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(54) WOUND BODY STORAGE BOX, AND STORAGE BOX HAVING WOUND BODY STORED THEREIN

(57) To provide a wound body storage box and a storage box with a wound body stored therein. A wound body storage box (1) has a main body section (10) being able to accommodate a wound body (91r), and a lid section (20) with the overhead cover piece (22). The overhead cover piece (22) is formed at a size capable of sandwiching a long object (91f) between itself and a front plate (12) over the entire width. The front plate (12) has a flap (12f) which sandwiches the long object (91f) between itself and the overhead cover piece (22). The flap (12f) is configured to include first and second flaps (12fA and 12fB) extending from the vicinity of the outside of a central area (12t) to an end portion. Thus, it is possible to appropriately cut the long object (91f) with the long object (91f) sandwiched between the flap (12f) and the overhead cover piece (22) while preventing the flap (12f) from being excessively pressed inward when the overhead cover piece (22) is pressed toward the front plate (12). A storage box with a wound body stored therein (100) has the wound body (91r) and the wound body storage box (1).

FIG. 1(A)

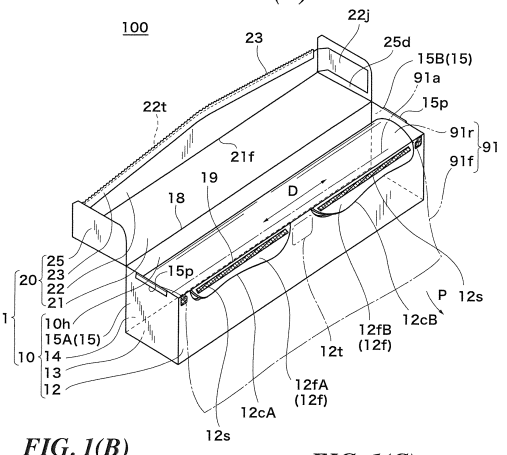


FIG. 1(B)

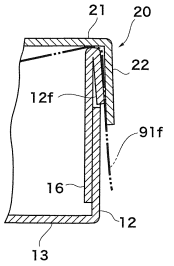
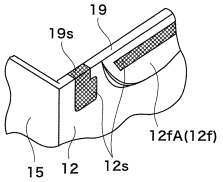


FIG. 1(C)



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Description

Technical Field

[0001] The present invention relates to a wound body storage box and a storage box with a wound body stored therein and particularly, to a wound body storage box and a storage box with a wound body stored therein, in which it is possible to appropriately cut a long object which is to be accommodated therein.

Background Art

[0002] A food wrap film that wraps a cooking ingredient, food, or tableware such as dishes with cooked foods is widely used. As for the food wrap film, typically, a long plastic film wound in a roll shape (a wound body) is accommodated in a long rectangular parallelepiped-shaped container (a storage box), and when being used, a leading end film is drawn out by a required amount from a roll and cut by a cutting blade mounted on a lid of the container. As a structure of the cutting blade, a structure having a straight line shape extending in an axial direction of the wound body and a structure having a V-shape in which the center in the axial direction of the wound body is formed in an apex are generally known. In an aspect of cutting a film by using a V-shaped cutting blade, holding a leading end of the film and drawing out by a required amount the film with one hand, closing a lid body with a central portion in a longitudinal direction of the container held with the other hand, sandwiching the film between a front wall of the lid body and a main body of the container by pressing the front wall of the lid body to the main body of the container, and twisting the container such that the cutting blade bites into the drawn-out film are performed (See for example the Patent Document 1).

Prior Art Document

Patent Document

[0003] [Patent Document 1] JP-A 2002-274534 (paragraph 0019, Fig. 2 etc.)

Summary of the Invention

Problem to be solved by the Invention

[0004] However, in the cutting aspect described above, although the film can be pressed at the central portion in the longitudinal direction which is pressed with the hand holding the container, the central portion is pressed, whereby gaps are formed between the main body of the container and the lid body at both end portions in the longitudinal direction of the container, and thus the film cannot be appropriately pressed, and a force to cut the film acts in a direction in which the film is drawn out from the wound body, and thus the film sometimes cannot be appropriately cut.

[0005] The present invention has been made in view of the above problems and has objects to provide a wound body storage box in which it is possible to appropriately cut a long object which is to be accommodated therein, and to provide the storage box with a wound body stored therein.

Means for solving the Problem

[0006] To achieve the above object, a wound body storage box according to the first aspect of the present invention comprises, as shown in FIG. 1, for example, a main body section 10 formed into a rectangular parallelepiped form, the main body section 10 being able to accommodate a wound body 91r with a thin-film-shape long object wound, wherein an opened opening face 10h is formed in one of four rectangular surfaces of the main body section 10, the four rectangular surfaces being parallel to an axis line 91a of the wound body 91r when the wound body 91r is accommodated in the main body section 10, the main body section 10 having a back plate 14, a front plate 12 and a pair of side plates 15, the back plate 14 configuring one of the two rectangular surfaces orthogonal to the opening face 10h, the front plate 12 configuring the rectangular surface facing the back plate 14, and the pair of side plates 15 configuring end surfaces of the rectangular parallelepiped form at right angles to the four rectangular surfaces; and a lid section 20 for covering the opening face 10h, the lid section 20 being rotatably connected to a back plate end side 18, the back plate end side 18 being an end side meeting the opening face 10h of the back plate 14, the lid section 20 having an overhead cover piece 22, and the overhead cover piece 22 covering a portion of the front plate 12 when the lid section 20 is closed, wherein the overhead cover piece 22 is formed at a size that can sandwich the long object 91f drawn out from the wound body 91r between itself and the front plate 12 over the entire width of the long object 91f along a front plate end side 19 that is an end side meeting the opening face 10h of the front plate 12, and the overhead cover piece 22 is provided with a cutting blade 23 along the front plate end side 19, the cutting blade 23 being for cutting the drawn-out long object 91f, the front plate 12 has a flap 12f that can sandwich the long object 91f drawn out from the wound body 91r between itself and the overhead cover piece 22 when the lid section 20 is closed, and the flap 12f extends along the front plate end side 19, the flap 12f is configured to include a first flap 12fA and a second flap 12fB, the first flap 12fA provided between a first side plate 15A that is one of the pair of side plates 15 and a central area 12t, the second flap 12fB provided between a second side plate 15B facing the first side plate 15A and the central area 12t, the central area 12t being a range in which the overhead cover piece 22 and the front plate 12 come into contact with each other when a portion of the overhead cover piece 22 corresponding to a center of a width of

the long object 91f is pressed toward the front plate 12 in a state where the lid section 20 is closed, the first flap 12fA is formed to integrally extend from the vicinity of the central area 12t to substantially an end portion of the width of the long object 91f toward the first side plate 15A, and the second flap 12fB is formed to integrally extend from the vicinity of the central area 12t to substantially an end portion of the width of the long object 91f toward the second side plate 15B.

[0007] With this configuration, it is possible to prevent the first flap and the second flap from being excessively pressed inward when the overhead cover piece is pressed toward the front plate, and it becomes possible to appropriately sandwich the long object between the flap and the overhead cover piece, and thus it is possible to appropriately cut the long object. In addition, the first flap or the second flap extending from the vicinity of the central area to substantially an end portion of the width of the long object toward the first side plate or the second side plate means that the first flap and the second flap are formed in a range capable of sandwiching the long object between the overhead cover piece and the flap to the extent preventing the long object from being loosened.

