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(54) CASE HAVING WRAPPING MATERIAL CUTTING FUNCTION

(57) The present invention relates to a case having a wrapping material cutting function. For this purpose, there is disclosed a case having a wrapping material cutting function, in which a body (51) includes a front panel (57), a bottom panel (65), a back panel (64), a cover (58), and a plurality of side panels, wherein the body (51) is made of a synthetic resin material, and wherein cutting protrusions (52) are kept spaced apart from each other and successively formed to protrude upward by connection portions (53) along a bend line, i.e., a bend line between the front panel (57) constituting part of the body (51) and an adjacent inward bend portion (56), so that a wrapping material accommodated in the body (51) is cut off by the cutting protrusions (52) protruding upward along the bend line.

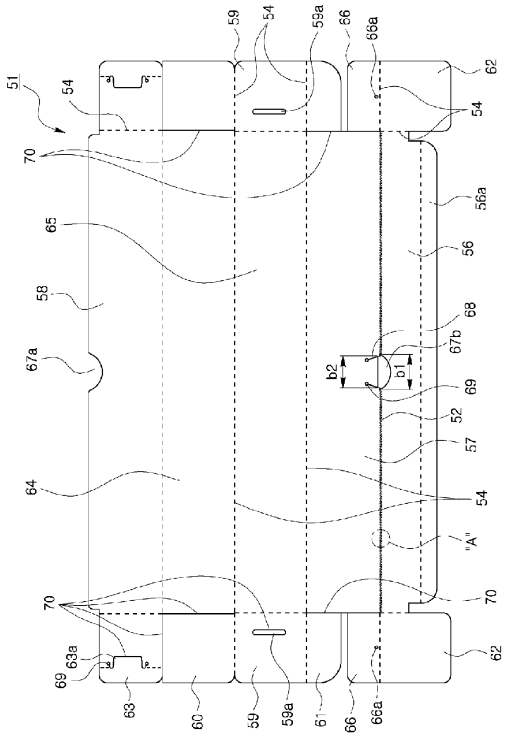

FIG. 3

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Description

Technical Field

[0001] The present invention relates generally to a case in which a roll-type wrapping material used to suppress the diffusion of odor and maintain freshness and cleanliness when storing a food, a vegetable, a fruit, or the like in a refrigerator or the like or carrying a food, a vegetable, a fruit, or the like is packed, and more specifically to a case having a wrapping material cutting function, in which the material and configuration of the case are significantly improved, and thus a wrapping material can be accurately and conveniently cut off without the use of a separate cutter.

Background Art

[0002] Generally, as wrapping materials used to pack groceries (a food, a vegetable, a fruit, or the like), there are known a wrapping film made of synthetic resin, aluminum foil, a kitchen paper sheet, etc.

[0003] Such a wrapping material is manufactured in the form of a thin sheet, is wound in the form of a roll, is accommodated inside a case made of a paper material, and is then sold. A user takes out a wrapping material (hereinafter referred to as the "sheet"), wound in the form of a roll, to a desired length, cuts off it, and then uses it.

[0004] A currently used common case is made of a paper material, and has a rectangular parallelepiped structure the cover of which can be selectively opened and closed. Furthermore, a metallic cutter with a serrated cutting edge is fastened onto one side of the case, and thus a user opens the cover, takes out a sheet by pulling the sheet by a required length, brings the sheet into contact with the cutting edge of the cutter, and then pulls the sheet downward, thereby cutting off the sheet.

[0005] However, since the sheet is cut off by means of the metallic cutting edge, the case has problems in that a user frequently cuts his or her hand due to his or her carelessness, in that the sheet is removed from the case during the cutting of the sheet or the sheet is moved within the case in the instant of cutting off the sheet and not cut off along a rectilinear line, etc.

[0006] Accordingly, in order to overcome the above problems, a new type of case is disclosed in a Japanese unexamined patent application publication (No. 2003-175488).

[0007] FIGS. 1a and 1b are perspective views showing a conventional embodiment, and FIG. 2 is a development view of a conventional saw teeth-equipped dispensing container. In the container, a container body A and a cover B formed to extend from the container body A and configured to cover the top opening of the container body A are composed of a blank P made of, for example, thick paper, a cardboard, or the like.

[0008] As shown in the development view of FIG. 2, in the blank P, a front part A1, a bottom part A2, a back part A3, and left and right side parts A4 constituting the container body A are successively formed via fold lines, and an upper cover part B1, a front cover part B2, and left and right cover part B3 constituting the cover B are successively formed via fold lines.

[0009] A cutoff portion B4 extends from the front end of the front cover part B2 with a saw-toothed cutting line 1 disposed therebetween, and the saw-toothed cutting line 1 is punched along with nicks 3 to be described later during the cutting of the blank P.

[0010] Furthermore, in the middle of the saw-toothed cutting line 1, a plurality of saw teeth 3 each larger than each peak-shaped edge 2a of the saw teeth 2 is installed, the blank P can be folded and bent by the nick 3a... formed at the front ends of the saw teeth 3..., and the nicks 3a... of the saw teeth 3... protrude from any one of the cutting surfaces 1a and 1b of the saw-toothed cutting line 1 to the other one.

[0011] Although the shape of each of the saw teeth 3... is shown as a peak larger than each peak-shaped edge of the saw teeth 2 in the case of the illustrated example, the shape is not limited thereto, and the shape may be, for example, another shape, such as an approximately semicircular shape or the like.

[0012] Furthermore, in the process of manufacturing the saw teeth-equipped dispensing container, both cutting surfaces 1a and 1b of the saw-toothed cutting line 1 are exposed in a two-layer stepped form by folding and superimposing the blank P around both cutting surfaces 1a and 1b of the saw-toothed cutting line 1 and the nicks 3a... of the saw teeth 3..., and the curable resin R is applied to the exposed portion and cured in the state in which both cutting surfaces 1a and 1b of the saw-toothed cutting line 1 have been exposed.

[0013] In the case of the present embodiment, as shown in FIGS. 1a and 1b, the cutting surface 1a of the saw-toothed cutting line 1 on a cutoff portion B4 side and the cutting surface 1b of the saw-toothed cutting line 1 on a cover B side are exposed by turning and superimposing the front cover part B2 and cutoff portion B4 of the cover B, and the curable resin R is applied to the exposed both cutting surfaces 1a and 1b and both surfaces of the adjacent blank P by means of, for example, a coating means R1, such as a rollers, a brush, or the like, in a strip shape.

[0014] In greater detail, the nicks 3a... of the saw teeth 3... have been exposed from the cutting surface 1a of the saw-toothed cutting line 1 on the cutoff portion B4 side to the cutting surface 1b of the saw-toothed cutting line 1 on the cover

B side, and the cutting surface 1b of the saw-toothed cutting line 1 on the cover B side on which the saw teeth 2 are formed have farther protruded than the cutting surface 1a of the saw-toothed cutting line 1 on the cutoff portion B4 side in a two-layer stepped form in the state in which the cutoff portion B4 and the front cover part B2 of the cover B have been turned around the nicks.

[0015] Furthermore, the curable resin R is preferably, for example, ultraviolet-curable resin, such as an acrylic polyester copolymer, acrylic epoxy copolymer or an acrylic urethane copolymer, or electron beam (EB)-curable resin in order to reduce curing time.

[0016] In this case, the applied curable resin is cured by radiating ultraviolet rays or electron beams thereon.

[0017] Next, the operation of the saw teeth-equipped dispensing container is descried.

[0018] First, as shown in FIGS. 1a and 1b, the front cover part B2 and cutoff portion B4 of the cover B are turned and superimposed on each other around both cutting surfaces 1a and 1b of the saw-toothed cutting line 1 and the nicks 3a ... of the saw teeth 3 ....

[0019] Accordingly, the cutting surface 1a of the saw-toothed cutting line 1 on the cutoff portion B4 side and the cutting surface 1b of the saw-toothed cutting line 1 on the cover B side are exposed.

[0020] Furthermore, when the curable resin R is applied to both the cutting surfaces 1a and 1b of the exposed saw-toothed cutting line 1 and both surfaces of the adjacent blank P by the coating means R1 in a strip shape, the curable resin R permeates throughout the cutting surfaces 1a and 1b of the saw-toothed cutting line 1.

[0021] As a result, the front end surfaces of the saw teeth 2 are reliably cured using even a simple resin coating method.

