13, and as a result, the overlap between the wipes 7a, 7b is more likely to be released. Once the starting end of the wipe 7b has been extracted by a certain extent to the outside of the orifice 13, to be described below, the terminal end of the wipe 7a and the starting end of the following wipe 7b separate such that the overlapping portion 10a disappears. In other words, the overlapping portion 10a formed in the part where the terminal end of the wipe 7a and the starting end of the following wipe 7b overlap serves as the separation portion 10 such that the wipe 7a is pulled away from the stacked body 6 including the following wipe 7b at the separation portion 10.

(Example of perforated stacked body 6)

[0053] As shown in Fig. 7, the stacked body 6 is formed by repeatedly folding back an elongated wipe sheet 14 on which detachment portions 10b are formed as the separation portions 10 so as to form a plurality of folded back portions 8, 9. The elongated tissue sheet 14 is structured such that the wipes 7, 7 are arranged in a line in planar sequence in a lengthwise direction and partially connected to each other. At this time, a structural portion in which the wipes 7, 7 are partially connected to each other serves as the separation portion 10. In this case, the separation portion 10 serves as a part in which the wipes 7, 7 are detached from each other by the pressing force that acts thereon when the tip end portion of the stacked body 6 is pulled out of the container structural body 3 and the frictional force received from the orifice 13, and therefore serves as the part where the wipe 7 is pulled away from the stacked body 6. The separation portion 10 may be formed as desired, for example in the form of perforations or in another form.

[0054] Note that the stacked body 6 shown in Fig. 7 is configured such that the separation portions 10 are positioned substantially centrally within the stacked body 6, but this is merely an example, and the positions of the separation portions 10 when viewing the stacked body 6 from the up-down direction may be selected appropriately as desired. Further, the stacked body 6 is not limited to a pattern in which a layer including the separation portion 10 and a layer not including the separation portion 10 occur alternately, as shown in Fig. 7, and the pattern in which the separation portions 10 occur may be selected appropriately.

(Storage space 26)

5 **[0055]** As shown in Figs. 2, 3, and so on, the orifice member 4 may be configured such that a storage space 26 is formed between the extraction port 12 and the orifice member 4. The storage space 26 may be formed as a space
10 portion between the orifice member 4 and the extraction port 12 by forming the orifice member 4 in a plate shape having a curved portion 27 that curves so as to project toward the rear side of the container structural body 3. By forming the storage space 26 in the wipe packaging body 1, the part of the wipe 7 that projects to the outside through the orifice 13 can be stored in the storage container 15 more effectively. When the orifice member 4 is formed with the curved portion 27, the orifice 13 is preferably formed in a predetermined position in the curved portion 27. Note that the orifice member 4 does not have to be formed in a plate shape.

(Connecting portion 47)

15 **[0056]** As shown in Fig. 3, by forming a connecting portion 47 that connects the interior space of the storage container 15 to the storage space 26 in a part excluding the orifice 13 in a case where the storage space 26 is formed in the wipe packaging body 1 between the extraction port member 17 and the orifice member 4, the space between the extraction port 12 and the orifice member 4 and the interior space of the storage container, which is connected thereto via the connecting portion 47, may be used as the storage space 26, and as a result, a volume of the space for storing the tip end portion of the following wipe 7 projecting from the orifice 13 can be enlarged. For example, the connecting portion
20 47 can be formed specifically by forming the orifice member 4 in a projecting shape and connecting the interior space of the storage container 15 to the storage space 26 on respective side portions of the projecting part of the orifice member 4. Further, when the bulk of the stacked body 6 decreases such that the orifice member 4 moves toward the rear of the storage container 15, the connecting portion 47 is also formed at the free end 22 of the orifice member. By forming the connecting portion 47 in the wipe packaging body 1, a part of the wipe 7 that cannot be stored completely within the storage space 26 when the wipe 7 is pressed into the storage space 26 can easily move toward the interior space of the storage container 15 through the connecting portion 47. In particular, when the bulk of the stacked body 6 is high (at the start of use), a sufficient volume cannot be secured in the storage space 26, and therefore, by providing the connecting portion 47, the tip end portion of the following wipe 7 projecting from the orifice 13 can be stored easily and securely in the storage container. Furthermore, the volume of the storage space 26 itself increases as the orifice member
25 4 moves downward, and therefore, when the storage space 26 is connected to the container interior via the connecting portion 47, the wipe projecting from the orifice 13 can be pushed back into the container and stored even more effectively.