[0008] As for the wound body storage box according to the second aspect of the present invention, as shown in FIG. 1, for example, in the wound body storage box 1 according to the first aspect, at the first flap 12fA and the second flap 12fB, sticking part 12s for restricting movement of the long object 91f in a direction P in which the long object 91f is drawn out is formed over substantially the entire width of each of the flaps 12fA and 12fB. In addition, the sticking part being formed over substantially the entire width is intended to include that the sticking part is formed intermittently or in a state of not reaching an end portion of the flap, in a range in which the long object can be appropriately cut without being loosened.

[0009] With this configuration, it is possible to more reliably prevent long object from slipping when cutting the long object.

[0010] As for the wound body storage box according to the third aspect of the present invention, as shown in FIG. 1, for example, in the wound body storage box 1 according to the first aspect or the second aspect, at least one of the first flap 12fA and the second flap 12fB is formed such that an outline is formed by a cut line 12cA (12cB) and the front plate end side 19, the cut line 12cA (12cB) passing through an in-plane of the front plate 12, and both ends of the cut line 12cA (12cB) substantially reach the front plate end side 19. In addition, both ends of the cut line substantially reaching the front plate end side are intended to include a case where the end portion of the cut line does not reach the front plate end side and is stopped on a surface of the front plate in a range in which the first flap or the second flap is deflected to the outside of the main body section to the extent that the drawn-out long object can be sandwiched between the first flap or the second flap and the overhead cover piece.

[0011] With this configuration, the amount of protrusion of the flap is adjusted depending on a pressing force from the overhead cover piece side, and thus the front plate and the overhead cover piece can sandwich the long object therebetween with an appropriate force.

[0012] As for the wound body storage box according to the fourth aspect of the present invention, as shown in FIG. 1, for example, in the wound body storage box 1 according to any one of the first aspect to the third aspect, the overhead cover piece 22 is configured such that a distance between a bent side 21f and a leading end side 22t in a direction orthogonal to the bent side 21f becomes shorter as the leading end side 22t moves from a midpoint of the leading end side 22t to a side of an end of the leading end side 22t, the bent side 21 f connected to a cover plate 21 that covers the opening face 10h when the lid section 20 is closed, the leading end side 22t facing the bent side 21 f.

[0013] With this configuration, it is possible to increase the range of selection of a method of cutting the long object.

[0014] As for a storage box with a wound body stored therein according to the fifth aspect of the present invention comprises, as shown in FIG. 1, for example, a wound body 91r with a thin-film-shape long object wound; and the wound body storage box 1 according to any one of the first aspect to the fourth aspect.

[0015] With this configuration, a storage box with a wound body stored therein is provided in which it is possible to appropriately cut the long object by preventing the first flap and the second flap from being excessively pressed inward when the overhead cover piece is pressed toward the front plate.

Effect of the Invention

[0016] According to the present invention, it is possible to prevent the first flap and the second flap from being excessively pressed inward when the overhead cover piece is pressed toward the front plate, and it becomes possible to appropriately sandwich the long object between the flap and the overhead cover piece, and thus it is possible to appropriately cut the long object.

[0017] This application is based on the Patent Application No. 2011-227178 filed on October 14, 2011 in Japan, the contents of which are hereby incorporated in its entirety by reference into the present application, as part thereof.

[0018] The present invention will become more fully understood from the detailed description given hereinbelow. Further range of application of the present invention will become clearer from the detailed description given hereinbelow. However, the detailed description and the specific embodiment are illustrated of desired embodiments of the present invention and are described only for the purpose of explanation. Various changes and modifications will be apparent to those ordinary skilled in the art on the basis of the detailed description.

[0019] The applicant has no intention to give to public any disclosed embodiment. Among the disclosed changes and modifications, those which may not literally fall within the scope of the patent claims constitute, therefore, a part of the present invention in the sense of doctrine of equivalents.

Brief Description of Drawings

[0020]

Fig. 1(A) is a perspective view of a wrap storing carton according to an embodiment of the invention, which includes a wrap carton according to an embodiment of the present invention, Fig. 1(B) is a partial cross-sectional side view of the wrap carton according to the embodiment of the present invention, and Fig. 1(C) is a partial perspective view of the wrap carton according to the embodiment of the present invention.

Fig. 2 is a front view of the wrap carton according to the embodiment of the present invention.

Fig. 3(A) is a front view of a wrap carton according to a first modified example of the embodiment of the present invention, and Fig. 3(B) is a front view of a wrap carton according to a second modified example.

Mode for carrying out the Invention

[0021] Description will hereinafter be made of an embodiment of the present invention with reference to the drawings. The same or corresponding members are denoted with the same reference numerals in all the drawings, and their descriptions are not repeated.

[0022] First, with reference to Fig. 1, a wrap carton 1 as a wound body storage box and a wrap storing carton 100 as a storage box with a wound body stored therein, in which a wrap roll 91r as the wound body is accommodated in the wrap carton 1, according to an embodiment of the invention, will be described. Fig. 1(A) is a perspective view of the wrap storing carton 100, Fig. 1(B) is a partial cross-sectional side view of the wrap carton 1, and Fig. 1(C) is a partial perspective view of the wrap carton 1. Fig. 1(A) shows an open-lid state. The wrap roll 91r is an object formed into a roll shape by winding a wrap film 91f as a thin film-shape long object on a cylindrical winding core around an axis line 91a. In the following description, in a case where a distinction between the external shapes of the wrap roll 91r and the wrap film 91f is not necessary, the wrap roll 91r and the wrap film 91f are collectively referred to as a "wrap 91". In this embodiment, the wrap film 91 f is formed in a thickness in a range of 5 μm to 20 μm by using polyvinylidene chloride as a raw material. The wrap carton 1 has a main body section 10 which is able to accommodate the wrap roll 91r, and a lid section 20 connected to the main body section 10.

[0023] The main body section 10 is a rectangular parallelepiped box having a size capable of accommodating the unused wrap roll 91r. In the box of the main body section 10, one elongated surface is an opening face 10h. The size of the main body section 10 is formed to be as small as possible while a gap that does not prevent the rotation around the axis line 91 a of the unused wrap roll 91r accommodated therein is formed, and, in this embodiment, is formed at a size having a width of 44 mm, a height of 44 mm, and a length of 310 mm. The main body section 10 has a front plate 12, a bottom plate 13, and a back plate 14 which configure the side surfaces of the rectangular parallelepiped in conjunction with the opening face 10h, and two side plates 15 which configure the end surfaces of the rectangular parallelepiped. The bottom plate 13 faces the opening face 10h. The front plate 12 and the back plate 14 are orthogonal to the opening face 10h and the bottom plate 13. The side plate 15 is typically formed into a square shape. However, the side plate 15 may have a rectangular shape in which vertical and horizontal lengths are different from each other. In the following description, there is also a case where description is made with the bottom plate 13 side set to be the bottom and the opening face 10h side set to be the top on the basis of a state where the bottom plate 13 is placed on a horizontal surface.