[0022] Furthermore, the curable resin R is applied in the state in which the cutting surface 1b of the saw-toothed cutting line 1 on the cover B side on which the saw teeth 2 are formed have farther protruded than the cutting surface 1a of the saw-toothed cutting line 1 on the cutoff portion B4 side in a two-layer stepped form.

[0023] Therefore, the curable resin R permeates throughout the cutting surfaces 1b of the saw teeth 2 and both surfaces of the adjacent blank P, and thus the overall front end of the saw teeth 2 can be reliably cured.

[Prior Art Documents]

[0024]

(Patent document 0001) Japanese Unexamined Patent Application Publication No. 2003-174588 (published on June 24, 2003)

(Patent document 0002) Japanese Unexamined Patent Application Publication No. 09-012036 (published on January 14, 1997)

(Patent document 0003) Korean Utility Model Registration Application Publication No. 20-2011-0000744 (published on January 24, 2011)

(Patent document 0004) Korean Utility Model Registration No. 20-0213804 (published on December 5, 2000)

Disclosure

Technical Problem

[0025] However, in the conventional case having the above-described structure, curable resin is applied to a corresponding exposed portion in the state in which the blank has been folded and superimposed around the saw-toothed cutting line and the nicks of the saw teeth and both cutting surfaces of the saw-toothed cutting line have been exposed in a stepped form. Accordingly, although the conventional case has the advantage of reliably curing the front end surfaces of the saw teeth, the following various problems occur.

[0026] First, although the curable resin is applied to both cutting surfaces of the saw-toothed cutting line in the blank made of a paper material, there is a limitation on maintaining high strength, and thus a sheet cannot be cut off along a rectilinear line.

[0027] Second, when the blank is deformed due to carelessness during distribution or storage, the cutter loses a cutter function, and thus cannot cut off a sheet.

[0028] Third, the cutter is formed by applying curable resin to the surface of paper, and thus a relatively thin sheet, such as a warping material or foil, can be cut off with the cutter but a paper sheet cannot be cut off with the cutter.

[0029] Fourth, the cutter is formed by applying curable resin to the surface of paper, and thus the durability of the cutter is degraded, with the result that the case cannot be repeatedly used.

[0030] Fifth, after the sheet accommodated in the body has been cut off, the sheet can be successively taken out only

when the front cover part is raised, and thus the use of the container is inconvenient.

[0031] The present invention has been contrived to overcome the above problems, and an object of the present invention is to make a case out of synthetic resin and form cutting protrusions having durability along a bend line constituting part of a body in an integrated manner, thereby enabling the case to be repeatedly used and also enabling a sheet to be always cut off along a rectilinear line.

[0032] Another object of the present invention is to form accommodation spaces in the cover and inward bend portions of a body and form a moving portion movable within the range of the accommodation spaces in a front panel, thereby enabling a sheet to be continuously taken out from the body and to be cut off without repeatedly opening and closing a cover.

Technical Solution

[0033] In order to accomplish the above objects, according to an aspect of the present invention provides, there is provided a case having a wrapping material cutting function, in which a body includes a front panel, a bottom panel, a back panel, a cover, and a plurality of side panels, wherein the body is made of a synthetic resin material, and wherein cutting protrusions are kept spaced apart from each other and successively formed to protrude upward by connection portions along a bend line, i.e., a bend line between the front panel constituting part of the body and an adjacent inward bend portion, so that a wrapping material accommodated in the body is cut off by the cutting protrusions protruding upward along the bend line.

Advantageous Effects

[0034] The present invention has the following various advantages over the conventional case.

[0035] First, the cutting protrusions performing a cutter function are made of a synthetic resin material and the case accommodating a sheet completely maintains a rectangular parallelepiped shape, as shown in FIG. 4, and thus the bend line along which the cutting protrusions are formed always maintains a rectilinear state, with the result that the shape of the bend line is not changed even when the sheet is cut off using strong force, thereby enabling the sheet to be always cut off along a rectilinear line.

[0036] Second, the case is made of a rigid synthetic resin material and assumes a complete rectangular parallelepiped shape, and thus the case is not easily deformed even when external force is applied to the case during distribution or storage.

[0037] Third, the cutting protrusions performing a cutter function are made of a synthetic resin material, and thus they can easily cut off not only foil but also a tough paper sheet without requiring separate post-treatment.

[0038] Fourth, the case is made of a synthetic resin material, and thus it has desirable durability, with the result that only a sheet needs to be purchased and the case can be repeatedly used, thus being economical.

[0039] Fifth, a sheet is stored in the body in the state in which the cover is closed and is taken out and cut off without opening the cover, and an advantage arises in that the use of the case is convenient.

[0040] Sixth, when a sheet is cut off, it is cut off in the state of pushing the sheet accommodated in the body with a finger, and thus the sheet can be cut off along a rectilinear line regardless of the amount of wound sheet.

Description of Drawings

[0041]

FIG. 1a is a partial perspective view showing a conventional saw teeth-equipped dispensing container;

FIG. 1b is a perspective view showing the state in which curable resin is applied;

FIG. 2 is a development view of the conventional saw teeth-equipped dispensing container;

FIG. 3 is a development view showing a case according to the present invention;

FIG. 4 is a perspective view showing the case according to the present invention;

FIG. 5 is an enlarged view of portion "A" of FIG. 3;

FIG. 6 is a perspective view showing the state in which cutting protrusions protrude upward through bending along the fold line of FIG. 5;

FIG. 7 is a sectional view taken along line B-B of FIG. 4;

FIG. 8 is a sectional view taken along line C-C of FIG. 4;

FIG. 9 is a sectional view taken along line D-D of FIG. 4; and

FIG. 10 is an enlarged view of portion "B" of FIG. 7.

Best Mode

[0042] Embodiments of the present invention will be described in detail below with reference to the accompanying drawings so that those having ordinary knowledge in the art to which the present invention pertains can easily practice the present invention. The present invention may be implemented in various different forms, and is not limited to the embodiments described herein. It is noted that the drawings are schematically drawn and are not necessarily drawn to scale. The relative proportions and ratios of components in the drawings may be exaggerated or diminished in size for the sake of clarity and convenience, and such arbitrary dimensions are merely illustrative and are not limitative. Furthermore, the same reference symbol is used for the same structure, element or part shown in two or more drawings in order to represent similar features.

[0043] FIG. 3 is a development view showing a case according to the present invention, FIG. 4 is a perspective view showing the case according to the present invention, and FIG. 5 is an enlarged view of portion "A" of FIG. 3. The present invention is characterized in that a body 51 constituting the case is made of a synthetic resin material unlike the conventional container and cutting protrusions 52 are formed along a bend line of the body 51 to be spaced apart and are made to successively protrude upward by connection portions 53 so that a wrapping material contained in the body 51 are cut off by the cutting protrusions 52.

[0044] The cutting protrusions 52 are formed by means of a separate cutter (not shown) along with the bend line by pressing a material having a predetermined thickness, such as that shown in FIG. 3, and is made to protrude upward, as shown in FIG. 6, by folding the body 51 along a fold line 54.

[0045] As shown in FIG. 5, the cutting protrusions 52 are formed throughout the bend line in the state in which one surface of each of the cutting protrusions 52 is formed in the shape of a vertical surface 52a, the other surface thereof is formed in the shape of an inclined surface 52b, and neighboring ones of the cutting protrusions 52 are kept spaced apart from each other at predetermined intervals by the connection portions 53.

[0046] In this case, one surface of each of the cutting protrusions 52 is formed in the shape of the vertical surface 52, and the other surface thereof is formed in the shape of the inclined surface 52b inclined at a predetermined angle θ. If the angle θ of the inclined surface is equal to or less than 30°, the gaps between the cutting protrusions 52 are narrow, and thus it is difficult to machine the cutter for forming the protrusions 52 by means of a tool. If the angle θ of the inclined surface is greater than 40°, the intervals between the cutting protrusions 52 are excessively long, and thus the performance of cutting a sheet 55 is degraded. Accordingly, the inclined surface 52b is preferably formed to be inclined at an angle in the range from 30 to 40°.

[0047] Although the location where the cutting protrusions 52 are formed may be set to a first bend line or a second bend line as desired, the cutting protrusions 52 are formed through the first bend line, i.e., a bend line between an inward bend portion 56 and a front panel 57, as shown in FIG. 4 in which an embodiment of the present invention is illustrated.