30 **[0057]** In the wipe packaging body 1 according to the present invention, as shown in Fig. 2, the position of the orifice 13 moves towards the rear side in response to movement of the orifice member 4 as the bulk of the stacked body 6 decreases, and as a result, a space that gradually increases in size is formed between the extraction port 12 and the orifice 13 and the peripheral part thereof. Hence, even when the curved portion 27 is not provided in the orifice member 4 so that the storage space 26 and the connecting portion 47 are not formed, a space between the extraction port 12 and the orifice member 4 and a space connecting the free end 22 of the orifice member 4 to the interior of the storage container 15, these spaces being formed in response to movement of the orifice member 4 as the bulk of the stacked body 6 decreases, may be used as a storage space. Accordingly, even when the tip end portion of the following wipe 7 projects to the outside by a large amount from the orifice 13, the projecting part can be pushed into the container structural body 3 by the extraction portion 11, and by closing the lid body 5, the wipe 7 can be prevented from drying out. Moreover, when the storage space 26 and the connecting portion 47 are provided, a wipe projecting from the orifice 13 can be stored reliably even while the bulk of the stacked body 6 is high. Hence, the storage space 26 and the connecting portion 47 are preferably provided.

35 **[0058]** In the example shown in Figs. 2 and 3, the orifice member 4 curves in a direction heading from the base end 21 side toward the free end 22 side so as to form the curved portion 27, but the curve direction of the curved portion 27 is not limited thereto. Note that in Fig. 3, an arrow C1 indicates the curve direction. As shown in Fig. 16, the curved portion 27 may be formed to curve in a direction (a direction of an arrow C2 in Fig. 16) that transects the direction heading from the base end 21 side toward the free end 22 side. At this time, the curved portion 27 is preferably formed to curve
40 in both the direction (the curve direction C1 in Fig. 16) heading from the base end 21 side toward the free end 22 side and the direction (the curve direction C2, for example) that transects the direction heading from the base end 21 side toward the free end 22 side. By forming the curved portion 27 to curve in two directions, the strength of the orifice member 4 can be improved, and as a result, unintended deformation of the orifice member 4 can be suppressed.

45 **[0059]** Furthermore, in the wipe packaging body 1 according to the present invention, as shown in Fig. 5, an interval between the separation portion 10 positioned on the rear end side of the initially extracted wipe 7 (N1) and the orifice 13 is unlikely to widen, and therefore a situation in which the initially extracted wipe 7 is separated from the following wipe 7 before the following wipe 7 passes through the orifice 13 is unlikely to occur.

50 **[0060]** Moreover, when the bulk of the stacked body 6 decreases, the orifice 13 tilts such that the free end 22 side

moves further inward toward the container structural body 3 side, and therefore, even in a case where the tip end of the following wipe 7 that remains within the container structural body 3 after being separated at the separation portion 10 cannot be held by the orifice 13 so as to fall back into the container structural body 3, the tip end part of the wipe 7 can easily be picked up by the fingertips and extracted.

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[Second Embodiment]

[0061] In the wipe packaging body 1 according to the first embodiment, the orifice member 4 is formed from a single piece, but the orifice member 4 provided in the wipe packaging body 1 is not limited to this configuration, and instead, the orifice member 4 may be formed from a combination of a plurality of orifice member forming pieces 44. A second embodiment will now be described on the basis of Figs. 12 and 13.

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[0062] The wipe packaging body 1 according to the second embodiment, shown in Figs. 12 and 13, differs from the wipe packaging body 1 according to the first embodiment in that the orifice member 4 is formed from a combination of two orifice member forming pieces 44, while all other configurations may be identical to the first embodiment. Hence, description of locations having identical configurations to the first embodiment has been omitted, and identical reference symbols have been applied thereto.

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[0063] The orifice member 4 according to the second embodiment is supported by the extraction portion 11 in cantilevered fashion such that when the wipe packaging body 1 is seen from above, the direction heading from the base end 21 side toward the free end 22 side of one of the two orifice member forming pieces 44 is opposite to that of the other orifice member forming piece 44.

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[0064] In the orifice member 4 shown in Figs. 12 and 13, the orifice 13 is formed when two orifice member forming pieces 44a, 44b are combined, and the respective orifice member forming pieces 44a, 44b are respectively supported by the extraction portion 11 in cantilevered fashion such that a supported end serves as the base end 21 and an opposite end thereto serves as the free end 22. Cutout portions 46 in shapes corresponding to respective halves of the gripping hole portion 28 and the auxiliary holes 33, 34, which are shaped similarly to those of the orifice 13 according to the first embodiment, are formed in the orifice member forming pieces 44a, 44b. By disposing the orifice member forming pieces 44a, 44b so that a side end surface of the orifice member forming piece 44a opposes a side end surface of the orifice member forming piece 44b, and aligning the cutout portions 46 of the orifice member forming piece 44a with the cutout portions 46 of the orifice member forming piece 44b, the orifice 13 is formed in a similar shape to the orifice 13 according to the first embodiment.