[0024] A projection 15p formed by folding outward a small piece extending upward by about 3 mm is provided at a central portion of an upper end of the side plate 15. The projection 15p is provided at the upper end of each of the two side plates 15. Further, the main body section 10 has a sub-plate 16 (refer to Fig. 1(B)) which is continuous with the front plate 12 at a front plate end side 19. The front plate end side 19 is an end side of the front plate 12, which is a portion where the front plate 12 and the opening face 10h meet, and in this embodiment, the front plate end side 19 also serves as the boundary between the front plate 12 and the sub-plate 16. The sub-plate 16 has approximately the same size as the front plate 12, but is not in contact with the bottom plate 13, and is provided further inside the main body section 10 than the front plate 12. An end side on the bottom plate 13 side of the sub-plate 16 is bonded to the front plate 12 in a longitudinal direction.

[0025] The lid section 20 is a member which closes the opening face 10h of the main body section 10. The lid section 20 has a cover plate 21, an overhead cover piece 22, a cutting blade 23, and a side cover piece 25. The cover plate 21 is a rectangular flat plate-like member having approximately the same size as the opening face 10h and is made so as to be able to make the main body section 10 become a blocked rectangular parallelepiped by matching the cover plate 21 with the opening face 10h. The cover plate 21 having approximately the same size as the opening face 10h is meant to include a case where the cover plate 21 is large to the extent that the cover plate 21 is larger by an amount corresponding to the thickness of the overhead cover piece 22 and the thickness of the side cover piece 25 and a gap which

does not obstruct the opening and closing of the lid section 20 is formed. One side extending in the longitudinal direction of the cover plate 21 is connected with a back plate end side 18 of the main body section 10. In other words, the main body section 10 and the cover plate 21 are connected through the back plate end side 18. The back plate end side 18 is an end side of the back plate 14, which is a portion where the back plate 14 and the opening face 10h meet. The cover plate 21 is configured so as to be able to rotate with respect to the main body section 10 with the back plate end side 18 as an axis of rotation.

[0026] The overhead cover piece 22 is provided so as to be orthogonal to the cover plate 21 through a bent side 21f and extend toward the bottom plate 13 when the lid section 20 is closed. The overhead cover piece 22 is made such that the height thereof (the length thereof in a short side direction of the rectangular front plate 12) at each of both ends in a direction in which the axis line 91a of the wrap roll 91r extends (hereinafter referred to as an "axis line direction D") is about 1/2 of the length in the short side direction of the front plate 12 and the height of a central portion in the axis line direction D is about 3/4 of the length in the short side direction of the front plate 12. A leading end side 22t facing the bent side 21f is formed such that the distance between the bent side 21f and the leading end side 22t in a direction orthogonal to the axis line direction D becomes shorter as it moves from the center in the axis line direction D to each end portion. Due to such a configuration, the leading end side 22t facing the bent side 21f is formed into a V-shape. When the lid section 20 is closed, the overhead cover piece 22 overlaps the outside of the front plate 12 along the front plate 12 and covers an upper portion of the front plate 12 in a pentagonal shape. The overhead cover piece 22 is configured such that the length thereof in the axis line direction D is slightly longer than the front plate 12, and is longer than the width of the wrap 91 accommodated in the main body section 10. In this way, the overhead cover piece 22 is configured so as to be able to sandwich the wrap film 91f drawn out of the main body section 10 between itself and the front plate 12 over the entire width thereof. The cutting blade 23 for cutting the wrap film 91f is mounted on the leading end side 22t of the overhead cover piece 22. The cutting blade 23 is provided in a V-shape along the leading end side 22t such that a cutting edge appears from the leading end side 22t.

[0027] The side cover piece 25 is provided to be orthogonal to both the cover plate 21 and the overhead cover piece 22. A total of two of the side cover pieces 25 are provided at both ends of the cover plate 21 (the overhead cover piece 22). The basic shape of the side cover piece 25 is formed into a rectangular shape in which a long side has the same length as a short side of the cover plate 21 and a short side has approximately the same length as the height at the central portion of the overhead cover piece 22 (the shortest distance from the tip of the V-shape to the bent side 21f). In the side cover piece 25, a corner portion where the side of the side cover piece 25 on the bottom plate 13 side and the side of the side cover piece 25 on the back plate 14 side intersect each other is removed based on the basic shape. The side cover piece 25 is fixed to a joining piece 22j connected to the overhead cover piece 22 by an adhesive. On the inside of the side cover piece 25, a concave portion 25d is formed between the joining piece 22j and the cover plate 21. The projection 15p provided at the upper end of the side plate 15 is fitted into the concave portion 25d when the lid section 20 is closed. The lid section 20 configured as described above is made such that when the lid section 20 is closed, the lid section 20 covers the opening 10h of the main body section 10 and the overhead cover piece 22 covers an upper portion of the front plate 12.

[0028] In this embodiment, each of the main body section 10 and the lid section 20 is formed by processing coated cardboard having a thickness in a range of about 0.45 mm to 0.7 mm. For this reason, the wrap carton 1 has elasticity. In addition, in this embodiment, for convenience of description, the main body section 10 and the lid section 20 are distinguished from each other from the viewpoint of a function. However, the main body section 10 and the lid section 20 are integrally formed by cutting a sheet of base paper and assembling it. After a design to elicit a consumer's willingness to buy is printed on the surfaces of the main body section 10 and the lid section 20, surface treatment is applied to the entirety. Further, in the wrap carton 1, a flap 12f that floats to the outside of the main body section 10 away from the sub-plate 16 is formed at the upper portion of the front plate 12 by cutting the face of the front plate 12. That is, the front plate 12 is configured to include the flap 12f.

[0029] Here, with reference to Fig. 2 in conjunction with Fig. 1, the details of the flap 12f will be described. Fig. 2 is a front view of the wrap carton 1 and shows an open-lid state. In this embodiment, the flaps 12f are provided along the front plate end side 19 on both sides of a central area 12t that is located at the center of the upper portion of the front plate 12, so as to interpose the central area 12t therebetween. Here, the "central area 12t" is the portion of the front plate 12, with which the overhead cover piece 22 comes into contact when a centroid of the overhead cover piece 22 (the portion of the overhead cover piece 22 in the vicinity of the apex of the V-shape of the leading end side 22t) is pressed toward the front plate 12 in a state where the lid section 20 is closed. At this time, in the wrap carton 1 having elasticity, a range in which the overhead cover piece 22 and the front plate 12 come into contact with each other can change depending on the magnitude of a force to press the overhead cover piece 22 toward the front plate 12. However, when defining the central area 12t, the portion of the front plate 12, with which the overhead cover piece 22 comes into contact when the front plate 12 is stopped by the wrap roll 91r in the main body section 10, thereby not

moving to the back plate 14 side, when pressing the centroid of the overhead cover piece 22 toward the front plate 12 in a state where the unused wrap roll 91r is accommodated in the main body section 10, is set to be the central area 12t.

[0030] With respect to the two flaps 12f provided to interpose the central area 12t therebetween, for convenience of description, the flap 12f on the left side of the central area 12t is referred to as a left flap 12fA and the flap 12f on the right side of the central area 12t is referred to as a right flap 12fB when seen in a front view (see Fig. 2). The left flap 12fA and the right flap 12fB respectively correspond to a first flap and a second flap. Hereinafter, when a configuration common to the left flap 12fA and the right flap 12fB is described, the left flap 12fA and the right flap 12fB are collectively referred to simply as the "flap 12f". Further, the side plate 15 close to the left flap 12fA is referred to as a left side plate 15A (a first side plate), the side plate 15 close to the right flap 12fB is referred to as a right side plate 15B (a second side plate), and the side plate 15 is a general term for these.

