

(19)



(11)

EP 2 898 814 B1

(12)

EUROPEAN PATENT SPECIFICATION

(45) Date of publication and mention
of the grant of the patent:
29.09.2021 Bulletin 2021/39

(51) Int Cl.:
A47L 15/50^(2006.01)

(21) Application number: **15152311.5**

(22) Date of filing: **23.01.2015**

(54) **Cutlery basket for a dishwasher**

Besteckkasten für Geschirrspüler

Panier à couverts pour un lave-vaisselle

(84) Designated Contracting States:
**AL AT BE BG CH CY CZ DE DK EE ES FI FR GB
GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO
PL PT RO RS SE SI SK SM TR**

(30) Priority: **27.01.2014 KR 20140009966**

(43) Date of publication of application:
29.07.2015 Bulletin 2015/31

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Description

[0001] The following description relates to a cutlery basket having an improved structure to increase washing efficiency, and a dish washing machine (dishwasher) having the cutlery basket.

[0002] A dish washing machine, which generally washes dishes by spraying high-pressure wash water onto dishes, usually performs operations of preliminary washing, main washing, rinsing, and drying. In the preliminary washing operation, wash water having no detergent introduced therinto is sprayed to remove debris from the dishes. In the main washing operation, the dishes are cleaned with detergent introduced into the sprayed wash water from a detergent feeder.

[0003] The dish washing machine generally includes a cabinet provided therein with a washing tub, a dish basket adapted to retain dishes and installed in the washing tub to be movable forward and backward, a cutlery basket including cutlery utensils therein, and spray units to spray wash water onto the dish basket and the cutlery basket. The dishes are washed by the wash water sprayed from the spray unit.

[0004] If a plurality of cutlery utensils is mixedly contained in a cutlery basket at one time, the washing efficiency becomes reduced. If the cutlery utensils are arranged in the cutlery basket one by one, a dish washing time becomes longer.

[0005] EP193532A1 relates to a component for insertion into the wet space of a dishwashing machine, and a cutlery basket comprising six chambers made of a first, essentially non-flexible material covered by a second, highly flexible relatively elastic material which has a soft-touch feel.

[0006] GB2033735A relates to a cutlery container having a spray device to direct cleaning liquid from the rotatable sprat arm onto the cutlery in the cutlery container.

[0007] EO0488093A1 discloses a cutlery basket according to the preamble of claim 1.

[0008] Therefore, it is an aspect of the present disclosure to provide a cutlery basket and a dish washing machine including the same.

[0009] Additional aspects of the disclosure will be set forth in part in the description which follows and, in part, will be obvious from the description, or may be learned by practice of the disclosure.

[0010] In accordance with an aspect of the invention, there is provided a cutlery basket according to claim 1.

[0011] The distribution unit may include: an inclined surface formed to be inclined to direct the cutlery disposed in the basket body to the first region.

[0012] At least some parts of the inclined surface may have a curved surface.

[0013] A slope of a first point on the inclined surface may be less than a slope of a second point located below the first point.

[0014] The distribution unit may have a cone shape.

[0015] If a predetermined angle between the inclined

surface and the bottom surface is a tilt angle, the tilt angle may be formed in a manner that the cutlery leaned to the inclined surface is spaced apart from an upper end of the basket body.

[0016] The height (h) of the distribution unit from the bottom surface may be larger than a half of an inner depth (d) of the basket body.

[0017] The distribution unit may include: a head portion disposed at an upper end; and an inclined surface formed to enclose the head portion, formed to be elongated from the head portion to the bottom surface of the basket body, and formed to be tilted in a manner that the cutlery is directed to the first region.

[0018] The distribution unit may further include: a separation protrusion disposed below the inclined surface in a manner that the distribution unit is spaced apart from the bottom surface of the basket body by a predetermined distance.

[0019] The basket body may include: a cover unit disposed in the opening, wherein the cover unit includes a cover body formed along a peripheral part of the opening, and at least one separation member protruded toward the inside of the opening from the cover body.

[0020] At least one separation member may include: a convex curved surface to reduce the size of a region contacting the cutlery.

[0021] The at least one separation member may include a plurality of wave-shaped separation members.

[0022] The at least one separation member may include: a plurality of separation members; and a holder groove formed to be concave toward the cover body rather than the plurality of separation members in such a manner that at least some parts of the cutlery are caught between any one of the separation members and a neighbor separation member contiguous to the one separation member.

[0023] The cover unit may be provided to be rotated around the basket body.

[0024] In accordance with an example, a cutlery basket for a dish washing machine includes: a basket body having an opening, one side of which is opened; and a cover unit disposed in the opening, wherein the cover unit includes a cover body in which an insertion hole is formed to communicate with the opening, and a plurality of separation members protruded inward from the cover body in a manner that cutlery is spaced apart from the basket body.

[0025] The plurality of separation members may include: a convex portion formed to be convex toward the insertion hole to reduce the size of a region contacting the cutlery. The cover unit may include: a holder groove formed to be concave toward the cover body rather than the plurality of separation members, at a position between the plurality of separation members so that the cutlery is caught in the holder groove.

[0026] The cutlery basket may further include: a distribution unit formed to be convex toward inside of the basket body from a bottom surface of the basket body.

[0027] The distribution unit may be arranged at a center part of the bottom surface of the basket body in a manner that the cutlery disposed in the basket body is distributed in a radial form.

[0028] The distribution unit may include: a head portion disposed at an upper end; and an inclined surface formed to enclose the head portion, formed to be elongated from the head portion to the bottom surface of the basket body, and formed to be tilted in a manner that the cutlery is distributed in a radial form.

[0029] The height (h) of the head portion from the bottom surface of the basket body may be larger than a half of an inner depth (d) of the basket body.

[0030] In accordance with another example, a dish washing machine includes: a cabinet to form an external appearance of the dish washing machine; a wash tub provided in the cabinet to wash dishes; and a cutlery basket seated in the wash tub to wash cutlery utensils. The cutlery basket includes: a basket body in which a plurality of holes is formed; and a distribution unit arranged to be convex toward inside of the basket body in a manner that the cutlery utensils disposed in the basket body is distributed. The distribution unit includes an inclined surface formed to be tilted with respect to a bottom surface of the basket body to support at least some parts arranged in a longitudinal direction of the cutlery utensils.

[0031] The dish washing machine may further include: a cover unit disposed in an opening, wherein the cover unit includes: a cover body in which an insertion hole communicating with the opening is formed; and a plurality of separation members protruded toward the insertion hole from the cover body in a manner that the plurality of cutlery utensils distributed by the distribution unit is spaced apart from the basket body.

[0032] A cutlery basket for a dish washing machine may include a basket body including: a side wall, a bottom, and a protrusion extending from a central portion of the bottom into an interior portion of the basket body from the bottom such that cutlery placed into the cutlery basket is distributed on the bottom of the basket body around an exterior circumference of the protrusion.

[0033] These and/or other aspects of the disclosure will become apparent and more readily appreciated from the following description of the embodiments, taken in conjunction with the accompanying drawings in which:

FIG. 1 illustrates a dishwasher;

FIG. 2 illustrates a dishwasher having an opened door;

FIG. 3 illustrates a cutlery basket for a dishwasher according to an embodiment of the present disclosure;

FIG. 4 is an exploded perspective view illustrating the cutlery basket for the dishwasher according to an embodiment of the present disclosure;

FIG. 5 is a top view illustrating a cutlery basket for the dishwasher according to an embodiment of the present disclosure;

FIGS. 6 and 7 are cross-sectional views illustrating a cutlery basket for a dishwasher according to an embodiment of the present disclosure;

FIG. 8 is a structural view illustrating a cover unit of a cutlery basket for a dishwasher according to an embodiment of the present disclosure;

FIG. 9 illustrates a plurality of cutlery utensils contained in a cutlery basket for the dishwasher according to an embodiment of the present disclosure;

FIG. 10 illustrates distribution units of the cutlery basket for the dishwasher according to an embodiment of the present disclosure; and

FIG. 11 is a cross-sectional view illustrating distribution units of the cutlery basket for the dishwasher according to an embodiment of the present disclosure.

[0034] Reference will now be made in detail to the embodiments of the present disclosure, examples of which are illustrated in the accompanying drawings, wherein like reference numerals refer to like elements throughout.

[0035] FIG. 1 illustrates a dishwasher.

[0036] FIG. 2 illustrates a dishwasher having an opened door.