[0048] The protruding height of the cutting protrusions 52 is set to a value in the range from 1.5 to 2.0 mm in an embodiment of the present invention. If the protruding height is equal to or less than 1.5 mm, the pitch is excessively narrow, and thus the performance of cutting the sheet 55 is degraded. In contrast, if the protruding height is equal to or greater than 2.0 mm, the pitch is excessively wide, and thus a cut surface becomes rough.

[0049] When the material of the body 51 is polypropylene (PP) or polyethylene terephthalate (PET) harmless to humans and the thickness of the body 51 ranges from 0.4 to 0.45 mm, it may be possible to minimize the amount of material used while maintaining the durability of the cutting protrusions 52, thus being economical.

[0050] The case according to the present invention is configured such that the inward bend portion 56 extends from the front panel 57 and thus part of a top opened by a cover 58 is closed by the inward bend portion 56, as shown in FIG. 3.

[0051] In this case, when a downward bend portion 56a is formed in the inward bend portion 56, the downward bend portion 56a pushes the sheet 55 taken out from the body 51, as shown in FIG. 7, and thus the advantage of cutting the sheet 55 with the cutting protrusions 52 while more stably taking out the sheet 55 is achieved.

[0052] A first side panel 59 having first and second auxiliary side panels 60 and 61 is formed at each of both opposite side ends of the body 51, and a stop hole 59a is formed in the first side panel 59.

[0053] Furthermore, a second side panel 62 is formed at each of both opposite side ends of the inward bend portion 56, and a third auxiliary side panel 66 is bendably formed in the second side panel 62. In this case, an embossing protrusion 66a protrudes from the third auxiliary side panel 66.

[0054] Furthermore, a fastening portion 63 having an elastic portion 63a to be caught in the stop hole 59a formed in the first side panel 59 so that the body 51 forms a rectangular parallelepiped shape is formed at each of both opposite side ends of the cover 58.

[0055] Accordingly, as shown in FIG. 9, when the first, second and third auxiliary side panels 60, 61 and 66 are bent at 90° along the fold lines 54 of the first and second side panels 59 and 62, the front panel 57 and a bottom panel 65 are bent at 90° along the fold line 54, and the third auxiliary side panel 66 is located over the second auxiliary side panel 66, the second side panel 62 is automatically located on the inner surface of the first side panel 59.

[0056] In this state, when the first auxiliary side panel 60 is brought into tight contact with the inner surface of the second side panel 62, the lower end of the first auxiliary side panel 60 is caught and supported on the embossing protrusion 66a formed on the third auxiliary side panel 66, and thus a box having an open back is formed by the inward bend portion 56, the front panel 57, and the bottom panel 65.

[0057] Thereafter, when the sheet 55 is put into the inner space of the body 51, the back panel 64 and the cover 58 are closed in the state in which one end of the sheet 55 is exposed out of the box, and the elastic portion 63a formed in the fastening panel 63 is fitted into the stop hole 59a formed in the first side panel 59, the assembly of the case of the present invention is completed, as shown in FIG. 4.

[0058] Meanwhile, accommodation spaces 67a and 67b are formed at the centers of the cover 58 and the inward bend portion 56 constituting the body 51 to be superimposed on each other, and a moving portion 68 movable within the range of the accommodation spaces 67a and 67b is formed in the front panel 57.

[0059] In this case, it is preferred that the width b1 of the accommodation space 67b formed in the inward bend portion 56 is larger than the width b2 of the moving portion 68. The reason for this is to allow the moving portion 68 to be freely moved into the accommodation space 67b when the moving portion 68 is pushed.

[0060] Furthermore, the moving portion 68 has a shape in which the upper portion thereof is wider than the lower portion thereof, and through holes 69 are formed at the lower ends of the moving portion 68. The reason for this is to prevent a phenomenon in which the lower ends of the moving portion 68 are cut (torn) even when the moving portion 68 is repeatedly pushed.

[0061] In FIG. 3, the lines indicated by solid lines are cutting lines 70, and the lines indicated by dotted lines are fold lines 54.

[0062] The operation of the present invention configured as described above is as follows.

[0063] First, when a sheet-shaped synthetic resin material, such as that shown in FIG. 3, is pressed, the sheet is cut into a predetermined shape along the cutting lines 70, pressing is performed along the fold lines 54, and the cutting protrusions 52 are formed throughout the bend line, i.e., the bend line between the inward bend portion 56 and the front panel 57, by means of the separate cutter (not shown) at the same time.

[0064] After the pressing, the cover 58, the back panel 64, the bottom panel 65, the front panel 57, the inward bend portion 56, and the downward bend portion 56a are sequentially turned along the fold lines 54 and, simultaneously, the first side panel 59, the first, second and third auxiliary side panels 60 and 61, the second side panel 62, the third auxiliary side panel 66, and the fastening portion 63 are turned along other fold lines 54.

[0065] Thereafter, the second auxiliary side panel 61 turned to 90° from the first side panel 59 along the fold line 54 is brought into tight contact with the inner surface of the front panel 57, the inward bend portion 56 is turned, the third auxiliary side panel 66 turned to 90° from the second side panel 62 is brought into tight contact with the second auxiliary side panel 61, and then the first auxiliary side panel 60 is brought into tight contact with the second side panel 62, thereby allowing the lower end of the first auxiliary side panel 60 to be caught on the embossing protrusion 66a. This assembly operation is performed on both opposite sides of the body 51 in the same manner.

[0066] When the first and second side panels 59 and 62 and the first, second and third auxiliary side panels 60, 61 and 66 are set, as described above, a box having an open back is formed by the inward bend portion 56, the front panel 57 and the bottom panel 65. A sheet 585 to be used is put into the inside of the box, the back panel 64 and the cover 58 are closed in the state in which one end of the sheet 585 is exposed out of the box, and then the elastic portion 63a formed in the fastening portion 63 is fitted into the stop hole 59a formed in the first side panel 59, thereby completing the assembly of a container box.

[0067] In this state, when it is necessary to cut off the sheet 55 accommodated inside the body 51, the sheet is taken out to a required length. In this case, the downward bend portion 56a of the inward bend portion 56 is in tight contact with the outer circumferential surface of the sheet 55, and thus the sheet 55 is stably taken out.

[0068] Once the sheet 55 has been taken out to a desired length, the cover 58 is pushed with one hand and the sheet 55 is held and pushed downward by the other hand, with the result that the sheet 55 is clearly cut off along a single rectilinear line by the cutting protrusions 52 made of a synthetic resin material and formed along the bend line.

[0069] After the sheet 55 has been taken out from the body 51 to a required length and cut off, the remaining sheet 55 is accommodated inside the body 51 by the cover 58 and the downward bend portion 58a, and thus a phenomenon in which the sheet 55 is contaminated with dust or the like can be prevented.

[0070] Meanwhile, when it is necessary to take out and cut off the sheet 55 accommodated in the body 51, the moving

portion 68 is pushed inward in the direction indicated by the lower arrow in the form indicated by the alternate short and long dotted lines so that the moving portion 68 is accommodated in the accommodation spaces 67a and 67b, as shown in FIG. 10, and thus the sheet 55 can be taken out to a desired length without opening the cover 58 by holding portion "K" of the sheet 55 accommodated inside the body 51 and pulling the portion "K" in the direction indicated by the upper arrow.

[0071] Although the embodiments of present invention have been described with reference to the accompanying drawings, it will be understood by those having ordinary knowledge in the art to which the present invention pertains that the prevent invention may be practiced in other specific forms without departing from the technical spirit and essential features of the present invention.

[0072] Therefore, it should be understood that the above-described embodiments are illustrative but are not limitative from all aspects, the scope of the present invention described in the detailed description is defined by the following claims, and all modifications and variations derived from the meanings, scopes and equivalents of the claims are included in the scope of the present invention.

[Description of reference symbols]

51: body	52: cutting protrusions
52a: vertical surface	52b: inclined surface
53: connection portion	54: fold line
56a: downward bend portion	57: front panel
55: sheet	56: inward bend portion
58: cover	59: first side panel
60, 61: first and second auxiliary side panels	62: second side panel
63: fastening panel	64: back panel
65: bottom panel	66: third auxiliary side panel
67a, 67b: accommodation space	68: moving portion

Claims

1. A case having a wrapping material cutting function, in which a body (51) comprises a front panel (57), a bottom panel (65), a back panel (64), a cover (58), and a plurality of side panels, wherein the body (51) is made of a synthetic resin material, and wherein cutting protrusions (52) are kept spaced apart from each other and successively formed to protrude upward by connection portions (53) along a bend line, i.e., a bend line between the front panel (57) constituting part of the body (51) and an adjacent inward bend portion (56), so that a wrapping material accommodated in the body (51) is cut off by the cutting protrusions (52) protruding upward along the bend line.