[0031] The outline of the left flap 12fA is formed by a cut line 12cA and the front plate end side 19. The cut line 12cA is formed in the surface of the front plate 12. The cut line 12cA is a line cutting a portion of the front plate 12. The cut line 12cA is formed by cutting the surface of the front plate 12 so as to extend from a point 12cAN through the in-plane of the front plate 12 to a point 12cAS. The point 12cAN is on the front plate end side 19 close to the central area 12t to the left side plate 15A side. The point 12cAS is on the front plate end side 19 close to the left side plate 15A. The point 12cAN is located in the vicinity of the central area 12t to the extent that the slipping of the wrap film 91f in which a cut end of the wrap film 91f is disturbed to an unacceptable extent does not occur at the time of cutting of the drawn-out wrap film 91f. The point 12cAS is located slightly nearer to the central area 12t than the left end of the drawn-out wrap film 91f. However, the point 12cAS may be located between the left end of the wrap film 91f and the left side plate 15A. The left end of the left flap 12fA (the position of the point 12cAS) being located slightly nearer to the central area 12t than the left end of the wrap film 91f is a state where the left end of the left flap 12fA does not reach the left end of the wrap film 91f in a range in which the wrap film 91f can be sandwiched between the left flap 12fA and the overhead cover piece 22 to the extent that the wrap film 91 f can be cut without being loosened at the time of cutting of the wrap film 91f, and this state, a state where the left end of the left flap 12fA coincides with the left end of the wrap film 91f, and a state where the left end of the left flap 12fA is further on the outside than the left end of the wrap film 91f, are collectively referred to as the left flap 12fA extending substantially to the left end of the wrap film 91f. If the left end of the left flap 12fA is formed nearer to the central area 12t than the left end of the wrap film 91f, it is possible to suppress a decrease in the strength of the main body section 10 around an end portion of the front plate 12 in the axis line direction D. In this embodiment, the left end of the left flap 12fA is formed 15 mm nearer to the central area 12t than the left end of the front plate 12 in the axis line direction D. However, the left end of the left flap 12fA may be formed 10 mm or 5 mm nearer to the central area 12t. The maximum length in a height direction of the left flap 12fA is formed in about 1/2 of the length in a height direction of the front plate 12. The side on the lower side of the left flap 12fA is formed, in this embodiment, in a smooth curve in which when being traced from the central area 12t side to the left side plate 15A side in the axis line direction D, after it slightly approaches the front plate end side 19 first, it becomes distant from the front plate end side 19 again. In other words, a central portion of the left flap 12fA is recessed further upward than both ends. The left flap 12fA is formed at a size in which when the lid section 20 is closed, the left flap 12fA is covered with the overhead cover piece 22 and thus does not appear on the external surface.

[0032] Both ends 12cAN and 12cAS of the cut line 12cA configuring the outline of the left flap 12fA reach the front plate end side 19, whereby it is possible to favorably maintain the floating of the left flap 12fA from the sub-plate 16. In addition, in a case where the left flap 12fA excessively floats from the face of the front plate 12 on the outside thereof, by slightly separating both ends of the cut line 12cA with respect to the front plate end side 19, it is possible to regulate a floating condition of the left flap 12fA. The longer the distance between the end portion of the cut line 12cA and the front plate end side 19 becomes, the smaller the floating amount of the left flap 12fA becomes, and the floating amount becomes smaller, for example, in a case of being separated by 5 mm than in a case of being separated by 3 mm. It is preferable that the upper limit of the distance between the end portion of the cut line 12cA and the front plate end side 19 be determined in a range in which the left flap 12fA is deflected to the outside of the main body section 10 to the extent that can sandwich the drawn-out long object 91f between the entire width of the left flap 12fA and the overhead cover piece 22, and this range is referred to as both ends of the cut line 12cA substantially reaching the front plate end side 19. The left flap 12fA is configured such that the left flap 12fA is connected to the sub-plate 16 at the front plate end side 19, whereby even if the left flap 12fA is cut at the cut line 12cA, the left flap 12fA does not fall off from the main body section 10. Further, the left flap 12fA is configured such that the left flap 12fA is connected to the sub-plate 16 at the front plate end side 19, thereby being able to rotate with the front plate end side 19 as the axis of rotation.

[0033] A stopper 12s as sticking part is formed on the surface of the left flap 12fA. In this embodiment, the stopper 12s is formed by applying UV varnish. The UV varnish to form the stopper 12s has characteristics in which it sticks to the wrap film 91f, but paper, dust, or the like does not stick thereto. Further, the wrap film 91f sticking

to the stopper 12s strongly sticks in a direction parallel to a sticking surface (a shear direction), but weakly sticks in a direction detaching the wrap film 91f from the sticking surface. That is, the stopper 12s is configured such that when the wrap film 91f is pulled in a drawing-out direction P that is a direction in which the wrap film 91f is drawn out from the main body section 10, the stopper 12s sticks to the wrap film 91f so as not to move the wrap film 91f in the drawing-out direction P, and when the wrap film 91f is pulled in a direction away from the sticking surface, the wrap film 91f is easily peeled off. In this embodiment, the stopper 12s is formed over substantially the entire length in the axis line direction D of the left flap 12fA. Here, the expression "being formed over substantially the entire length in the axis line direction D of the left flap 12fA" is not intended to require that the stopper 12s is strictly continuously formed, and is meant to allow a portion which is not formed to be intermittently present or portions which are not formed to be present at both ends, in a range in which it is possible to lock the wrap film 91f to the extent that can avoid the wrap film 91f moving to an extent which obstructs appropriate cutting at the time of cutting the wrap film 91f. In this embodiment, the stopper 12s is also formed on the face of the front plate 12 further on the outside than the left flap 12fA (see Fig. 1(C)).

[0034] The right flap 12fB is formed line-symmetrically with the left flap 12fA with an imaginary straight line 12v bisecting the front plate 12 into left and right as an axis. Points 12cBN and 12cBS of the right flap 12fB respectively correspond to the points 12cAN and 12cAS of the left flap 12fA. In this embodiment, the stopper 12s is also formed over substantially the entire length of the axis line direction D of the right flap 12fB and the stopper 12s is also formed on the face of the front plate 12 further on the outside than the right flap 12fB. In addition, in this embodiment, sticking part 19s such as application of UV varnish in the same way as the stopper 12s is also formed at the front plate end side 19 between the flap 12f and the side plate 15 (further on the outside than the flap 12f in the axis line direction D) (see Fig. 1(C)), and thus occurrence of slipping of the wrap film 91f is further suppressed at an end portion in the width direction of the wrap film 91f, in which slipping at the time of cutting of the wrap film 91f occurs relatively easily.