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[0065] In the example shown in Figs. 12 and 13, the orifice 13 is formed by combining the two orifice member forming pieces 44a, 44b, but the present invention is not limited thereto, and an orifice member may be formed by combining three or more orifice member forming pieces. Moreover, the orifice 13 may be formed in only a part of the plurality of orifice member forming pieces, and parts constituting the periphery of the orifice 13 may be formed on another orifice member forming piece.

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[0066] With the wipe packaging body 1 according to the second embodiment, as shown in Fig. 13, when the bulk of the stacked body 6 decreases, the plurality of orifice member forming pieces 44a, 44b rotate about the respective base ends 21 thereof such that the free ends 22 move toward the rear side of the storage container 15 (in Fig. 13, a direction in which the respective free end 22 sides of the plurality of orifice member forming pieces 44a, 44b move is indicated by an arrow K). Hence, the stacked body 6 can be maintained in a condition of being pressed in the rearward direction of the container structural body 3 by the respective pressing portions 18 of the plurality of orifice member forming pieces 44a, 44b, and as a result, the stacked structure of the stacked body 6 is held more securely. Note that in Fig. 13, reference symbols 44a (T1) and 44b (T1) respectively denote the orifice member forming pieces 44a, 44b in a condition where the bulk of the stacked body 6 has decreased.

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[0067] Further, with the wipe packaging body 1 according to the second embodiment, when the wipe packaging body 1 is used upright, the plurality of orifice member forming pieces 44 respectively press the stacked body 6 in the rearward direction of the container structural body 3 such that the stacked body 6 is pressed in the rearward direction of the container structural body 3 in a plurality of positions. As a result, collapse of the stacked structure of the stacked body 6 can be suppressed even more reliably.

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[Third Embodiment]

[0068] In the wipe packaging body 1 according to the first embodiment, the orifice member 4 is supported by the extraction portion 11 in cantilevered fashion, whereas in a third embodiment, as shown in Fig. 14, the orifice member 4 is supported by the extraction portion 11 at both ends. Note that in the present invention, the term "supported at both ends" is used in relation to cantilever support, and is not limited to a configuration in which the orifice member 4 is supported at only two points on the base end. Instead, the term "supported at both ends" also includes a configuration in which the orifice member 4 is supported around an entire periphery of the base end.

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[0069] The wipe packaging body 1 according to the third embodiment differs from the wipe packaging body 1 according to the first embodiment in the support configuration of the orifice member 4, while all other configurations may be identical to the first embodiment. Hence, description of locations having identical configurations to the first embodiment has been omitted, and identical reference symbols have been applied thereto.

[0070] In a configuration shown in Fig. 14A, for example, respective ends of the orifice member 4 are attached to a bellows 51 fixed to the extraction portion 11, and the orifice member 4 is moved toward the rear side of the container structural body 3 (in a direction of an arrow L) by a restoring force of the compressed bellows 51. Further, in a configuration shown in Fig. 14B, the orifice member 4 is fixed to respective other ends of springs 52 fixed to the extraction portion 11, and the orifice member 4 is moved toward the rear side of the container structural body 3 (in the direction of the arrow L) by a restoring force of the compressed springs 52. Furthermore, in a configuration shown in Fig. 14C, the orifice member 4 is fixed to elastic bodies 53 instead of springs, and when the elastic bodies 53 are compressed so as to curve, the orifice member 4 is moved toward the rear side of the container structural body 3 (in the direction of the arrow L) by a restoring force of the compressed elastic bodies 53. Note that the elastic bodies 53 may be separate bodies or an integrated structure provided around the periphery of the orifice member 4. Moreover, in a configuration shown in Fig. 14D, one end of a rod-shaped support body 54 constituted by an elastic body or the like is folded and attached to the extraction portion 11, another end of the support body 54 is fixed to the orifice member 4, and the orifice member 4 is moved toward the rear side of the container structural body 3 (in the direction of the arrow L) by a restoring force generated when the folded portion is compressed. Rubber, plastic, or the like, for example, may be used as the elastic body, but the elastic body is not limited thereto, and any material possessing elasticity may be used, although rubber and plastic are typically preferable. Note that the configurations shown in Figs. 14A to 14D are examples, and the present invention is not limited to these examples.