2. The case of claim 1, wherein one surface of each of the cutting protrusions (52) is formed in a shape of a vertical surface (52a), and a remaining surface of each of the cutting protrusions (52) is formed in a shape of an inclined surface (52b) inclined at an angle in a range from 30 to 40°.

3. The case of claim 1, wherein a protruding height of the cutting protrusions (52) ranges from 1.5 to 2.0 mm.

4. The case of claim 1, wherein a material of the body (51) is PP or PET, and a thickness of the body (51) ranges from 0.4 to 0.45 mm.

5. The case of any one of claims 1 to 4, wherein accommodation spaces (67a and 67b) are formed in the cover (58) and the inward bend portion (56), and a moving portion (68) configured to be movable within a range of the accommodation spaces (67a and 67b) is formed in the front panel (57).

6. The case of claim 1, wherein a downward bend portion (56a) is further formed in the inward bend portion (56).

7. The case of claim 1, wherein a first side panel (59) having first and second auxiliary side panels (60 and 61) is formed on each of both sides of the front panel (57) and the back panel (60) constituting part of the body (51), a stop hole (59a) is formed in the first side panel (59), second side panels (62) each having a third auxiliary side panel (66) are formed in the inward bend portion (56) in connection with which the stop protrusions (52) are formed along the bend line between the inward bend portion (56) and the front panel (57), an embossing protrusion (66a) is formed

on each of the third auxiliary side panel (66), and a fastening panel (63) having an elastic portion (63a) configured to be fitted into the stop hole (59a) is formed at each of both ends of the cover (58), so that lower ends of the first auxiliary side panels (60) are caught and supported on the embossing protrusions (66a) and the elastic portions (63a) of the fastening panels (63) are fitted into the stop hole (59a) of the first side panel (59).