[0037] Referring to FIGS. 1 to 3, a dishwasher 1 includes a cabinet 10 forming the external appearance of the dishwasher, a wash tub 12 provided in the cabinet 10, baskets (14a, 14b) provided in the wash tub 12 to accommodate dishes, a sump 20 to collect and store wash water, and spray units (41, 42, 43) to spray wash water.

[0038] The wash tub 12 is formed approximately in the shape of a box and provided with an open front surface to allow dishes to be put in and retrieved from the wash tub 12. The open front surface of the wash tub 12 may be opened and closed by a door 11. The door 11 may be rotatably coupled to the body 10.

[0039] The baskets (14a, 14b) may include an upper basket 14a and a lower basket 14b. The upper basket 14a may be supported by an upper rack 13a, and the lower basket 14b may be supported by a lower rack 13b. The upper rack 13a and the lower rack 13b may be slidably arranged in the wash tub 12.

[0040] The sump 20 may be provided with a washing pump 21 to pump out stored water to the spray units (41, 42, 43). The wash water pumped out by the washing pump 21 may be supplied to a first spray unit 41 and a second spray unit 42 through a first supply pipe 31 or supplied to a third spray unit 43 through a second supply pipe 32.

[0041] In addition, a heater 15 to heat the wash water and a drainage pump 22 to drain the wash water may be arranged below the wash tub 12.

[0042] As is clearly illustrated in FIG. 1, the first spray unit 41 may be arranged over the upper basket 14a, the second spray unit 42 may be arranged between the upper basket 14a and the lower basket 14b, and the third spray unit 43 may be arranged under the lower basket 14b.

[0043] In addition, the first spray unit 41 may be arranged to rotate about a spindle 41a, and the second spray unit 42 may be arranged to rotate about a shaft 42a.

[0044] The first spray unit 41 may spray the wash water toward the dishes accommodated in the upper basket 14a, and the second spray unit 42 may spray the wash water toward the dishes accommodated in the upper basket 14a and the lower basket 14b.

[0045] Unlike the first spray unit 41 and the second spray unit 42, the third spray unit 43 may be affixed to one side of the wash tub 12. The third spray unit 43 sprays the wash water in an approximately horizontal direction. Accordingly, the wash water sprayed by the third spray unit 43 may not be directly directed to the dishes.

[0046] The third spray unit 43 may include a plurality of nozzles 44 through which wash water is sprayed. The nozzles 44 may be arranged in a line approximately from one lateral surface of the wash tub to the opposite lateral surface and spaced a predetermined distance from each other.

[0047] Wash water sprayed from the nozzles of the third spray unit 43 in an approximately horizontal direction may be diverted by a switching assembly 60 disposed in the wash tub 12 such that the wash water travels toward the dishes accommodated in the lower cutlery basket 14b. The switching assembly 60 is provided on a guide rail 62 by a holder 64, and is provided to be movable along the guide rail 62.

[0048] FIG. 3 illustrates a cutlery basket for a dishwasher according to an embodiment of the present disclosure. FIG. 4 is an exploded perspective view illustrating the cutlery basket for the dishwasher according to an embodiment of the present disclosure. FIG. 5 is a top view illustrating a cutlery basket for the dishwasher according to an embodiment of the present disclosure.

[0049] The cutlery basket 100, which accommodates various kinds of tableware, such as spoons, chopsticks, knives, forks, etc. may be detachably mounted to the cutlery baskets (14a, 14b). The cutlery basket 100 arranges cutlery such as spoons and chopsticks in the wash tub 12, so that the dishwasher can wash the cutlery.

[0050] The cutlery basket 100 may include a basket body 110.

[0051] The basket body 110 is formed to have a predetermined length corresponding to the length of a cutlery item, and includes a wash space 112 capable of accommodating the cutlery item, such as spoons or chopsticks, for example, therein. A plurality of holes 114 is formed in the basket body 110, so that wash water sprayed from the spray units in the wash tub 12 can be introduced or discharged to wash the cutlery accommodated in the basket body 110.

[0052] An opening 110a through which the cutlery or the like can be put in and drawn out of the basket body 110 is formed, and the wash space 112 in which the cutlery received through the opening 110a can be seated may also be contained in the cutlery basket 100.

[0053] A handle 120 may be provided at the basket

body 110, such that a user who grasps the handle 120 can move the basket body 110.

[0054] The basket body 110 may further include a compartment plate 116. The compartment plate 116 divides the wash space 112 into a plurality of spaces, so that cutlery utensils to be accommodated in the cutlery basket 100 are classified and disposed in the divided spaces. The compartment plate 116 may be integrated with the basket body 110, or may be separated from the basket body 110 so that the compartment plate 116 can be detachably connected to the basket body 110.

[0055] The cutlery basket 100 may include distribution units 130.

[0056] The distribution units 130 may be configured in a manner that the cutlery utensils can be distributed and disposed in the basket body 110.

[0057] According to the invention, the distribution units 130 are configured separately from the basket body 110.

[0058] The distribution units 130 are disposed in a convex form toward the interior of the basket body 110 on the bottom surface 118 of the basket body 110 in such a manner that a plurality of cutlery utensils are distributed in the wash space 112.

[0059] The distribution units 130 are arranged in such a manner that cutlery utensils disposed in the basket body 110 are distributed between a first region (a1) of the bottom surface 118 of the basket body 110 and a second region (a2) provided in the first region (a1). The distribution units 130 may be disposed in a convex form toward the interior of the basket body 110 on the basis of the bottom surface 118 of the basket body 110.

[0060] The first region (a1) and the second region (a2) may be divided by the distribution units 130. In addition, the first region (a1) may enclose the second region (a2).

That is, each distribution unit 130 is enclosed by the first region (a1) in which cutlery is disposed, so that the cutlery arranged in the basket body 110 can be distributed in a radial shape. In other words, the distribution units 130 may be disposed at the center of the bottom surface 118 of the basket body 110 in such a manner that the cutlery arranged in the basket body 110 can be distributed in a radial shape. However, arrangement of the distribution units 130 and arrangement or shape of the first and second regions (a1, a2) divided by the arrangement of the distribution units 130 are not limited thereto.

[0061] The distribution units 130 are disposed in the basket body 110, and a plurality of holes 138 may be arranged in a manner that wash water can pass through the holes 138. Each distribution unit 130 may include an inclined surface 132.

[0062] The inclined surface 132 is inclined at a predetermined angle with respect to the bottom surface 118 of the cutlery basket 100, so that cutlery disposed in the cutlery basket 100 slides along the inclined surface 132 and is thus seated in the first region (a1). A plurality of cutlery utensils can be distributed without unbalance by the inclined surface 132.

[0063] The inclined surface 132 is formed to be inclined

in a manner that the cutlery arranged in the basket body 110 is guided to the first region (a1). The inclined surface 132 may have a planar surface or a curved surface. As shown in the embodiment, the inclined surface 132 may have a planar surface or a curved surface. In addition, a cross-section perpendicular to the length direction of the distribution units is configured in the form of a close loop, so that the cutlery utensils can be distributed in a radial form on the basis of the distribution units disposed in the wash space. Although there is no limitation in the shape of the distribution units 130, each distribution unit may be formed to have a cone shape.

[0064] Although the inclined surface 132 may be formed to have different inclined angles (θ) according to the height of each distribution unit 130, the embodiment exemplarily shows the inclined surface 132 having the same angle according to the height of the distribution unit 130.

[0065] Each of the distribution unit 130 may further include a head portion 134.

The head portion 134 may be disposed at an upper end of the distribution unit 130, and may be enclosed by the inclined surface 132.

[0066] That is, the inclined surface 132 may be disposed among the head portion 134, the basket body 110, and the bottom surface 118.

[0067] Each of the distribution units 130 may further include a separation protrusion 136.

[0068] The separation protrusion 136 may be located below each distribution unit 130, such that the inclined surface 132 can be spaced apart from the bottom surface 118 of the basket body 110. Although wash water can be drained through a plurality of holes 114 on the bottom surface 118 of the basket body 110, if the inclined surface 132 is in contact with the bottom surface 118, wash water may be collected in the contact part and the inclined surface 132 and the bottom surface 118 are spaced apart from each other, so that wash water can be prevented from being collected in the contact part. Each of the distribution units 130 may further include a movable handle 140 provided thereon, such that the user who uses the movable handle 140 can seat the distribution units in the basket body 110 or can detach the distribution units from the basket body 110.

[0069] FIGS. 6 and 7 are cross-sectional views illustrating a cutlery basket for a dishwasher according to an embodiment of the present disclosure.