[0035] Continuously, with reference to Figs. 1 and 2, an operation of the wrap storing carton 100 will be described. An operation of the wrap carton 1 will be described as part of the operation of the wrap storing carton 100. In the unopened wrap storing carton 100, a cut-off piece (not shown) is connected to a leading end of the overhead cover piece 22 through a perforation (not shown) of the leading end side 22t and the cut-off piece (not shown) is bonded to the front plate 12 at a plurality of points. When using the wrap film 91f for the first time, the cut-off piece (not shown) is separated from the overhead cover piece 22 by cutting the cut-off piece at the perforation (not shown) while peeling off the cut-off piece from the front plate 12. By opening the wrap carton 1 in this manner, a state is created where the lid section 20 can be rotated around the back plate end side 18 with respect to the main body section 10.

[0036] In the opened wrap storing carton 100, the wrap roll 91r is contained in the main body section 10. In the wrap roll 91r, a drawing-out seal (not shown) is attached to a leading end of the wrap film 91f, and the leading end of the wrap film 91f is peeled off from the wrap roll 91r by pinching and drawing out the drawing-out seal (not shown), and thus it is possible to easily draw out the wrap film 91f. When using the wrap film 91f, the wrap film 91f is drawn out by a required length from the wrap roll 91r and cut by the cutting blade 23. At this time, if sandwiching the wrap film 91f between the front plate 12 and the overhead cover piece 22 by closing the lid section 20 in a state where the wrap film 91f is drawn out by a required length, pressing the centroid of the overhead cover piece 22 with the thumb, and then twisting the wrap storing carton 100 around the axis line 91 a such that the center of the cutting blade 23 bites into the drawn-out wrap film 91f are performed, it is easy to cut the wrap film 91f even in a state where the wrap film 91f is attached to tableware or the like which is wrapped, and thus it is suitable.

[0037] When the wrap film 91f is cut, the cutting blade 23 is put into the wrap film 91f in a state where tension is applied in the drawing-out direction P. For this reason, in a case where the flap 12f is provided at the center of the front plate 12 at about 1/3 of the entire length of the front plate 12 in the axis line direction D, when the lid section 20 is closed and the centroid of the overhead cover piece 22 is pressed, a gap is formed between the front plate 12 and the overhead cover piece 22 at a portion further on the outside than the flap 12f, and thus a case occurs where the wrap film 91 f corresponding to the portion further on the outside than the flap 12f is cut while sliding (being drawn out) with respect to the wrap carton 1 depending on tension in the drawing-out direction P, and a case can occur where a cut line of the wrap film 91f does not become a cut end corresponding to the cutting blade 23. Or, even in a case where the flap 12f is continuously formed at approximately the same length as the entire length of the front plate 12 in the axis line direction D, when the lid section 20 is closed and the centroid of the overhead cover piece 22 is pressed, both outer portions of the flap 12f are also sunk so as to approach the sub-plate 16 according to a central portion of the flap 12f being pressed, and eventually, a gap is formed between the front plate 12 and the overhead cover piece 22 at the outer portion, and a case occurs where the wrap film 91f corresponding to the portion where the gap is formed is cut while sliding with respect to the wrap carton 1 depending on tension in the drawing-out direction P, and thus a case can occur where a cut line of the wrap film 91f does not become a cut end corresponding to the cutting blade 23.

[0038] In the wrap carton 1 according to this embodiment, since the flap 12f is divided into the left flap 12fA

and the right flap 12fB which are respectively independently provided on both sides of the central area 12t, when the lid section 20 is closed and the centroid of the overhead cover piece 22 is pressed, the flap 12f being attracted and sunk so as to approach the sub-plate 16 is suppressed, and thus it is possible to sandwich the drawn-out wrap film 91 f between the flap 12f and the overhead cover piece 22 and it is possible to suppress the slipping at the time of cutting of the wrap film 91f. In addition, in the wrap carton 1, since the stopper 12s is formed over the entire length in the axis line direction D of the flap 12f, it is possible to stop the movement (slipping) in the drawing-out direction P of the wrap film 91 f sandwiched between the flap 12f and the overhead cover piece 22, and thus it is possible to more appropriately cut the wrap film 91f.

[0039] Since after cutting, the wrap film 91f sandwiched between the flap 12f and the overhead cover piece 22 sticks to the stopper 12s, rewinding to the wrap roll 91r is prevented. Further, if the lid section 20 is opened when using the wrap film 91f the next time, since the flap 12f floats to the outside of the main body section 10, the leading end of the wrap film 91 f sticking to the stopper 12s formed at the flap 12f also floats from the front plate 12 outside the flap 12f, and thus it is easy to pinch it. In particular, in the wrap carton 1, since the flap 12f is not formed at the central area 12t, a gap is formed between the central area 12t and the wrap film 91f, and therefore, it is possible to easily pinch the wrap film 91 f by putting the finger in the gap.

[0040] As described above, according to the wrap storing carton 100, when cutting the wrap film 91f, since it is possible to sandwich the wrap film 91 f between the flap 12f and the overhead cover piece 22, it is possible to stop the movement (slipping) in the drawing-out direction P of the wrap film 91f even outside the central area 12t, and thus it is possible to appropriately cut the wrap film 91f.

[0041] In the above description, the wrap film 91f is described as being formed into a thin film shape by using polyvinylidene chloride as a raw material. However, the wrap film 91f may be formed of synthetic resin which is usually used for a household wrap, such as polyethylene or polyvinyl chloride, for example, other than polyvinylidene chloride.

[0042] In the above description, both ends of each of the cut lines 12cA and 12cB forming the flaps 12f are described as substantially reaching the front plate end side 19. However, both ends of each of the cut lines 12cA and 12cB may be stopped on a surface of the front plate 12 without substantially reaching the front plate end side 19. In this case, if a folding line is created along an imaginary straight line connecting both ends of each cut line, the flap easily floats to the outside. However, if both ends of each of the cut lines 12cA and 12cB substantially reach the front plate end side 19, even if the lid section 20 is repeatedly opened and closed, since it is possible to favorably maintain the floating (opening to the outside) of the flap 12f, it is preferable.

[0043] In the above description, the flap 12f is described as not being formed at the central area 12t. However, a flap may be formed at the central area 12t in a state of being separated from the left flap 12fA and the right flap 12fB.

[0044] Fig. 3(A) is a front view of a wrap carton 1A according to a first modified example of the embodiment of the invention. In the wrap carton 1A, a central flap 12fC is provided between the left flap 12fA and the right flap 12fB. The area of the central flap 12fC partially or entirely overlaps that of the central area 12t (see Fig. 2). The length in the height direction of the central flap 12fC is formed to be the same length as that of the left flap 12fA. Further, a cut line 12cC of the central flap 12fC reaches the front plate end side 19 and the outline of the central flap 12fC is formed by the cut line 12cC and the front plate end side 19. In addition, in Fig. 3(A), the cut line 12cC is not in contact with the left flap 12fA and the right flap 12fB. However, a portion of the cut line 12cC may also be used as the cut line 12cA and/or the cut line 12cB. As in the wrap carton 1A, if the central flap 12fC is provided, even in a case where the nail or the like of the fingertip touches a central portion in a width direction of the wrap film 91f when opening the lid section 20, since a shear force which may occur in the wrap film 91 f can be reduced by the central flap 12fC, it is possible to suppress the breaking of the wrap film 91f.