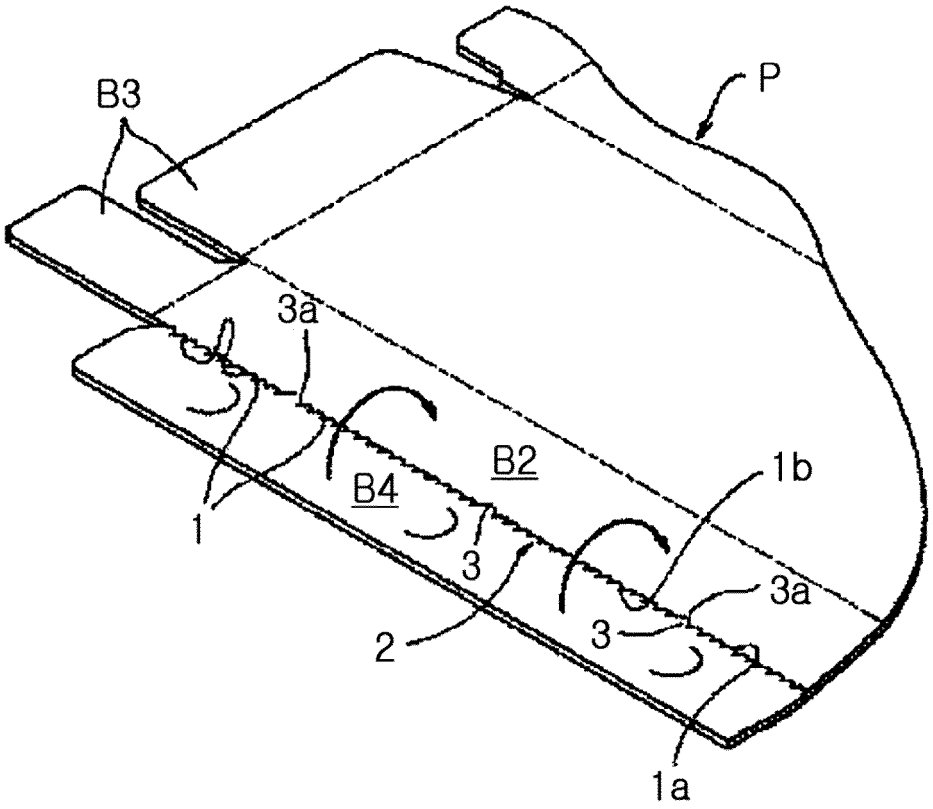


FIG. 1a

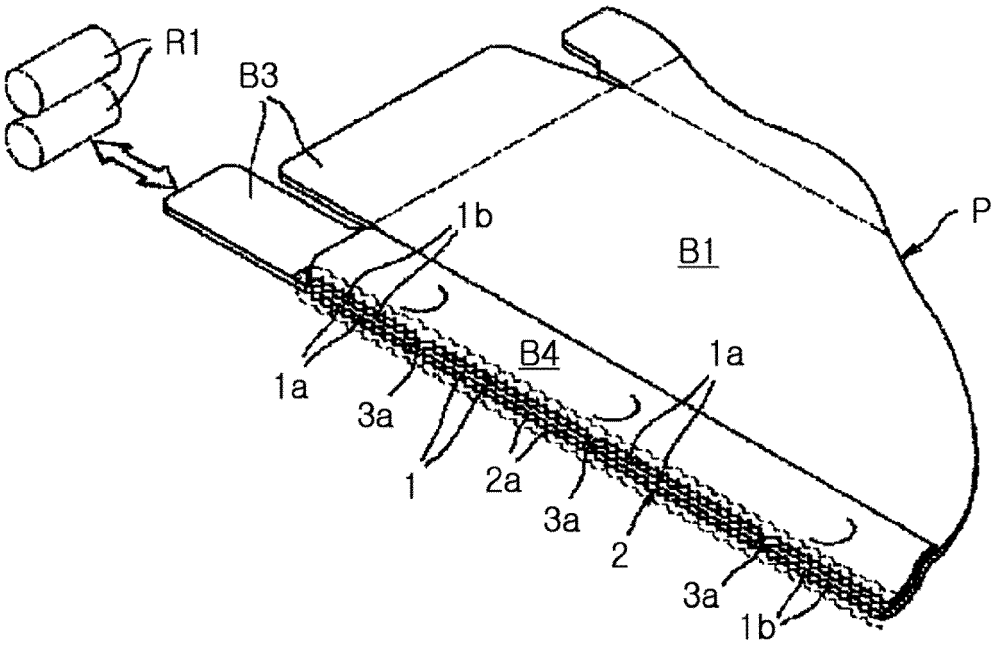


FIG. 1b

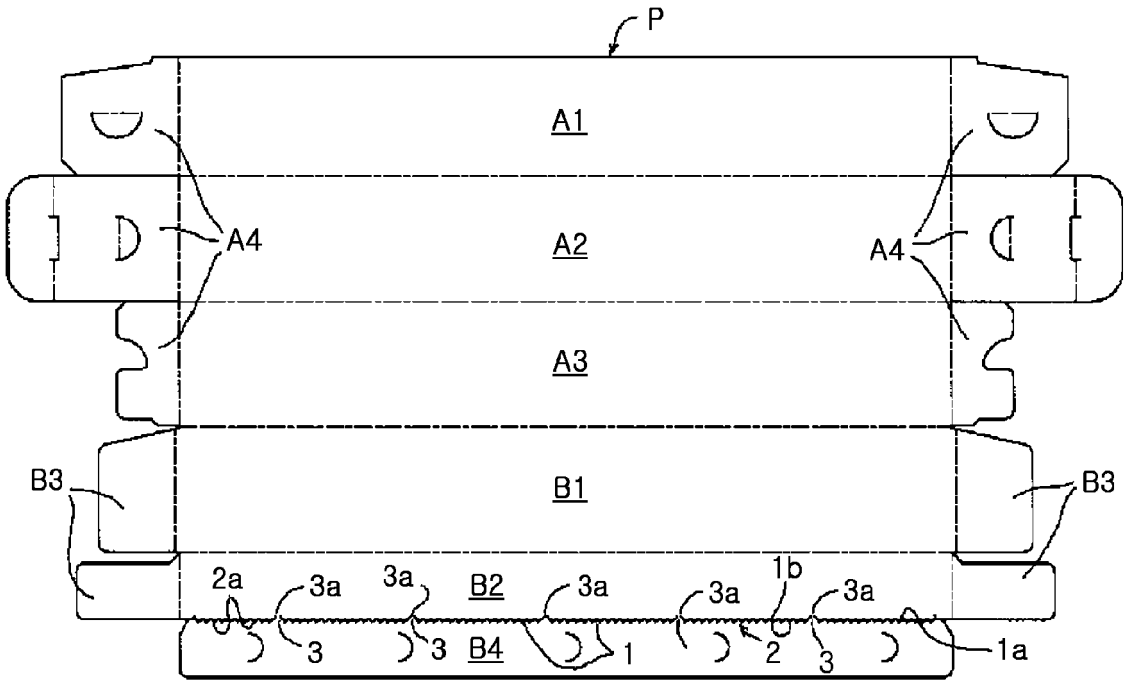
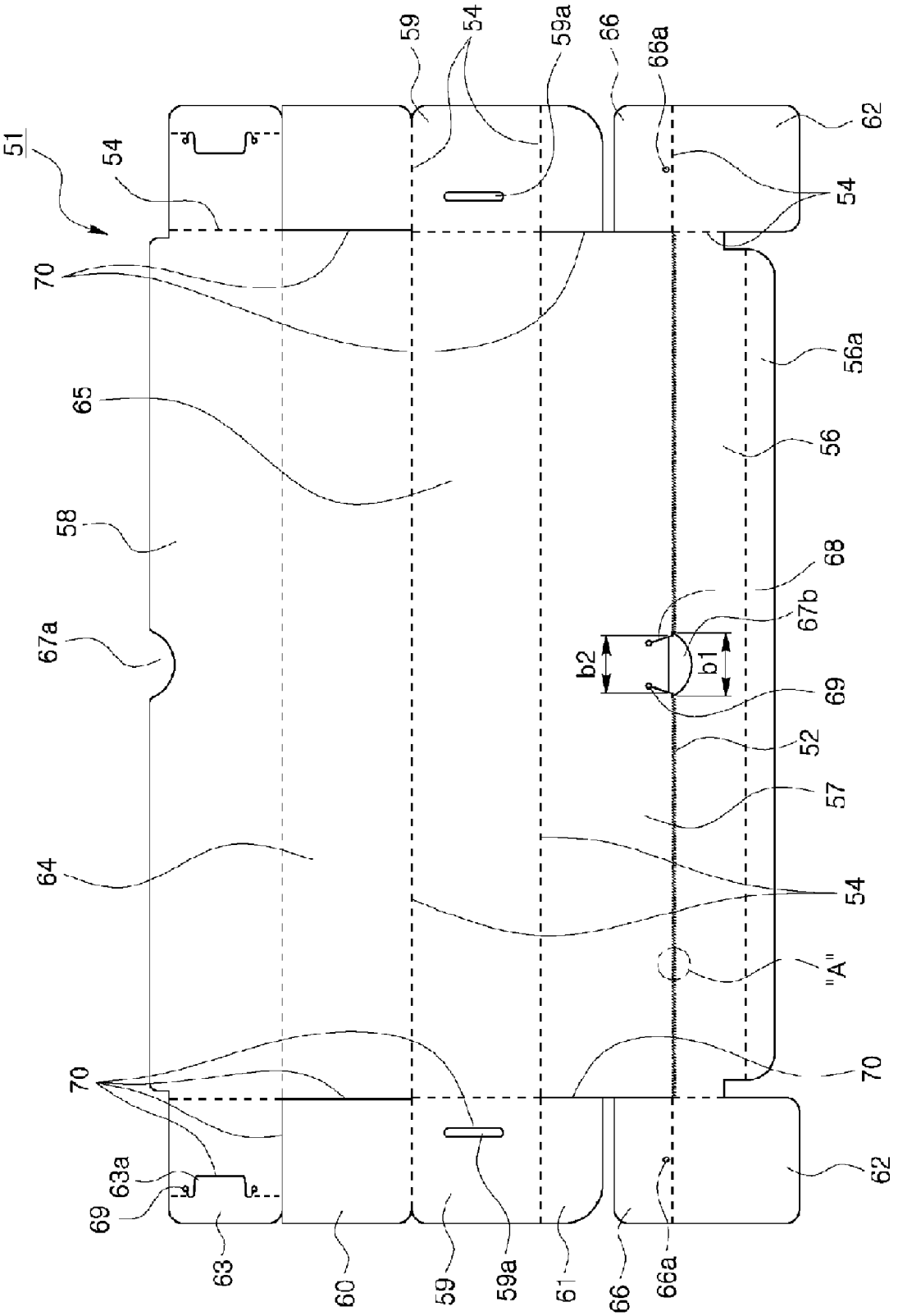


FIG. 2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65
58
67a
64
70
63a
69
63
60
59
59a
61
66
66a
62
54
56a
56
68
67b
b2
b1
69
52
57
54
"A"
70
62
59
59a
66
66a