[Fourth Embodiment]

[0071] In the first to third embodiments, the orifice member 4 is supported by the extraction portion 11 either in cantilevered fashion or at both ends, whereas in a fourth embodiment, the orifice member 4 is not supported mechanically by the extraction portion 11.

[0072] The wipe packaging body 1 according to the fourth embodiment differs from the wipe packaging body 1 according to the first embodiment in that the orifice member 4 is not supported by the extraction portion 11, while all other configurations may be identical to the first embodiment. Hence, description of locations having identical configurations to the first embodiment has been omitted, and identical reference symbols have been applied thereto.

[0073] As shown in Fig. 17, in the wipe packaging body 1 according to the fourth embodiment, the orifice member 4 is not supported by the extraction portion 11, and therefore, when the wipes 7 are extracted from the stacked body 6 such that the stacked body 6 decreases in thickness, the orifice member 4 falls under its own weight such that the orifice 13 of the orifice member 4 moves toward the rear side of the container structural body 3 (in a direction of an arrow M in Fig. 17). Note that in Fig. 17, a reference symbol 4 (T1) denotes the orifice member 4 in a condition where the bulk of the stacked body 6 has decreased by a predetermined amount, and a reference symbol 13 (T1) denotes the orifice 13 of the orifice member 4 (T1).

[0074] In the wipe packaging body 1, a condition in which the orifice member 4 is placed on the uppermost surface of the stacked body 6 can be realized easily, and therefore the interval between the orifice 13 and the separation portion 10 positioned on the rear end side of the initially extracted wipe 7 can be prevented from widening. Hence, a condition in which an appropriate frictional force is applied to the wipe 7 from the orifice 13 can be maintained easily, and as a result, the leading wipe 7 and the following wipe 7 are more likely to be separated from each other at an appropriate timing.

(Extension portion 45)

[0075] In the wipe packaging body 1 according to the fourth embodiment, the orifice member 4 may include an extension portion 45 that is formed by extending at least part of an outer peripheral end of the orifice member 4 in a direction corresponding to a surface direction of the stacked body 6. By forming the extension portion 45, the orifice member 4 can easily be made less likely to move in the surface direction of the stacked body 6 even when the orifice member 4 moves in a thickness direction of the stacked body 6. Moreover, the weight of the orifice member 4 can be increased.

[0076] The wipe packaging bodies 1 described in detail above are merely examples of embodiments of the wipe packaging body 1 according to the present invention, and other appropriate embodiments may be employed within a scope that does not depart from the spirit of the present invention.

EXPLANATION OF REFERENCE NUMERALS

[0077]

1	wipe packaging body
3	container structural body
4	orifice member
5	lid body
6	stack of wipes
7	wipe
8, 9	folded back portion
10	separation portion
10a	overlapping portion
10b	detachment portion
11	extraction portion
12	extraction port
13	orifice
14	wipe sheet
15	storage container
16	opening portion
17	extraction port member
18	pressing portion
19	attachment portion
20	21 base end
	22 free end
	23 bent portion
	24 elastic body
	25 carrying surface
25	26 storage space
	27 curved portion
	28 gripping hole portion
	33, 34 auxiliary hole
	37, 38 slit
30	40 rib
	41 base end portion
	42 free end portion
	43 central portion
	44 orifice member forming piece
35	45 extension portion
	46 cutout portion
	47 connecting portion
	51 bellows
	52 spring
40	53 elastic body
	54 support body

Claims

- 45
1. A wipe packaging body formed by storing a stack of wipes constituted by a plurality of overlapping wipes in a storage container of a container structural body, **characterized in that** in said container structural body, an extraction port member having an extraction port for extracting said wipes from said storage container is hermetically joined to an opening portion of said storage container, and
50 an orifice member that applies two types of resistance in order to separate a wipe extracted initially from said stored stack of wipes from a following wipe is provided in a position further within said storage container than said extraction port of said extraction port member, said orifice member having a pressing portion that presses said stack of wipes so as to apply a first resistance to said wipes and an orifice that applies a second resistance generated by frictional force to said wipes, and
55 said container structural body has a lid body that can be opened and closed freely, and is capable of hermetically sealing said extraction port.
 2. The wipe packaging body according to claim 1, **characterized in that** said orifice member is supported by said

extraction port member.