[0045] In the above description, the left flap 12fA and the right flap 12fB are described as being separated from each other. However, as in a wrap carton 1B according to a second modified example of the embodiment of the invention shown in Fig. 3(B), if it is possible to avoid the left flap 12fA and the right flap 12fB being sunk to the sub-plate 16 side excessively (to the extent that the wrap film 91f cannot be pressed by the flap 12f and the overhead cover piece 22) when the lid section 20 is closed and the centroid of the overhead cover piece 22 is pressed toward the front plate 12, the left flap 12fA and the right flap 12fB may be connected. In the wrap carton 1B according to the second modified example, the left flap 12fA and the right flap 12fB are connected by a connection portion 12j. Due to this configuration, the respective end points on the central area 12t side of the cut line 12cA of the left flap 12fA and the cut line 12cB of the right flap 12fB do not reach the front plate end side 19 and are connected by a straight line configuring the outline of the connection portion 12j. The length in the height direction of the connection portion 12j can be determined in a range that can avoid excessive sinking of the left flap 12fA and the right flap 12fB to the sub-plate 16 side when the lid section 20 is closed and the centroid of the overhead cover piece 22 is pressed toward the front plate 12, and is set to be, in this example, 3 mm. Further, the stopper 12s is provided on the surface throughout the left flap 12fA, the connection portion 12j, and the right flap 12fB (in Fig. 3(B), a portion of the stopper 12s is omitted in order to show the configuration of the connection portion

12j). If the connection portion 12j is provided, it is possible to make the connection portion 12j function as a guide of the wrap film 91f drawn out from the wrap roll 91r.

[0046] In the above description, the stopper 12s is described as being formed by applying UV varnish. However, the stopper 12s may be formed of a material other than the UV varnish, such as by application of an adhesive. Further, the stopper 12s may also be formed by sticking to the wrap film 91f a sheet-shaped label preformed of a material to which the wrap film 91f sticks, in addition to being formed by application. As the material to which the wrap film 91f sticks, the wrap film 91f itself (a label formed of the same material as that of the wrap film 91f) or a material that sticks to the wrap 91 which is to be accommodated in the wrap carton 1, of synthetic resins such as polyvinylidene chloride, polypropylene, and polyethylene terephthalate, can be given. That is, it is suitable that the stopper 12s is formed of, depending on a material of a long object such as the wrap film 91f that is used, a material having characteristics in which it can be easily peeled off while sticking to the long object, but foreign matter such as dust does not stick thereto. The same also applies to the sticking part 19s formed at the front plate end side 19.

[0047] The use of the terms "a" and "an" and "the" and similar referents in the context of describing the invention (especially in the context of the following claims) is to be construed to cover both the singular and the plural, unless otherwise indicated herein or clearly contradicted by context. The terms "comprising," "having," "including," and "containing" are to be construed as open-ended terms (i.e., meaning "including, but not limited to,") unless otherwise noted. Recitation of ranges of values herein are merely intended to serve as a shorthand method of referring individually to each separate value falling within the range, unless otherwise indicated herein, and each separate value is incorporated into the specification as if it were individually recited herein. All methods described herein can be performed in any suitable order unless otherwise indicated herein or otherwise clearly contradicted by context. The use of any and all examples, or exemplary language (e.g., "such as") provided herein, is intended merely to better illuminate the invention and does not pose a limitation on the scope of the invention unless otherwise claimed. No language in the specification should be construed as indicating any non-claimed element as essential to the practice of the invention.

[0048] Preferred embodiments of this invention are described herein, including the best mode known to the inventors for carrying out the invention. Variations of those preferred embodiments may become apparent to those of ordinary skill in the art upon reading the foregoing description. The inventors expect skilled artisans to employ such variations as appropriate, and the inventors intend for the invention to be practiced otherwise than as specifically described herein. Accordingly, this invention includes all modifications and equivalents of the subject matter recited in the claims appended hereto as permitted by applicable law. Moreover, any combination of the above-described elements in all possible variations thereof is encompassed by the invention unless otherwise indicated herein or otherwise clearly contradicted by context.

Description of Reference Numerals and Symbols

[0049]

1	wrap carton
10	main body section
10h	opening face
12	front plate
12cA, 12cB	cut line
12f	flap
12fA	left flap
12fB	right flap
12s	stopper
12t	central area
13	bottom plate
14	back plate
15	side plates
15A	left side plate
15B	right side plate
18	back plate end side
19	front plate end side
20	lid section
21	cover plate
21f	bent side
22	overhead cover piece
22t	leading end side
23	cutting blade
25	side cover piece
91a	axis line
91f	wrap film
91r	wrap roll
100	wrap storing carton

Claims

1. A wound body storage box comprising:

a main body section formed into a rectangular parallelepiped form, the main body section being able to accommodate a wound body with a thin-film-shape long object wound, wherein an opened opening face is formed in one of four rectangular surfaces of the main body section, the four rectangular surfaces being parallel to an axis line of the wound body when the wound body is accommodated in the main body section, the main body section having a back plate, a front plate and a pair of side plates, the back plate configuring one of the two rectangular surfaces orthogonal to the opening face, the front plate configuring the rectangular surface facing

the back plate, and the pair of side plates configuring end surfaces of the rectangular parallelepiped form at right angles to the four rectangular surfaces; and

a lid section for covering the opening face, the lid section being rotatably connected to a back plate end side,-the back plate end side being an end side meeting the opening face of the back plate, the lid section having an overhead cover piece, and the overhead cover piece covering a portion of the front plate when the lid section is closed,

wherein the overhead cover piece is formed at a size that can sandwich the long object drawn out from the wound body between itself and the front plate over the entire width of the long object along a front plate end side that is an end side meeting the opening face of the front plate, and the overhead cover piece is provided with a cutting blade, the cutting blade being for cutting the drawn-out long object,

the front plate has a flap that can sandwich the long object drawn out from the wound body between itself and the overhead cover piece when the lid section is closed, and the flap extends along the front plate end side,

the flap is configured to include a first flap and a second flap, the first flap provided between a first side plate that is one of the pair of side plates and a central area, the second flap provided between a second side plate facing the first side plate and the central area, the central area being a range in which the overhead cover piece and the front plate come into contact with each other when a portion of the overhead cover piece corresponding to a center of a width of the long object is pressed toward the front plate in a state where the lid section is closed,

the first flap is formed to integrally extend from the vicinity of the central area to substantially an end portion of the width of the long object toward the first side plate, and

the second flap is formed to integrally extend from the vicinity of the central area to substantially an end portion of the width of the long object toward the second side plate.

2. The wound body storage box according to Claim 1, wherein at the first flap and the second flap, sticking part for restricting movement of the long object in a direction in which the long object is drawn out is formed over substantially the entire width of each of the flaps.

3. The wound body storage box according to Claim 1 or 2, wherein at least one of the first flap and the second flap is formed such that an outline is formed by a cut line and the front plate end side, the cut line passing through an in-plane of the front plate, and both ends of the cut line substantially reach the front plate end side.

4. The wound body storage box according to any one of Claims 1 to 3, wherein the overhead cover piece is configured such that a distance between a bent side and a leading end side in a direction orthogonal to the bent side becomes shorter as the leading end side moves from a midpoint of the leading end side to a side of an end of the leading end side, the bent side connected to a cover plate that covers the opening face when the lid section is closed, the leading end side facing the bent side.