FIG. 3

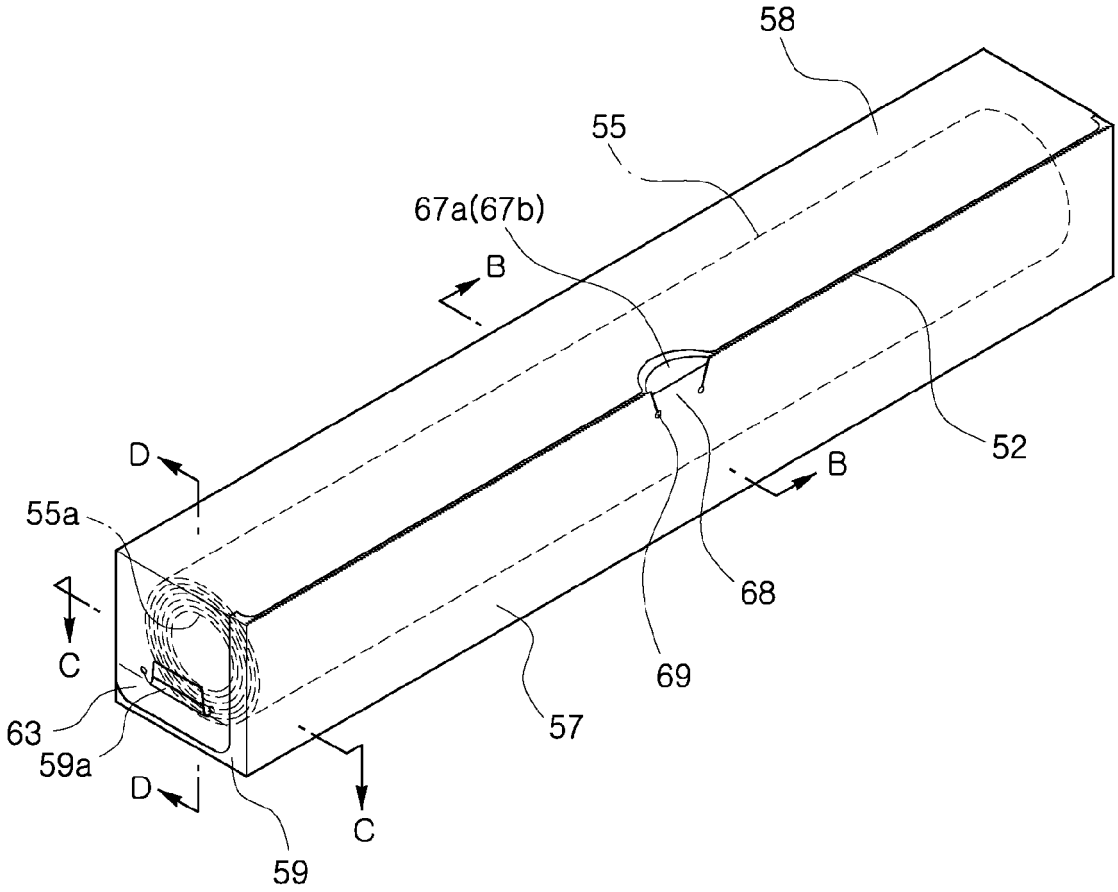

FIG. 4

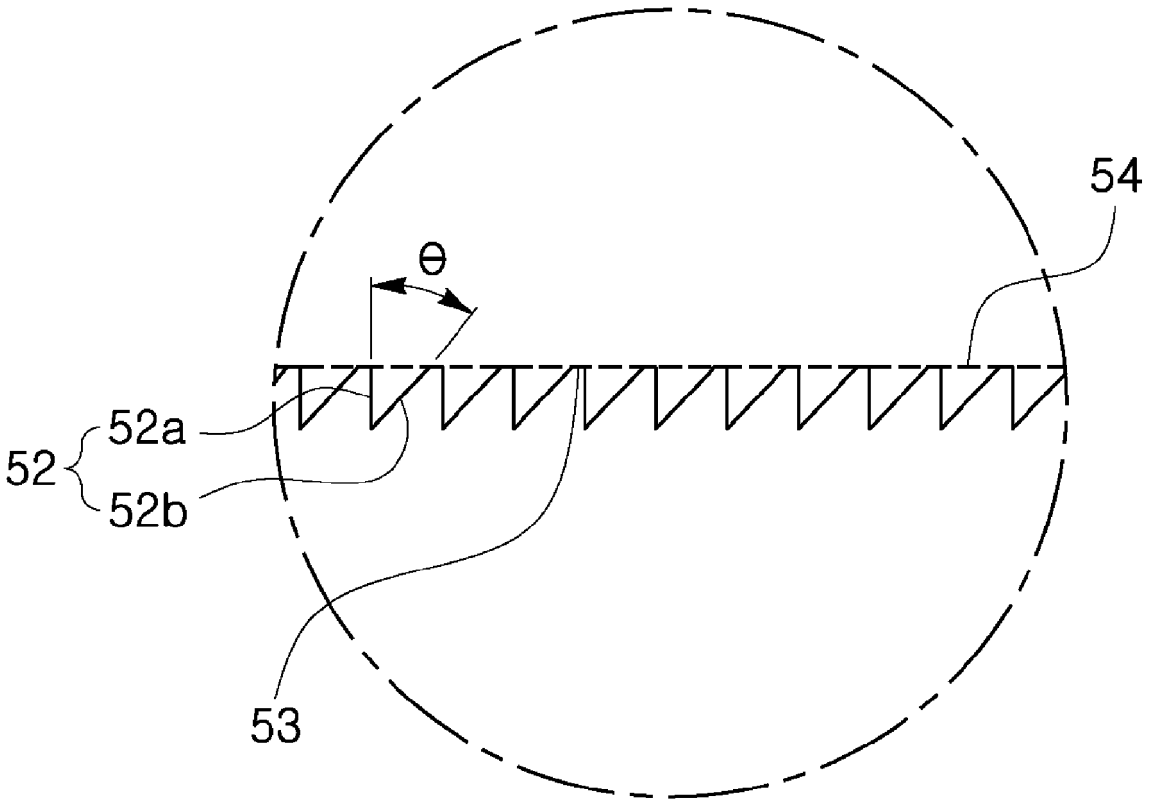

FIG. 5

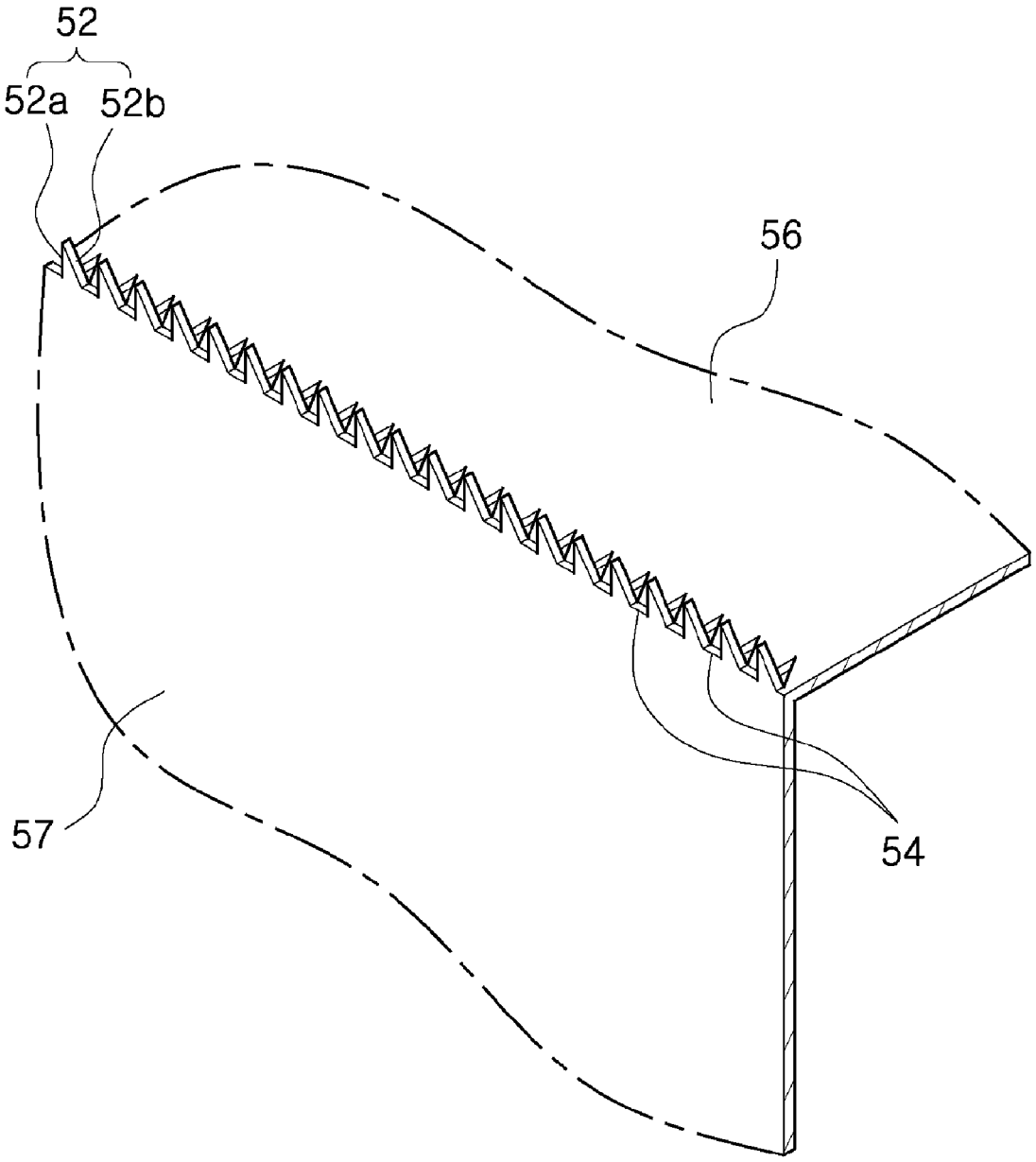

FIG. 6

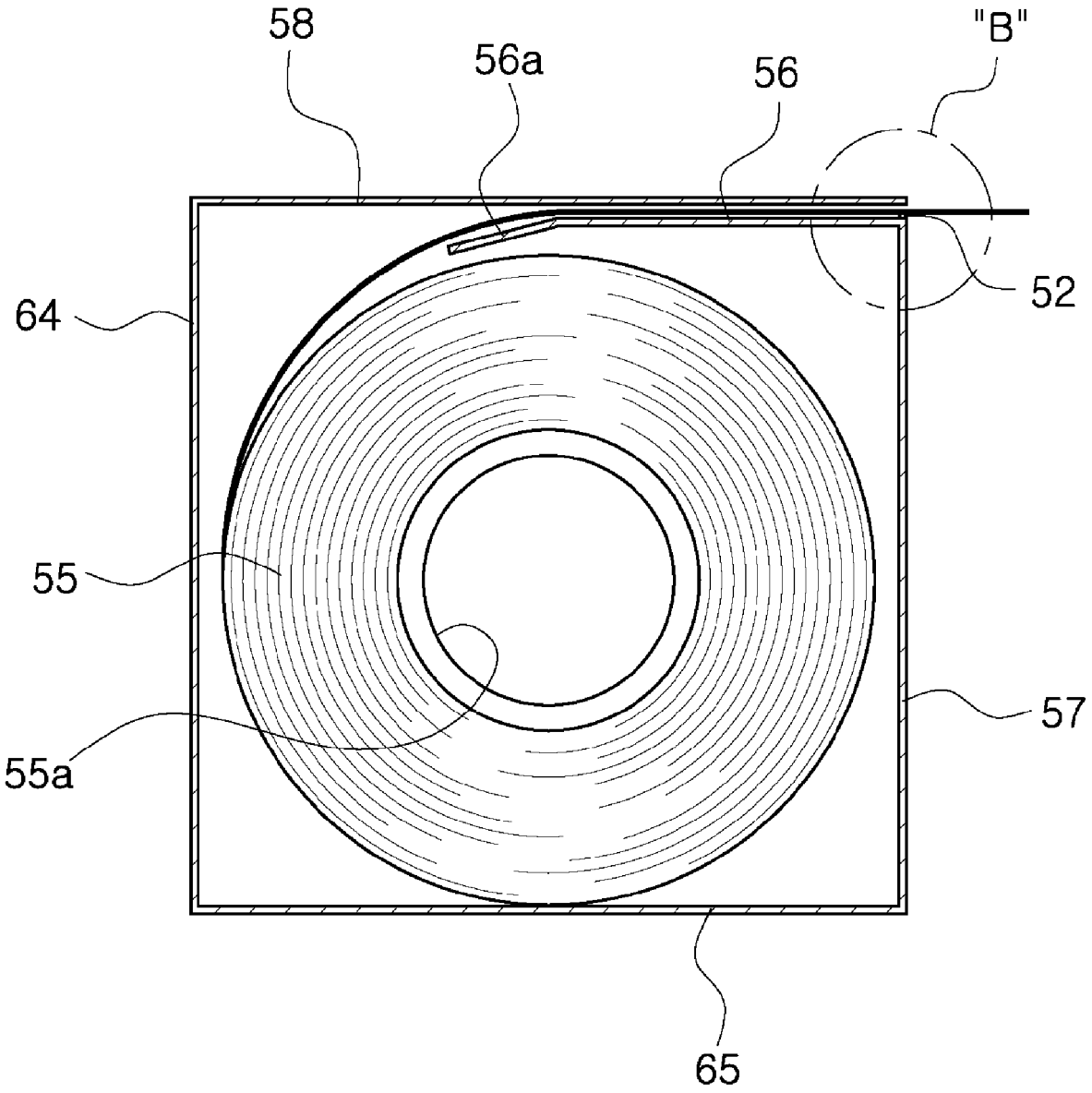

FIG. 7

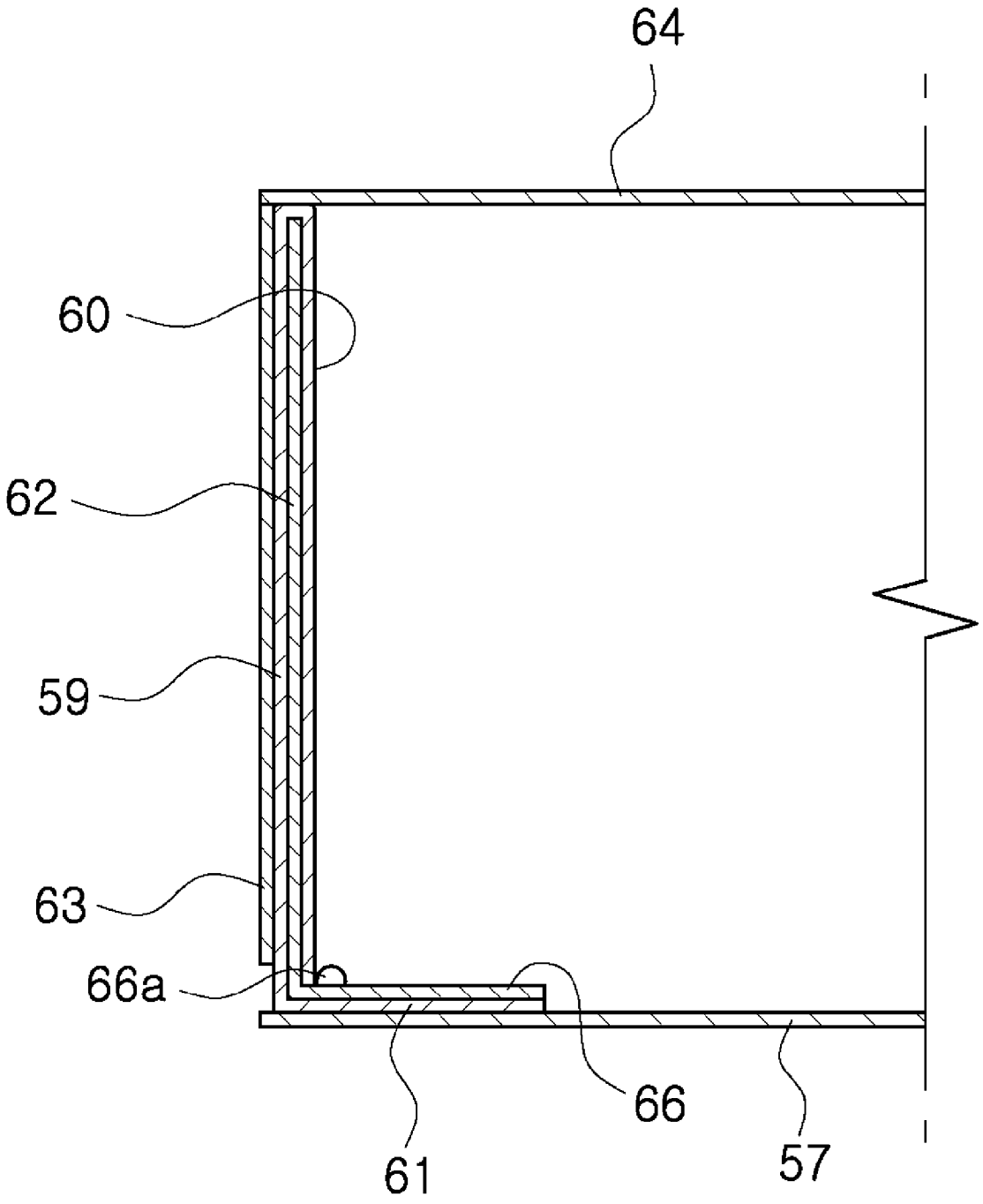

FIG. 8

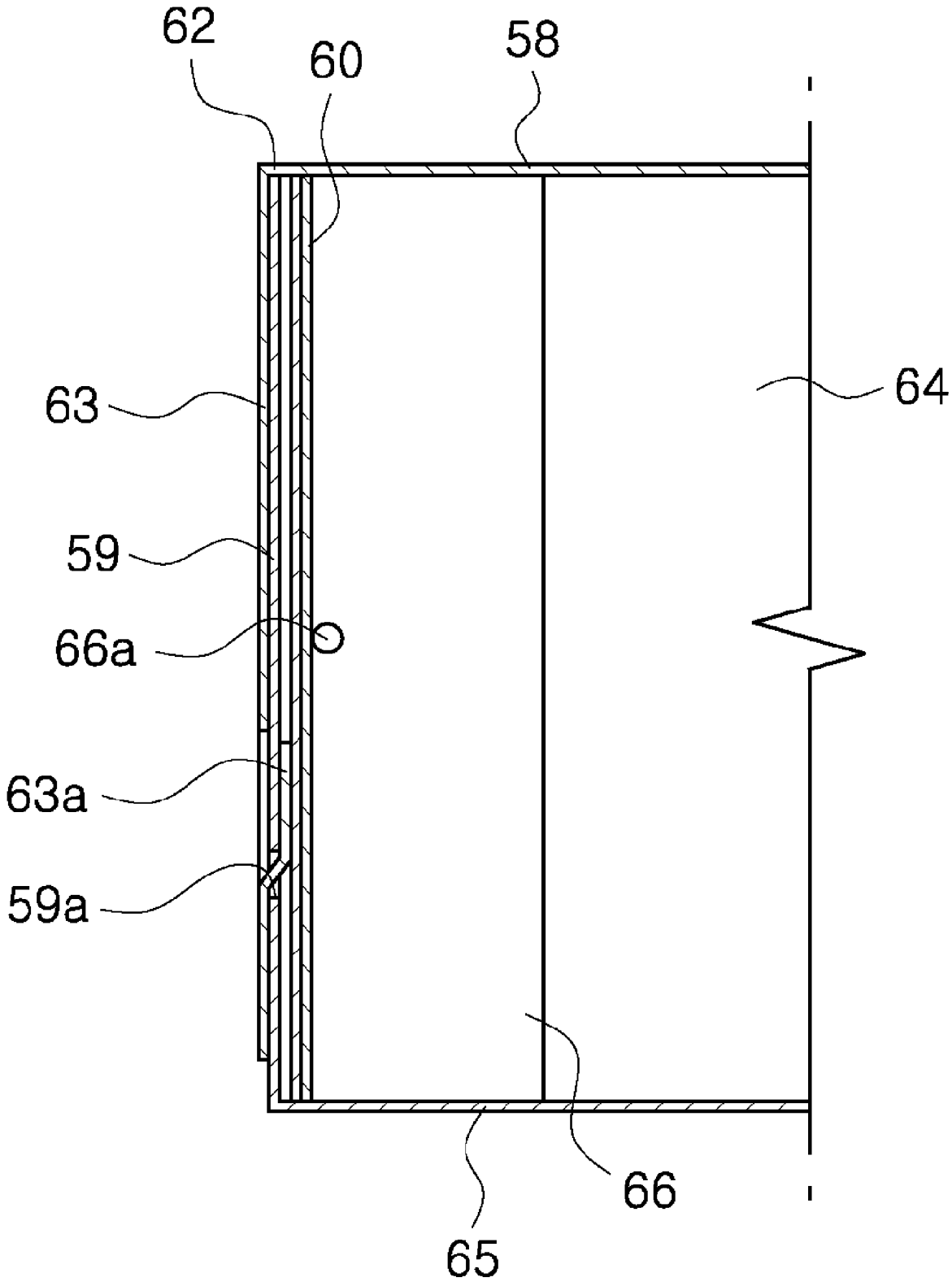

FIG. 9

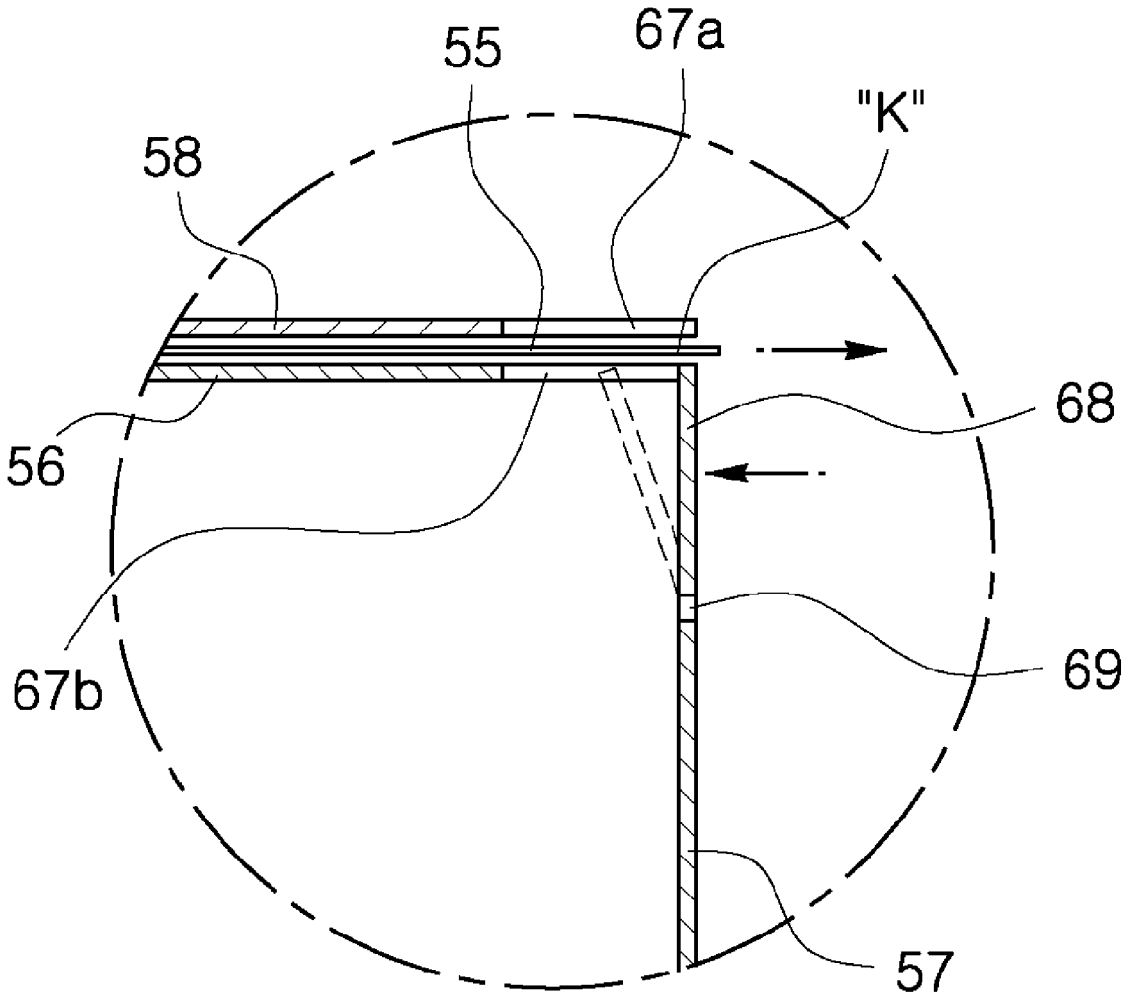

FIG. 10

INTERNATIONAL SEARCH REPORT

International application No.
PCT/KR2016/000144

A. CLASSIFICATION OF SUBJECT MATTER

B65D 25/52(2006.01)i, B65D 5/72(2006.01)i, B26D 1/02(2006.01)i, B65D 85/672(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)
B65D 25/52; B26D 1/02; B65D 25/20; B65H 35/04; B65D 85/672; B65D 5/72; B65H 35/06

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
Korean Utility models and applications for Utility models: IPC as above
Japanese Utility models and applications for Utility models: IPC as above

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
eKOMPASS (KIPO internal) & Keywords: wrapping material, case, body, synthetic resin material, bending part, cutting protrusion, connecting pin