[0070] An inclined angle (θ) between the inclined surface 132 and the bottom surface 118 of the basket body 110 may be formed in a manner that cutlery leaned to the inclined surface 132 is spaced apart from an upper end of the basket body 110 when one end of the cutlery is disposed in the first region (a1). In other words, a distance between the head portion 134 located at the height (h) of the distribution unit 130 and the bottom surface 118 may be larger than a half of an inner depth (d) of the basket body 110.

[0071] Because the inclined angle (θ) or the height of

the distribution unit 130 is achieved, the size of a contact region between the cutlery and the basket body 110 can be minimized, and a surface area of wash water can be enlarged in size, resulting in increased washing efficiency. Through the above-mentioned construction, when one end of the cutlery is arranged in the first region (a1), at least some parts located in a longitudinal direction of the cutlery are not in contact with the basket body 110, so that the cutlery can be exposed to wash water.

[0072] FIG. 8 is a structural view illustrating a cover unit of a cutlery basket for a dishwasher according to an embodiment of the present disclosure. FIG. 9 exemplarily illustrates that a plurality of cutlery utensils are contained in a cutlery basket for the dishwasher according to an embodiment of the present disclosure.

[0073] Referring to FIGS. 8 and 9, the cutlery basket 100 may include a cover unit 150.

The cover unit 150 is constructed in a manner that cutlery arranged in the basket body 110 does not adhere closely to the basket body 110, and may also be disposed in the opening 110a.

[0074] The cover unit 150 may include a cover body 152 and a separation member 154.

[0075] The cover body 152 may be disposed in the opening 110a of the basket body 110. The cover body 152 forms an insertion hole 152a coupled to the opening 110a, and is formed to correspond to an upper shape of the basket body 110. That is, the cover body 152 may have a frame shape to correspond to the upper shape of the basket body 110 along a peripheral part of the opening 110a.

[0076] Although the cover body 152 may be integrated with the basket body 110, it should be noted that the cover body 152 may be rotatably provided while being separated from the basket body. In more detail, a rotation unit 153 is provided at one side of the cover body 152, so that the rotation unit 153 can be rotated around the basket body 110. Through the above-mentioned construction, cutlery utensils can be put in and drawn out of the cutlery basket, resulting in greater convenience for the user. In addition, respective constituent elements of the cutlery basket 100 can be separated from each other when the cutlery basket 100 is washed, so that the constituent elements can be more cleanly washed.

[0077] The separation member 154 is provided to separate cutlery utensils from the basket body 110. In more detail, the separation member 154 is provided in the cover body 152, so that the cutlery utensils can be separated from the upper end corresponding to the opening 110a of the basket body 110. The separation member 154 may be protruded toward the inside of the insertion hole 152a of the cover body 152 or toward the inside of the opening 110a. There may be a plurality of separation members 152 arranged along the cover body 152.

[0078] The separation member 152 may include a convex unit 156 that is convex toward the inside of either the insertion hole 152a or the opening 110a. The convex unit 156 may be provided to reduce the size of a contact re-

gion between the separation member 154 and the cutlery. If the cutlery utensils are randomly disposed in the basket body 110, the cutlery utensils disposed in the basket body 110 are in close contact with an inner surface of the basket body 110, so that a region to be washed by wash water is relatively reduced in size. In order to prevent reduction of the size of the region washed by wash water, the separation member 154 is constructed in a manner that the cutlery utensils are put in the basket body 110, and the cutlery utensils are point-contacted with the convex unit 156. As a result, the size of a contact region can be greatly reduced as compared to other cases in which the cutlery utensils are line-contacted or surface-contacted with the basket body 110, so that a relatively larger number of cutlery utensils can be exposed to the wash water.

[0079] The cover unit 150 may include a holder groove 158.

[0080] The holder groove 158 is provided to correspond to the separation member 154, and some parts of the cutlery utensils can be caught, or held, in the holder groove 158. As a result, the present disclosure prevents the occurrence of overlapping cutlery utensils, so that it can also prevent the washing efficiency from being decreased.

[0081] The holder groove 158 is disposed between one of the separation members 154 and a neighbor separation member 154 contiguous to the one separation member, and may be formed to be concave toward the cover body 152 rather than the separation member 154. There may be a plurality of holder grooves 158 in correspondence with the plurality of separation members 154, and the plurality of holder grooves 158 may be formed alternately with the plurality of separation members 154.

[0082] Although there is no limitation in the shape of the separation member 154, it should be noted that the plurality of separation members 154 and the plurality of holder grooves 158 according to the embodiments are formed alternately to make a wave shape.

[0083] In the case of the above-mentioned distribution units 130, the cutlery utensils are arranged parallel to one another along the first region (a1). The cutlery utensils are caught in the holder groove 158, or are point-contacted by the separation member 154, so that the cutlery utensils can be separated from each other and a surface region exposed to wash water can be increased in size.

[0084] A cutlery basket for a dish washing machine according to an embodiment of the present disclosure will hereinafter be described.

[0085] A detailed description of the same constituent elements as those described above will herein be omitted for convenience of description.

[0086] FIG. 10 exemplarily illustrates a distribution unit of the cutlery basket for the dishwasher according to an embodiment of the present disclosure. FIG. 11 is a cross-sectional view illustrating the distribution unit of the cutlery basket for the dishwasher according to an embodi-

ment of the present disclosure.

[0087] The distribution unit 230 is formed to be convex toward the inside of the basket body 110 from the bottom surface of the basket body 110. A plurality of cutlery utensils may be distributed in the wash space 112.

[0088] The distribution unit 230 is disposed in the basket body 110, and may include a plurality of holes 238 through which wash water can pass.

[0089] The distribution units 230 may include an inclined surface 232.

[0090] The inclined surface 232 is obliquely formed in a manner that the cutlery utensils disposed in the basket body 210 are directed to the first region (a1). The inclined surface 232 may have a planar or curved shape. In the embodiment of the present disclosure, the inclined surface 232 may have planar and curved shapes. The first shape (a1) may enclose the second region (a2). That is, the distribution unit 230 is enclosed by the first region (a1) in which the cutlery utensils are arranged, so that the cutlery utensils disposed in the basket body 110 can be distributed in a radial form.

[0091] The distribution unit 230 may include an inclined surface 232 having an inclined angle changing with the height. In more detail, the degree of slope (α) of a first point on the inclined surface 232 is less than the degree of slope (β) of a second point located below the first point. As a result, the plurality of cutlery utensils can be more efficiently distributed in a radial form.

[0092] As is apparent from the above description, the cutlery basket and the dish washing machine having the same can distribute a plurality of cutlery utensils, and can increase a surface area to be used for spraying of wash water, resulting in increased washing efficiency.

[0093] Although a few embodiments of the present invention have been shown and described, it would be appreciated by those skilled in the art that changes may be made in these embodiments without departing from the principles of the invention, the scope of which is defined in the claims.

Claims

1. A cutlery basket for a dishwasher, the cutlery basket comprising:

a basket body (110) to accommodate cutlery and in which a plurality of holes (114) are disposed, the basket body comprising an opening (110a) for insertion of cutlery into the cutlery basket; and

a distribution unit (130, 230) disposed in the basket body and defining a second region (a2) of the bottom surface (118) of the basket body, the second region being enclosed by a first region (a1) of the bottom surface of the basket body, wherein the distribution unit is formed to be convex in a direction towards the inside of the basket