5. A storage box with a wound body stored therein, comprising:

a wound body with a thin-film-shape long object wound; and

the wound body storage box according to any one of Claims 1 to 4.

FIG. 1(A)

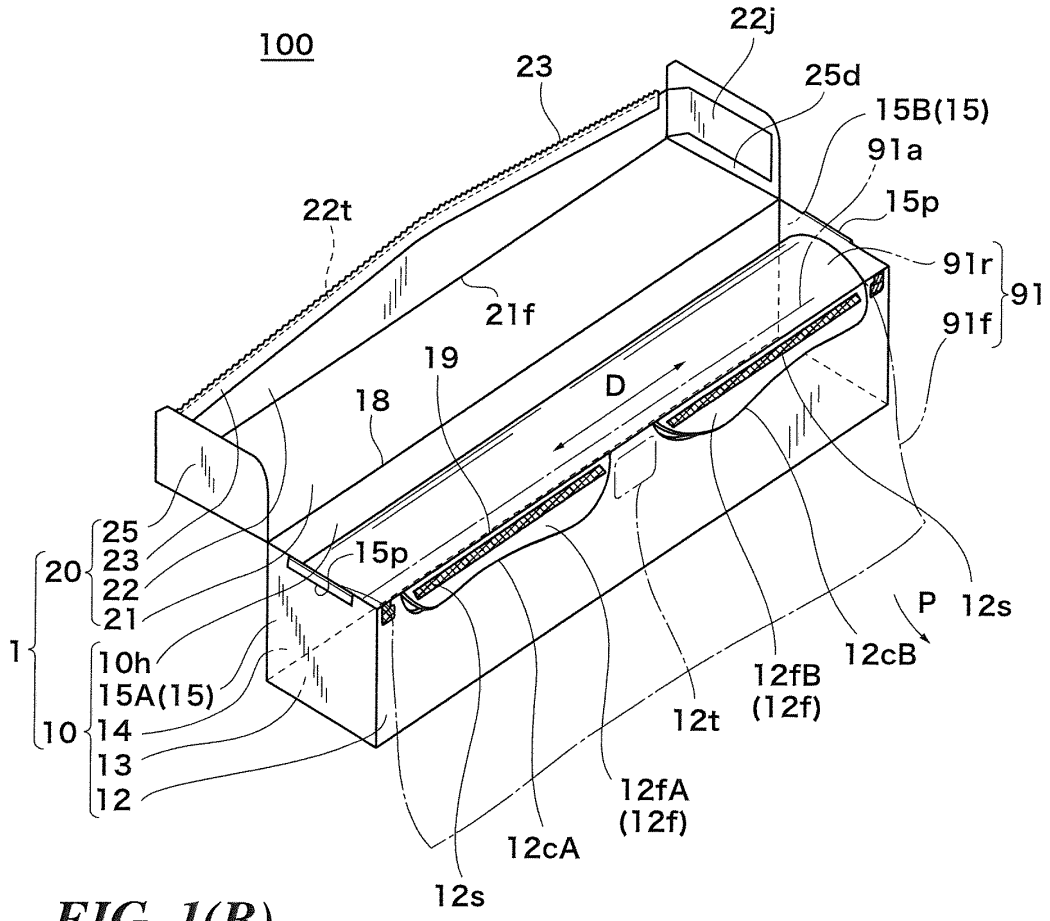


FIG. 1(B)

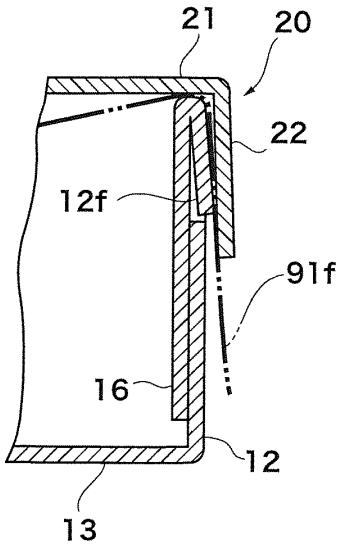


FIG. 1(C)

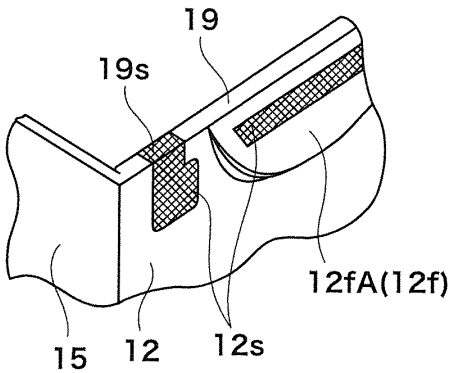
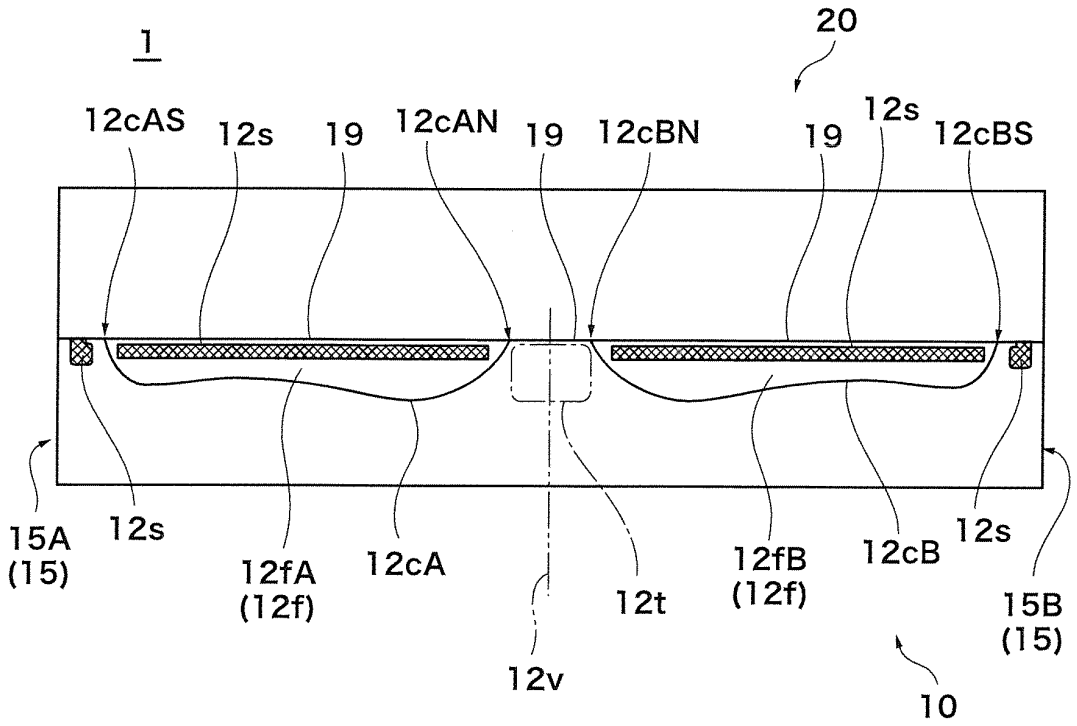