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	JP 2003-175488 A (FURUBAYASHI SHIKO CO., LTD.) 24 June 2003 See paragraphs [0007]-[0009] and figures 1-3.	1-7
A	JP 09-012036 A (DAINIPPON PRINTING CO., LTD.) 14 January 1997 See abstract, paragraphs [0005], [0009] and figures 1-4.	1-7
A	KR 20-2013-0000100 U (GPP CO., LTD.) 03 January 2013 See paragraphs [0030], [0044], claim 1 and figures 1-2.	1-7
A	KR 10-1421972 B1 (KIM, Dea Hyun) 23 July 2014 See claims 1, 6 and figures 3-4.	1-7
A	KR 20-2013-0000656 U (HANKOOK FUJEE MACHINARY CO., LTD.) 29 January 2013 See paragraph [0018], claim 1 and figures 2, 9.	1-7

☐ Further documents are listed in the continuation of Box C.

☒ See patent family annex.

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"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

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"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
02 APRIL 2016 (02.04.2016)	**08 APRIL 2016 (08.04.2016)**

Name and mailing address of the ISA/KR	Authorized officer
Korean Intellectual Property Office Government Complex-Daejeon, 189 Seonsa-ro, Daejeon 302-701, Republic of Korea Facsimile No. 82-42-472-7140	Telephone No.

Form PCT/ISA/210 (second sheet) (January 2015)

INTERNATIONAL SEARCH REPORT
Information on patent family members

International application No.
PCT/KR2016/000144

Patent document cited in search report	Publication date	Patent family member	Publication date
JP 2003-175488 A	24/06/2003	NONE	
JP 09-012036 A	14/01/1997	NONE	
KR 20-2013-0000100 U	03/01/2013	NONE	
KR 10-1421972 B1	23/07/2014	NONE	
KR 20-2013-0000656 U	29/01/2013	KR 20-0467084 Y1	27/05/2013

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REFERENCES CITED IN THE DESCRIPTION

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Patent documents cited in the description

- JP 2003175488 A **[0006]**
- JP 2003174588 A **[0024]**
- JP 9012036 A **[0024]**
- KR 2020110000744 **[0024]**
- KR 200213804 **[0024]**