- body from the bottom surface of the basket body,,
wherein the distribution unit causes cutlery placed in the basket body to be distributed to the first region of the bottom surface of the basket body, **characterised in that**
the distribution unit is configured to be separable from the basket body.
2. The cutlery basket according to claim 1, wherein the distribution unit includes:
an inclined surface (132, 232) formed to be inclined to direct the cutlery accommodated in the basket body to the first region.
 3. The cutlery basket according to claim 2, wherein at least a portion of the inclined surface (132, 232) has a curved surface.
 4. The cutlery basket according to claim 2, wherein a slope (α) of a first point on the inclined surface is less than a slope (β) of a second point located below the first point.
 5. The cutlery basket according to any one of the preceding claims, wherein the distribution unit (130, 230) has a conical shape.
 6. The cutlery basket according to claim 2, wherein: if a predetermined angle between the inclined surface (132, 232) and the bottom surface (118) is a tilt angle, the tilt angle is formed in a manner that cutlery leaned onto the inclined surface is spaced apart from an upper end of the basket body.
 7. The cutlery basket according to claim 2, wherein the height (h) of the distribution unit (132, 232) from the bottom surface is greater than a half of an inner depth (d) of the basket body.
 8. The cutlery basket according to any one of the preceding claims, wherein the distribution unit includes:
a head portion (134) disposed at an upper end;
and
an inclined surface (132, 232) formed to enclose the head portion, formed to be elongated from the head portion to the bottom surface (118) of the basket body, and formed to be tilted in a manner that the cutlery is directed to the first region (a1).
 9. The cutlery basket according to claim 2, wherein the distribution unit further includes:
a separation protrusion (136) disposed below the inclined surface in a manner that the distribution unit is spaced apart from the bottom surface (118) of the basket body by a predetermined distance.
 10. The cutlery basket according to any one of the preceding claims, wherein the basket body includes:
a cover unit (150) disposed in the opening, wherein the cover unit includes a cover body (152) formed along a peripheral part of the opening, and at least one separation member (154) protruding toward the inside of the opening from the cover body.
 11. The cutlery basket according to claim 10, wherein the at least one separation member includes:
a convex portion (156) that is convex toward the inside of either the insertion hole (152a) or the opening 110a to reduce the size of a region contacting the cutlery.
 12. The cutlery basket according to claim 11, wherein the at least one separation member (154) includes a plurality of wave-shaped separation members.
 13. The cutlery basket according to claim 11, wherein the at least one separation member includes:
a plurality of separation members (154); and
a holder groove (158) formed to be concave toward the cover body (152) rather than the plurality of separation members in such a manner that at least some parts of cutlery are held between any one of the separation members and a neighbor separation member contiguous to the one separation member.
 14. The cutlery basket according to any one of claims 11 to 14, wherein the cover unit (150) is provided to be rotated around the basket body.

Patentansprüche

1. Besteckkorb für eine Geschirrspülmaschine, wobei der Besteckkorb Folgendes aufweist:

einen Korbkörper (110) zur Aufnahme von Besteck und in dem eine Vielzahl von Löchern (114) angeordnet ist, wobei der Korbkörper eine Öffnung (110a) zum Einsetzen von Besteck in den Besteckkorb aufweist; und
eine Verteilungseinheit (130, 230), die in dem Korbkörper angeordnet ist und eine zweite Region (a2) der Bodenfläche (118) des Korbkörpers definiert, wobei die zweite Region von einer ersten Region (a1) der Bodenfläche des Korbkörpers umschlossen ist,
wobei die Verteilungseinheit so gebildet ist, dass sie in einer Richtung von der Bodenfläche des Korbkörpers zur Innenseite des Korbkörpers hin konvex ist,

wobei die Verteilungseinheit verursacht, dass in den Korbkörper gegebenes Besteck auf die erste Region der Bodenfläche des Korbkörpers verteilt wird, **dadurch gekennzeichnet, dass** die Verteilungseinheit so gestaltet ist, dass sie vom Korbkörper trennbar ist.

2. Besteckkorb nach Anspruch 1, wobei die Verteilungseinheit Folgendes beinhaltet: eine geneigte Oberfläche (132, 232), die so gebildet ist, dass sie geneigt ist, um das in dem Korbkörper aufgenommene Besteck auf die erste Region zu lenken. 10
3. Besteckkorb nach Anspruch 2, wobei wenigstens ein Teil der geneigten Oberfläche (132, 232) eine gekrümmte Oberfläche hat. 15
4. Besteckkorb nach Anspruch 2, wobei eine Schräge (α) eines ersten Punkts auf der geneigten Oberfläche kleiner ist als eine Schräge (β) eines unterhalb des ersten Punkts befindlichen zweiten Punkts. 20
5. Besteckkorb nach einem der vorhergehenden Ansprüche, wobei die Verteilungseinheit (130, 230) eine konische Form hat. 25
6. Besteckkorb nach Anspruch 2, wobei: wenn ein vorbestimmter Winkel zwischen der geneigten Oberfläche (132, 232) und der Bodenfläche (118) ein Neigungswinkel ist, der Neigungswinkel so gebildet ist, dass an die geneigte Oberfläche angelehntes Besteck von einem oberen Ende des Korbkörpers beabstandet ist. 30
7. Besteckkorb nach Anspruch 2, wobei die Höhe (h) der Verteilungseinheit (132, 232[A1]) von der Bodenfläche größer ist als eine Hälfte einer Innentiefe (d) des Korbkörpers. 35
8. Besteckkorb nach einem der vorhergehenden Ansprüche, wobei die Verteilungseinheit Folgendes beinhaltet: 40
 - einen Kopfteil (134), der an einem oberen Ende angeordnet ist; und
 - eine geneigte Oberfläche (132, 232), die zum Umschließen des Kopfteils gebildet ist, so gebildet ist, dass sie von dem Kopfteil zu der Bodenfläche (118) des Korbkörpers langgestreckt ist, und so gebildet ist, dass sie dergestalt geneigt ist, dass das Besteck zu der ersten Region (a1) gelenkt wird. 50
9. Besteckkorb nach Anspruch 2, wobei die Verteilungseinheit ferner Folgendes beinhaltet: 55
 - einen Trennvorsprung (136), der unterhalb der geneigten Oberfläche dergestalt angeordnet ist,

dass die Verteilungseinheit um einen vorbestimmten Abstand von der Bodenfläche (118) des Korbkörpers beabstandet ist.

- 5 10. Besteckkorb nach einem der vorhergehenden Ansprüche, wobei der Korbkörper Folgendes beinhaltet:
 - eine Deckeleinheit (150), die in der Öffnung angeordnet ist, wobei die Deckeleinheit einen Deckelkörper (152), der an einem Randteil der Öffnung entlang ausgebildet ist, und wenigstens ein Trennelement (154), das vom Deckelkörper zum Inneren der Öffnung hin vorspringt, beinhaltet. 10
11. Besteckkorb nach Anspruch 10, wobei das wenigstens eine Trennelement Folgendes beinhaltet: eine konvexen Teil (156), der zum Inneren von entweder dem Einsetzloch (152a) oder der Öffnung (110a) hin konvex ist, um die Größe einer Region zu reduzieren, die mit dem Besteck in Kontakt kommt. 20
12. Besteckkorb nach Anspruch 11, wobei das wenigstens eine Trennelement (154) eine Vielzahl von wellenförmigen Trennelementen beinhaltet. 25
13. Besteckkorb nach Anspruch 11, wobei das wenigstens eine Trennelement Folgendes beinhaltet:
 - eine Vielzahl von Trennelementen (154); und
 - eine Halternut (158), die so gebildet ist, dass sie zum Deckelkörper (152) anstatt der Vielzahl von Trennelementen dergestalt konkav ist, dass wenigstens einige Besteckteile zwischen irgendwelchen der Trennelemente und einem an das eine Trennelement angrenzenden Nachbartrennelement gehalten werden. 30
14. Besteckkorb nach einem der Ansprüche 11 bis 14, wobei die Deckeleinheit (150) zum Drehen um den Korbkörper vorgesehen ist. 40

45 Revendications

1. Panier à couverts pour un lave-vaisselle, le panier à couverts comprenant :
 - un corps de panier (110) permettant d'accueillir des couverts, et dans lequel est disposée une pluralité d'orifices (114), le corps de panier comprenant une ouverture (110a) permettant d'introduire des couverts dans le panier à couverts ; et
 - un module de distribution (130, 230) disposé dans le corps de panier, et définissant une deuxième zone (a2) de la surface inférieure