- 5
3. The wipe packaging body according to claim 1 or 2, **characterized in that** said orifice member is configured to move toward a rear of said storage container while pressing said stack of wipes in accordance with an amount by which a bulk of said stack of wipes decreases as said wipes are extracted.
- 10
4. The wipe packaging body according to any of claims 1 to 3, **characterized in that** a force required to separate said wipes from each other is between 20 and 800 mN/cm.
- 15
5. The wipe packaging body according to any of claims 1 to 3, **characterized in that** said orifice member is constituted by an elastic member.
- 20
6. The wipe packaging body according to any of claims 1 to 3, **characterized in that** said orifice member comprises a base end and a free end, said orifice member is supported within said storage container in a cantilevered fashion at said base end, and said pressing portion is provided in a part of said orifice member other than said base end.
- 25
7. The wipe packaging body according to any of claims 1 to 3, **characterized in that** said orifice member is supported within said storage container at both of two base ends sandwiching said orifice, and said pressing portion is provided in a part of said orifice member other than said two base ends.
- 30
8. The wipe packaging body according to any of claims 1 to 3, **characterized in that** said orifice member comprises a curved portion that projects toward said rear of said storage container, and said orifice is formed in said curved portion.
- 35
9. The wipe packaging body according to any of claims 1 to 3, **characterized in that** when a force required to separate said wipes from each other is F_0 , said first resistance, which serves as a pressing force applied to said wipes by said orifice member, is F_1 , and said second resistance, which serves as said frictional force applied to said wipes by said orifice member, is F_2 , a relationship of $F_1 < F_0 < F_1 + F_2$ is established between F_0 , F_1 , and F_2 .

INTERNATIONAL SEARCH REPORT

International application No.

PCT/JP2014/001452

5	A. CLASSIFICATION OF SUBJECT MATTER B65D83/08(2006.01)i, A47K10/42(2006.01)i	
	According to International Patent Classification (IPC) or to both national classification and IPC	
10	B. FIELDS SEARCHED Minimum documentation searched (classification system followed by classification symbols) B65D83/08, A47K10/42	
15	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 1996-2014 Kokai Jitsuyo Shinan Koho 1971-2014 Toroku Jitsuyo Shinan Koho 1994-2014	
20	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
25	Y	Microfilm of the specification and drawings annexed to the request of Japanese Utility Model Application No. 104709/1978(Laid-open No. 20968/1980) (Fujio HATANO), 09 February 1980 (09.02.1980), page 6, line 7 to page 11, line 13; fig. 1 to 3 (Family: none)
30		Relevant to claim No. 1-9
35	Y	GB 1085560 A (CANADIAN INTERNATIONAL PAPER CO.), 15 May 1965 (15.05.1965), page 2, left column, lines 55 to 65; fig. 1 to 6 & DE 1554562 A
40		Relevant to claim No. 1-9
	<input checked="" type="checkbox"/> Further documents are listed in the continuation of Box C. <input type="checkbox"/> See patent family annex.	
45	* Special categories of cited documents:	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
	"A" document defining the general state of the art which is not considered to be of particular relevance	"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
	"E" earlier application or patent but published on or after the international filing date	"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
	"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"&" document member of the same patent family
	"O" document referring to an oral disclosure, use, exhibition or other means	
	"P" document published prior to the international filing date but later than the priority date claimed	
50	Date of the actual completion of the international search 27 May, 2014 (27.05.14)	Date of mailing of the international search report 10 June, 2014 (10.06.14)
55	Name and mailing address of the ISA/ Japanese Patent Office	Authorized officer
	Facsimile No.	Telephone No.

INTERNATIONAL SEARCH REPORT

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PCT/JP2014/001452

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C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

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Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	Microfilm of the specification and drawings annexed to the request of Japanese Utility Model Application No. 133031/1978 (Laid-open No. 49612/1980) (Yoshino Kogyosho Co., Ltd.), 01 April 1980 (01.04.1980), page 2, line 1 to page 3, line 17; fig. 1 to 4 (Family: none)	1-9
Y	JP 9-132280 A (Uni-Charm Corp.), 20 May 1997 (20.05.1997), fig. 1 to 3 (Family: none)	1-9
Y	JP 10-77076 A (Kenji NAKAMURA), 24 March 1998 (24.03.1998), fig. 1 to 8 (Family: none)	1-9

Form PCT/ISA/210 (continuation of second sheet) (July 2009)

REFERENCES CITED IN THE DESCRIPTION

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Patent documents cited in the description

- JP 2004196303 A [0005]
- JP 2010173649 A [0005]