FIG. 2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12s
19
12cAN
19
12cBN
19
12s
12cBS
15A
(15)
12s
12fA
(12f)
12cA
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12fB
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12cB
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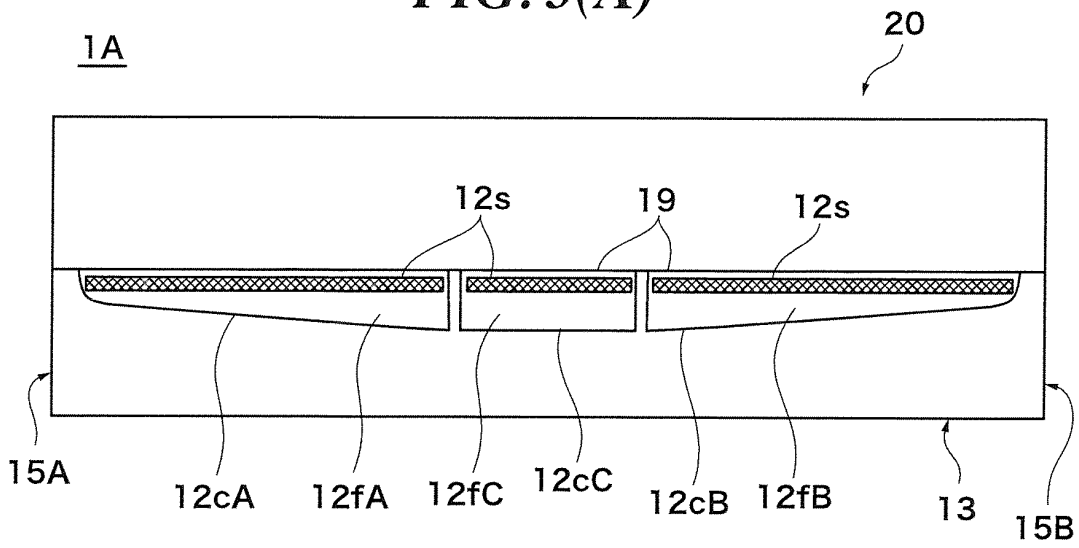
15B
(15)
12v
10

FIG. 3(A)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15A
12cA
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12fC
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12cB
12fB
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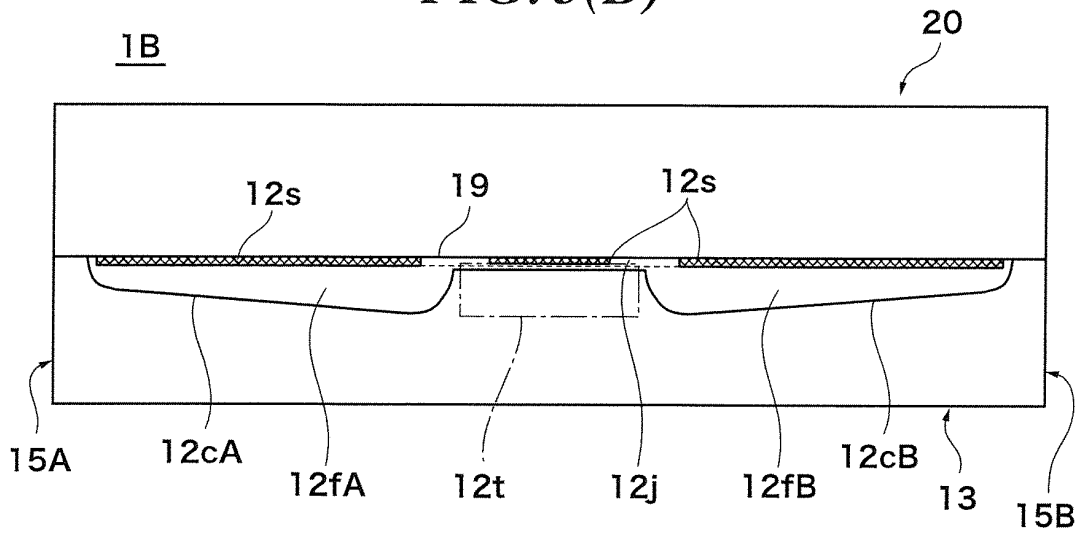
15B

FIG. 3(B)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12fB
12cB
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INTERNATIONAL SEARCH REPORT

International application No.
PCT/JP2012/075613

A. CLASSIFICATION OF SUBJECT MATTER
B65D5/72(2006.01)i, *B65D25/52*(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)
B65D5/72, B65D25/52

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	1996-2012
Kokai Jitsuyo Shinan Koho	1971-2012	Toroku Jitsuyo Shinan Koho	1994-2012

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.
X Y	JP 4673442 B1 (Yoshio ONO), 20 April 2011 (20.04.2011), entire text; all drawings (Family: none)	1,2,3,5 4
Y	JP 2002-274534 A (Kyodo Printing Co., Ltd.), 25 September 2002 (25.09.2002), entire text; all drawings & WO 2002/074641 A1 & TW 568871 B & CN 1610632 A	1-5
Y	JP 3023411 U (Akihiko MIGITA), 16 April 1996 (16.04.1996), entire text; all drawings (Family: none)	1-5

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

* Special categories of cited documents:
"A" document defining the general state of the art which is not considered to be of particular relevance
"E" earlier application or patent but published on or after the international filing date
"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)
"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
"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
"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
"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
"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
18 December, 2012 (18.12.12)	08 January, 2013 (08.01.13)
Name and mailing address of the ISA/ Japanese Patent Office Facsimile No.	Authorized officer Telephone No.

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

INTERNATIONAL SEARCH REPORT

International application No.
PCT/JP2012/075613

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	WO 2008/153012 A1 (Asahi Kasei Home Products Corp.), 18 December 2008 (18.12.2008), entire text; all drawings & JP 4408139 B & US 2010/0181359 A1 & EP 2165939 A1 & WO 2008/153012 A1 & KR 10-2009-0115183 A & CN 101678916 A & CN 101966896 A	1-5
Y	JP 2006-335375 A (Kureha Corp.), 14 December 2006 (14.12.2006), entire text; all drawings (Family: none)	2,4
E,Y	JP 2012-101814 A (Kureha Corp.), 31 May 2012 (31.05.2012), entire text; all drawings (Family: none)	1-5

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

INTERNATIONAL SEARCH REPORT

International application No.
PCT/JP2012/075613

Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. ☐ Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:

3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

This international search revealed that the invention of claim 1 cannot be considered to be novel in the light of the invention disclosed in the document 1 and does not have a special technical feature, since the invention of claim 1 is disclosed in the document 1.

Consequently, it is obvious that this application does not comply with the requirement of unity of invention, since there is no special technical feature common to claim 1 and claims 2-5.

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.

2. ☒ As all searchable claims could be searched without effort justifying additional fees, this Authority did not invite payment of additional fees.

3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:

4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

☐ The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.

☐ The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.

☐ No protest accompanied the payment of additional search fees.

Form PCT/ISA/210 (continuation of first sheet (2)) (July 2009)

REFERENCES CITED IN THE DESCRIPTION

This list of references cited by the applicant is for the reader's convenience only. It does not form part of the European patent document. Even though great care has been taken in compiling the references, errors or omissions cannot be excluded and the EPO disclaims all liability in this regard.

Patent documents cited in the description

- JP 2002274534 A **[0003]**
- JP 2011227178 A **[0017]**