- (118) du corps de panier, la deuxième zone étant entourée par une première zone (a1) de la surface inférieure du corps de panier, le module de distribution étant réalisé pour être convexe dans une direction allant de la surface inférieure du corps de panier vers l'intérieur du corps de panier, le module de distribution assurant la distribution des couverts placés dans le corps de panier dans la première zone de la surface inférieure du corps de panier, **caractérisé en ce que** le module de distribution est configuré pour pouvoir être séparé du corps de panier.
2. Panier à couverts selon la revendication 1, le module de distribution comprenant : une surface inclinée (132, 232) réalisée de façon à être inclinée pour diriger les couverts accueillis dans le corps de panier vers la première zone.
 3. Panier à couverts selon la revendication 2, au moins une partie de la surface inclinée (132, 232) présentant une surface courbe.
 4. Panier à couverts selon la revendication 2, une pente (α) d'un premier point sur la surface inclinée étant inférieure à une pente (β) d'un deuxième point situé sous le premier point.
 5. Panier à couverts selon une quelconque des revendications précédentes, le module de distribution (130, 230) ayant une forme conique.
 6. Panier à couverts selon la revendication 2, dans lequel :
si un angle prédéterminé entre la surface inclinée (132, 232) et la surface inférieure (118) est un angle d'inclinaison, l'angle d'inclinaison est façonné de sorte que les couverts s'appuyant sur la surface inclinée soient espacés d'une extrémité supérieure du corps de panier.
 7. Panier à couverts selon la revendication 2, la hauteur (h) du module de distribution (132, 232[A1]) depuis la surface inférieure étant supérieure à une moitié d'une profondeur intérieure (d) du corps de panier.
 8. Panier à couverts selon une quelconque des revendications précédentes, le module de distribution comprenant :
une partie de tête (134) disposée sur une extrémité supérieure ; et
une surface inclinée (132, 232) réalisée de façon à incorporer la partie de tête, réalisée pour être allongée de la partie de tête à la surface inférieure (118) du corps de panier, et réalisée pour être inclinée de sorte que les couverts soient dirigés vers la première zone (a1).
 9. Panier à couverts selon la revendication 2, le module de distribution comprenant en outre :
une saillie de séparation (136) disposée sous la surface inclinée de sorte que le module de distribution soit espacé, d'une distance prédéterminée, de la surface inférieure (118) du corps de panier.
 10. Panier à couverts selon une quelconque des revendications précédentes, le corps de panier comprenant :
un dispositif de couvercle (150) disposé dans l'ouverture,
le dispositif de couvercle comprenant un corps de couvercle (152) réalisé le long d'une partie périphérique de l'ouverture, et au moins un élément de séparation (154) saillant vers l'intérieur de l'ouverture depuis le corps de couvercle.
 11. Panier à couverts selon la revendication 10, l'au moins un élément de séparation comprenant :
une partie convexe (156), convexe vers l'intérieur soit de l'orifice d'insertion (152a) soit de l'ouverture (110a) afin de réduire la taille d'une zone au contact avec les couverts.
 12. Panier à couverts selon la revendication 11, l'au moins un élément de séparation (154) comprenant une pluralité d'éléments de séparation de forme ondulée.
 13. Panier à couverts selon la revendication 11, l'au moins un élément de séparation comprenant :
une pluralité d'éléments de séparation (154) ; et
une cannelure de retenue (158) réalisée pour être concave vers le corps de couvercle (152) plutôt que la pluralité d'éléments de séparation, de sorte qu'au moins certains éléments des couverts soient maintenus entre un quelconque des éléments de séparation et un élément de séparation voisin contigu à l'un élément de séparation.
 14. Panier à couverts selon une quelconque des revendications 11 à 14, le dispositif de couvercle (150) étant agencé de sorte qu'il puisse tourner autour du corps de panier.

FIG. 1

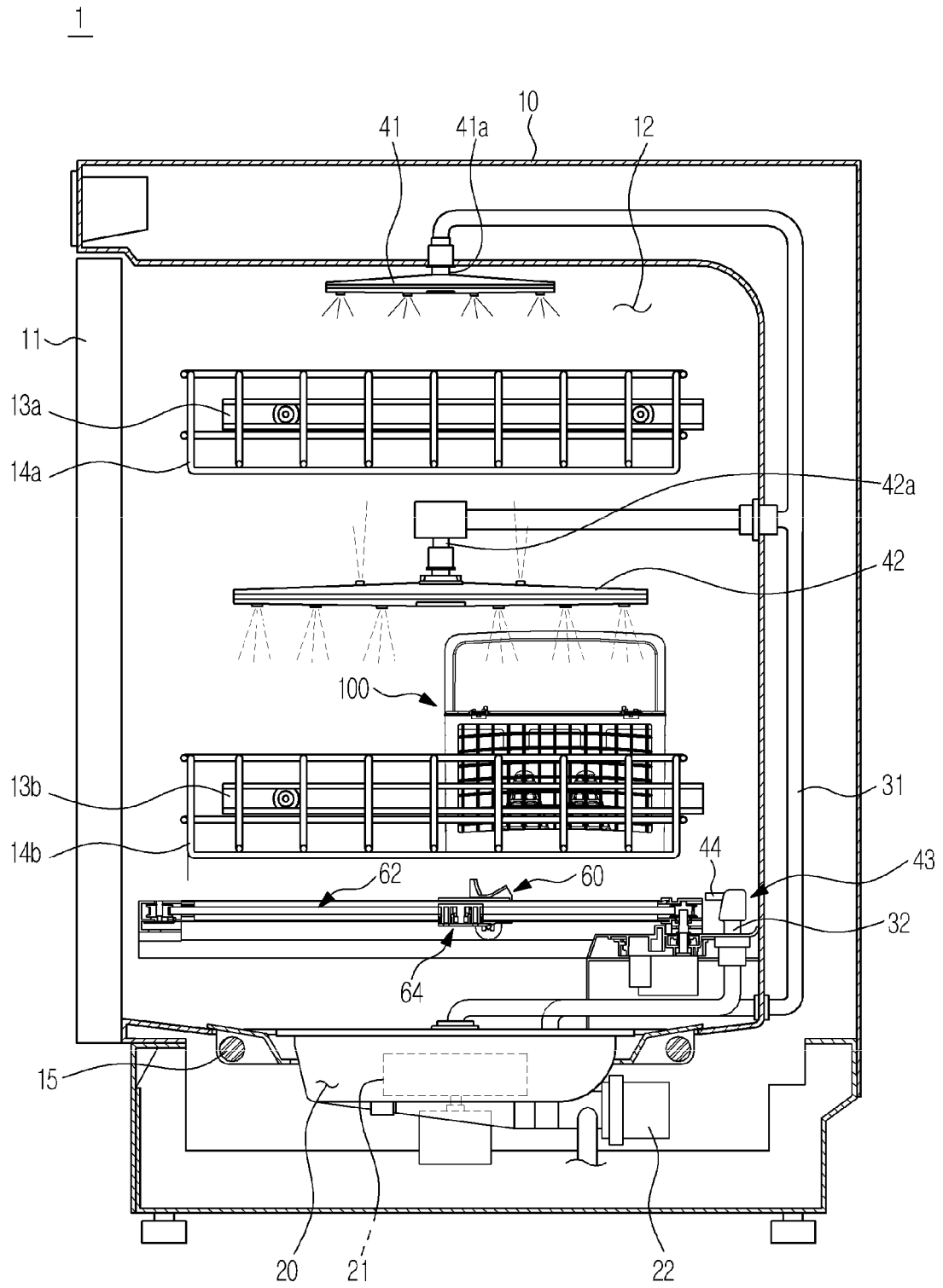


FIG. 2

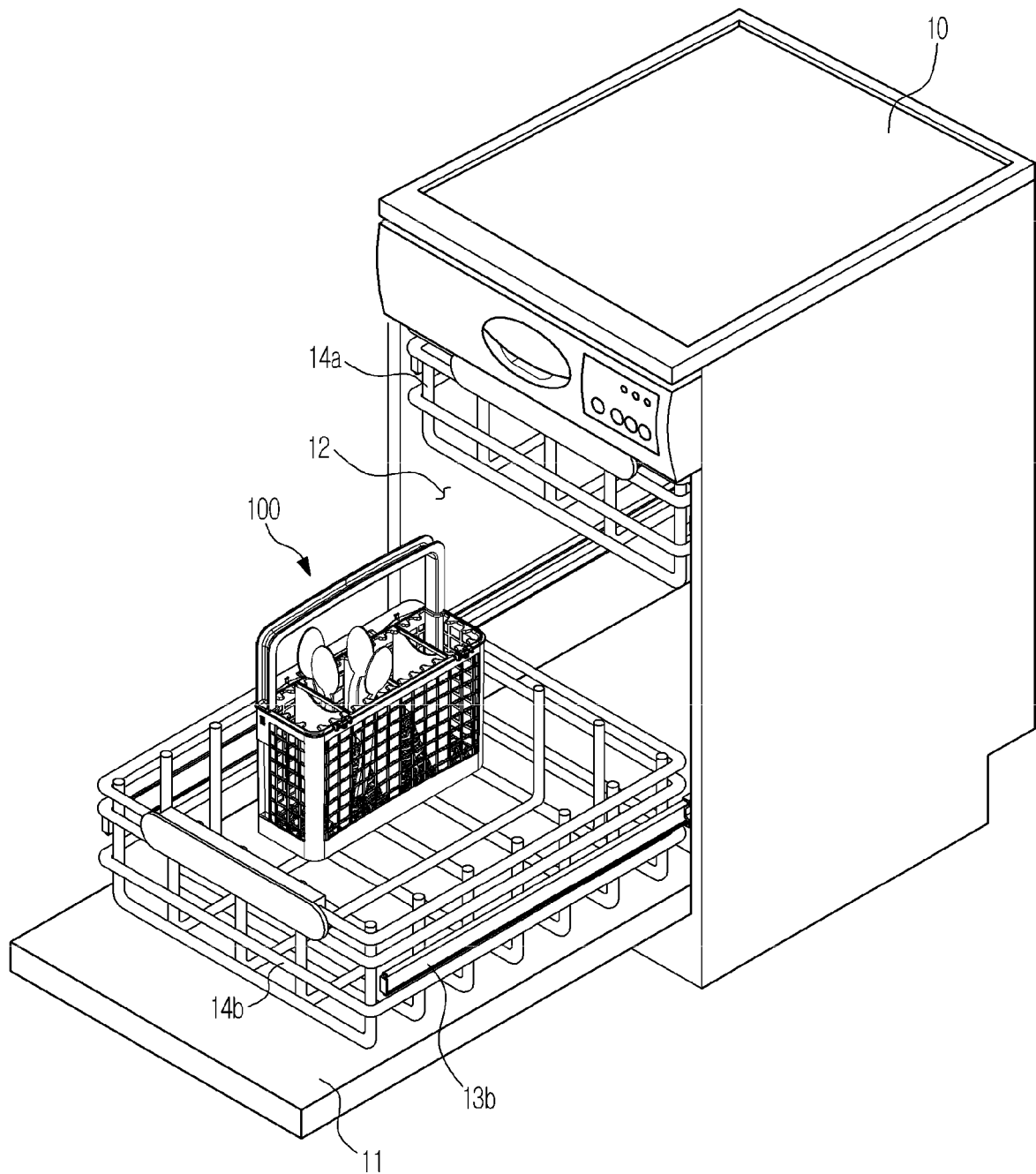


FIG. 3

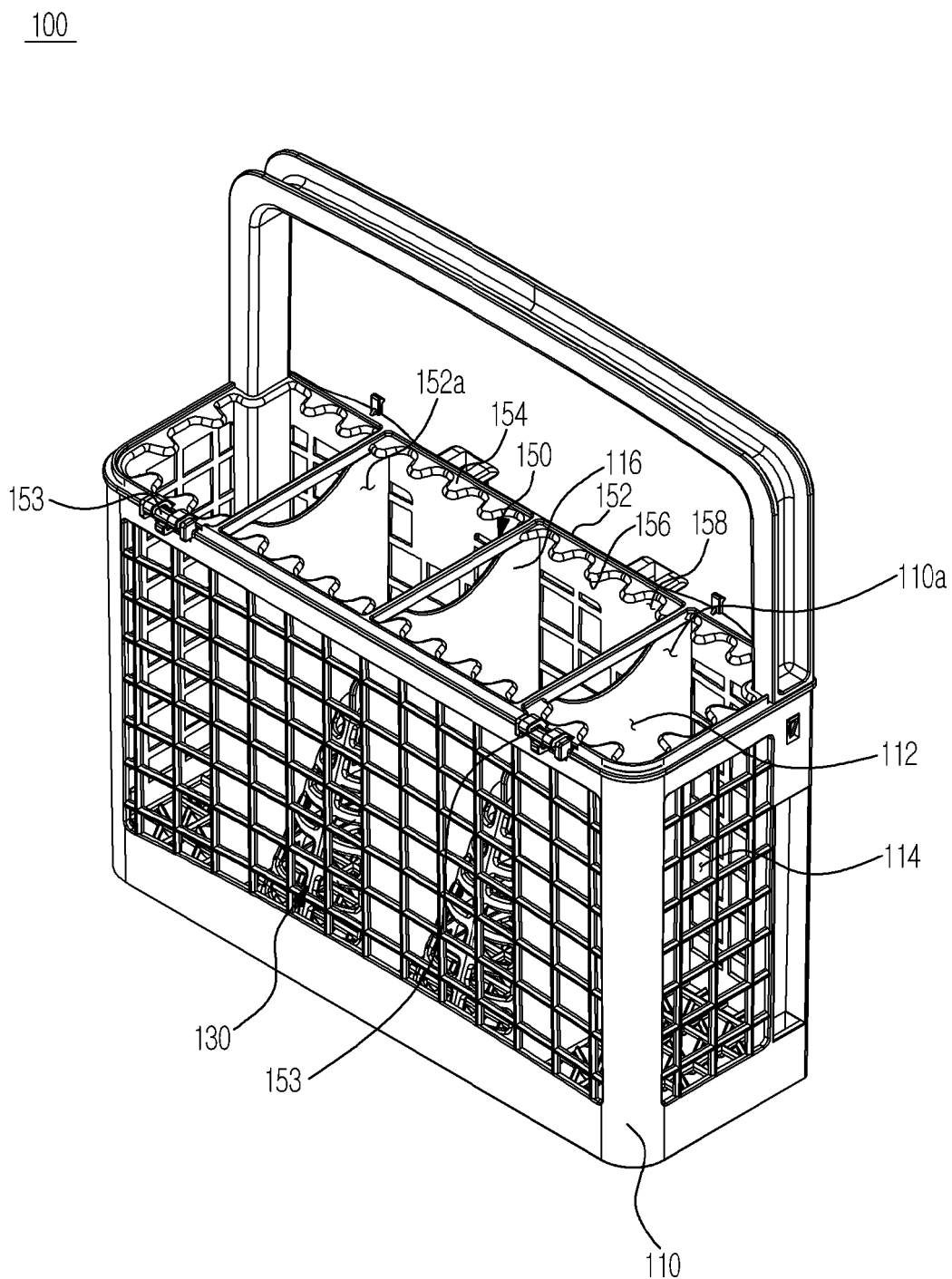


FIG. 4

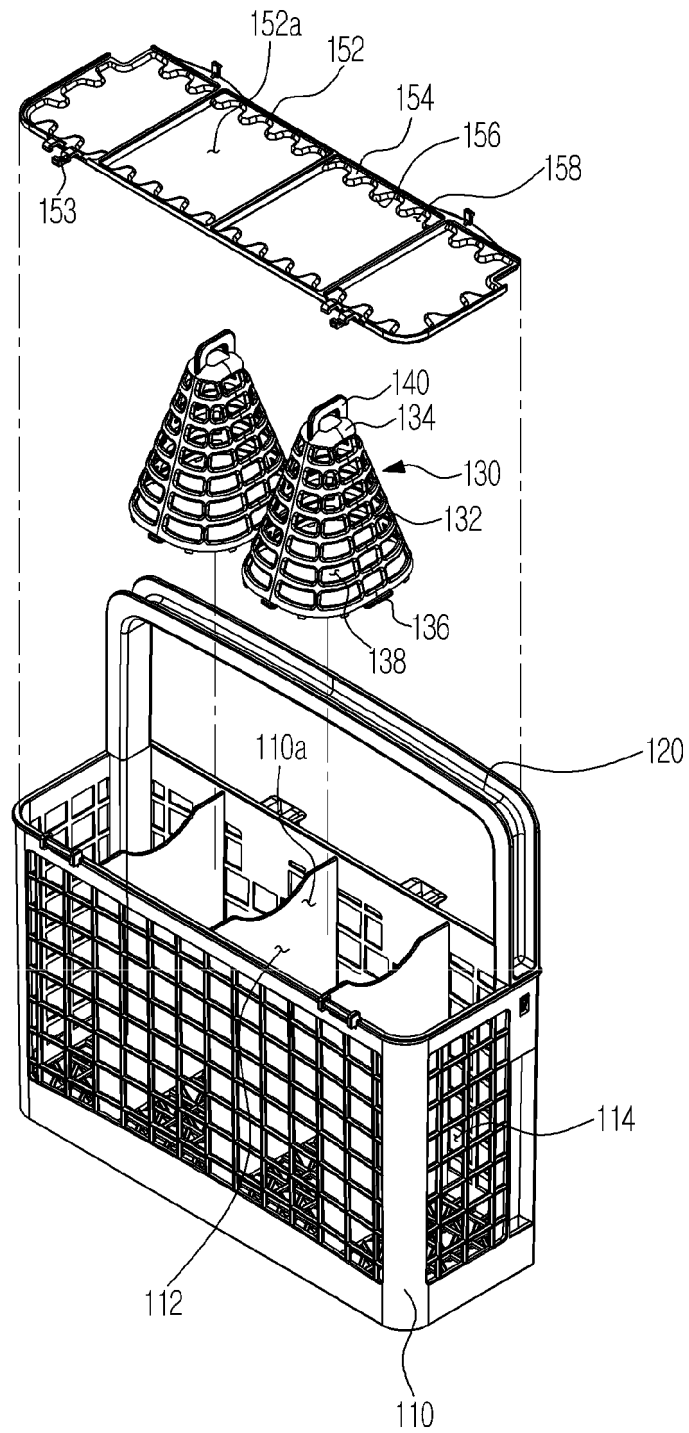


FIG. 5

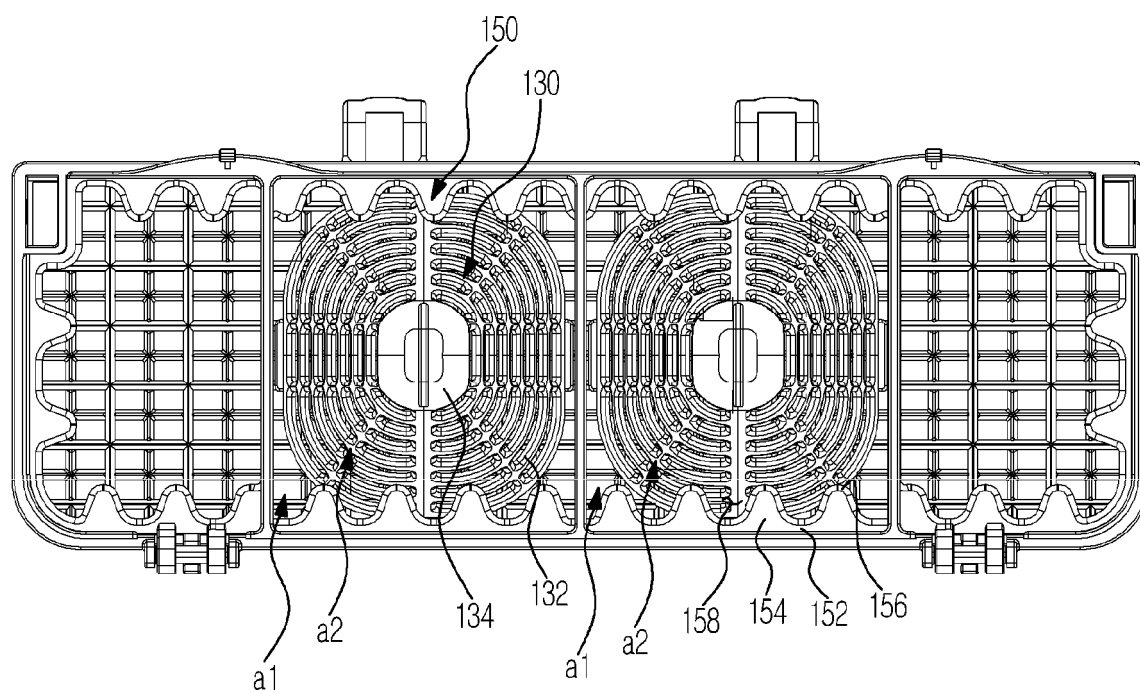


FIG. 6

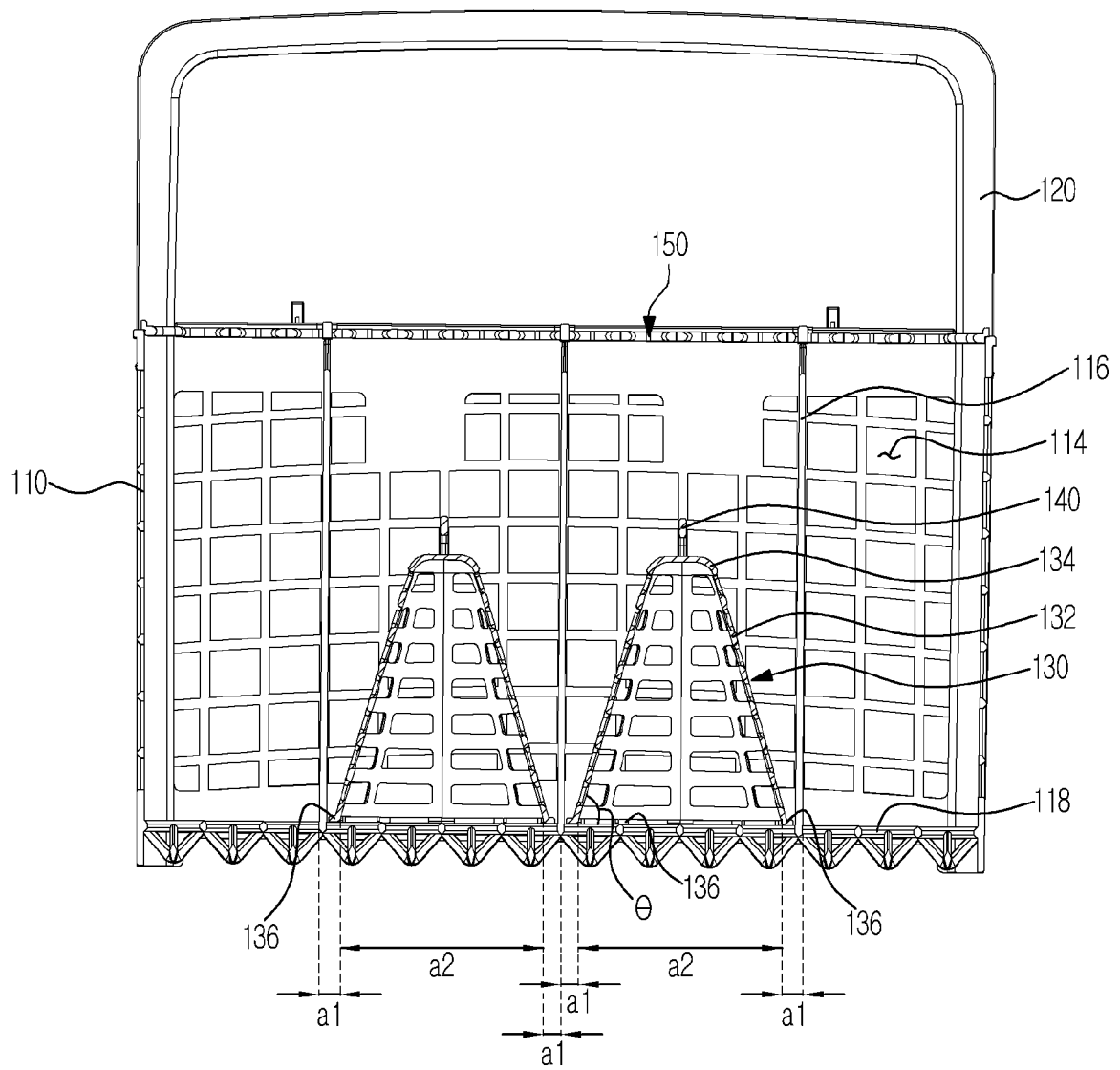


FIG. 7

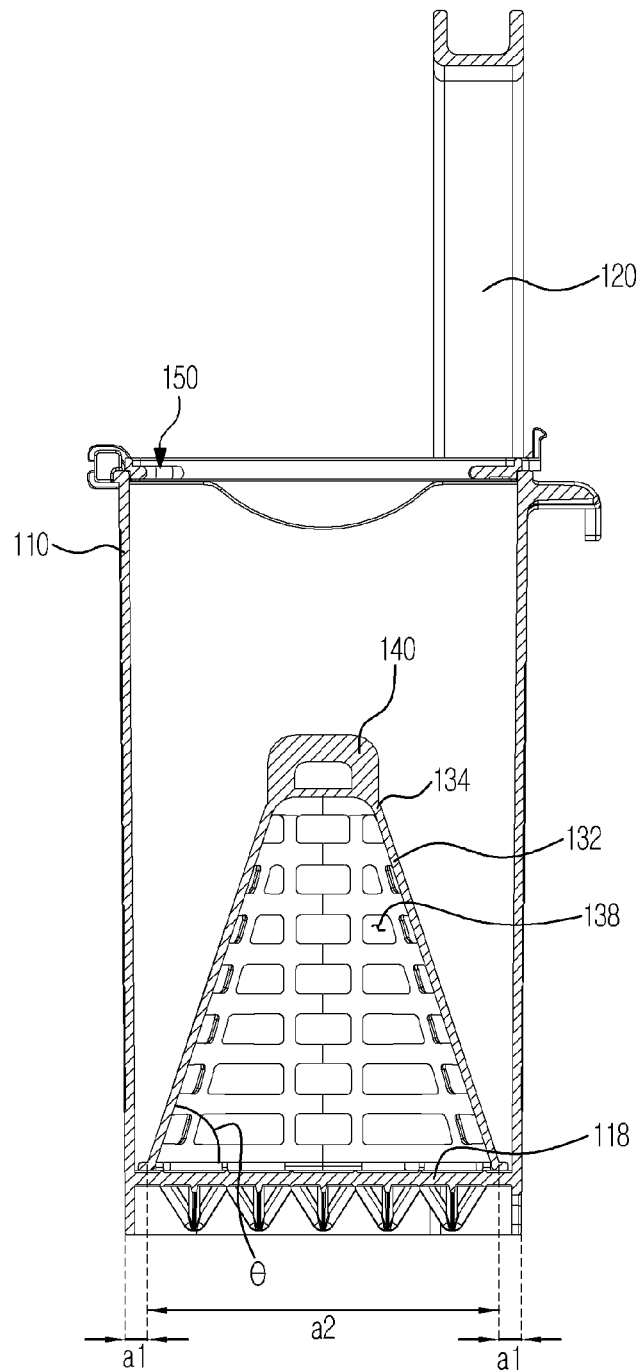


FIG. 8

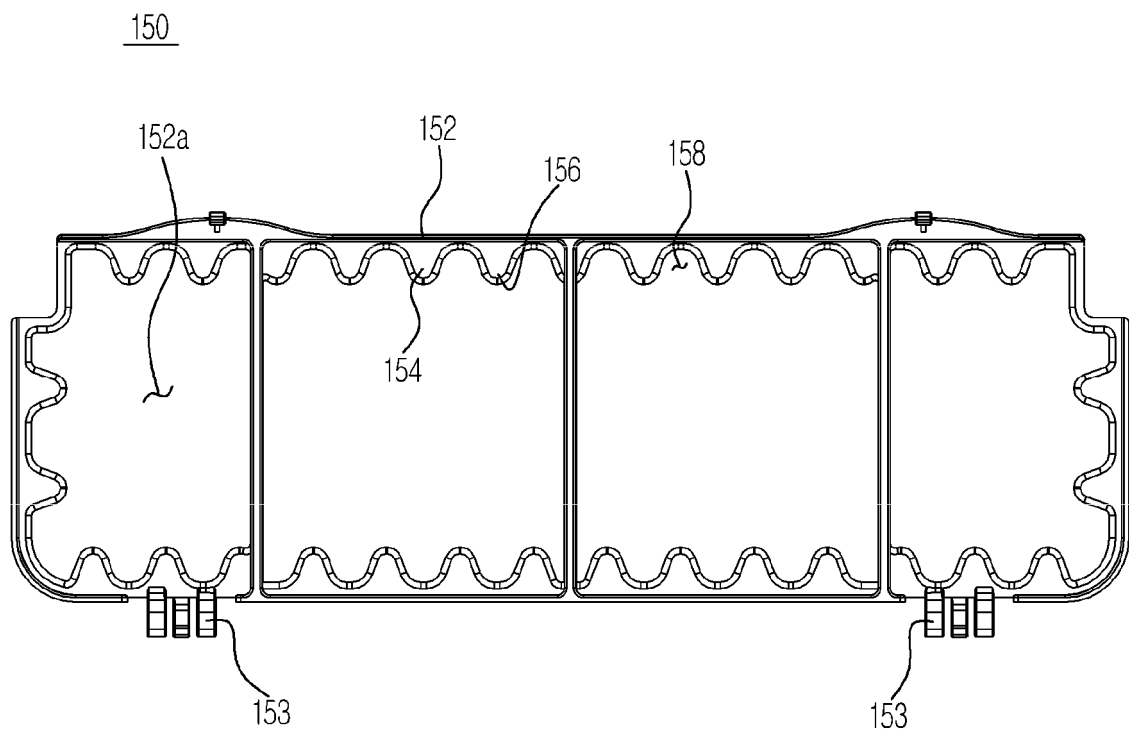


FIG. 9

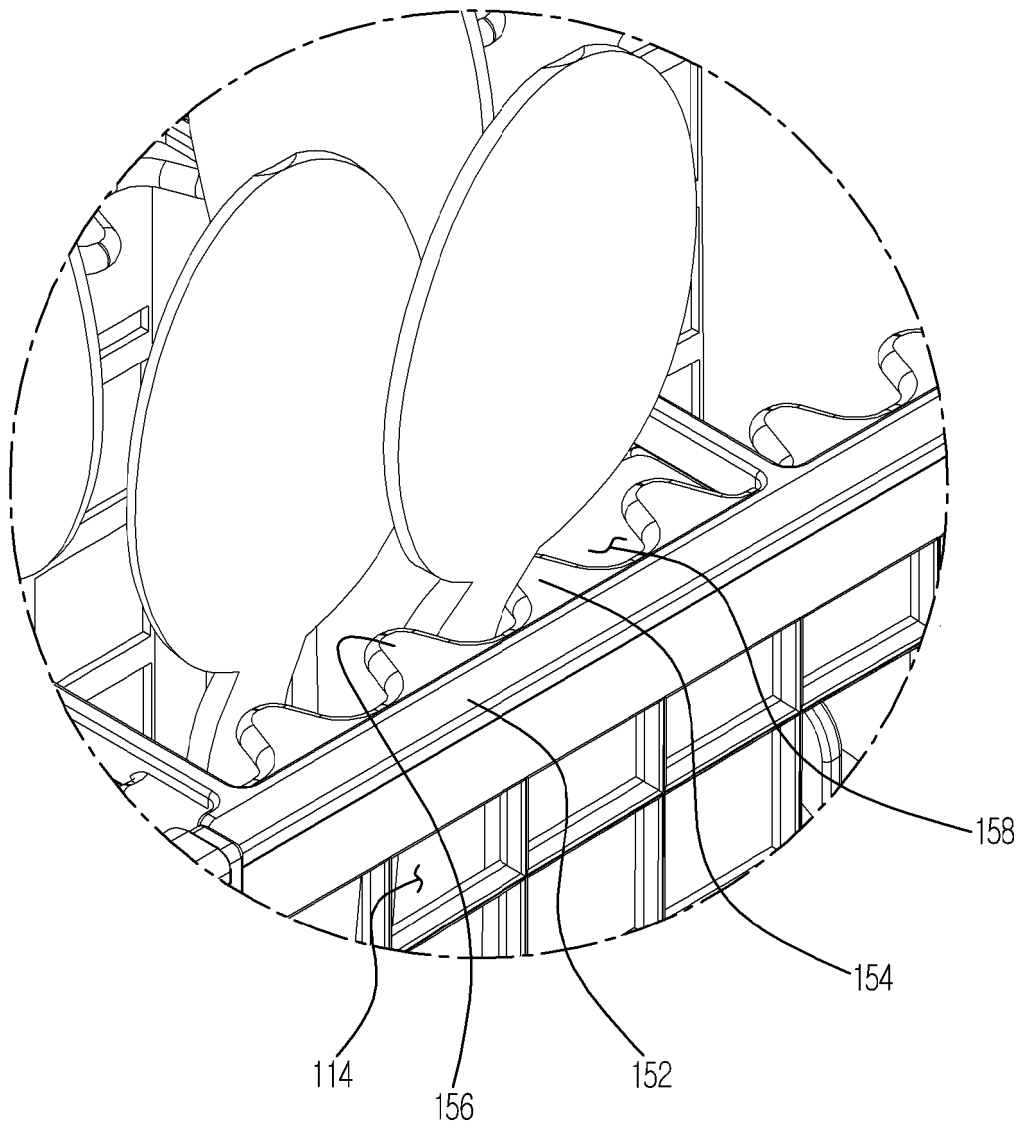


FIG. 10

230

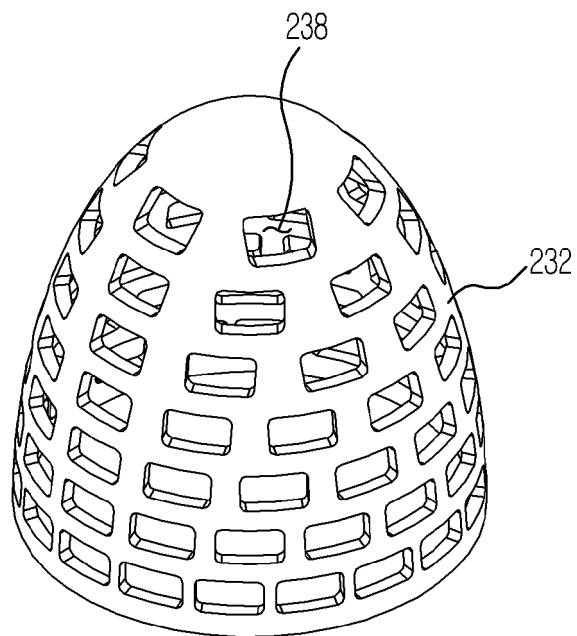
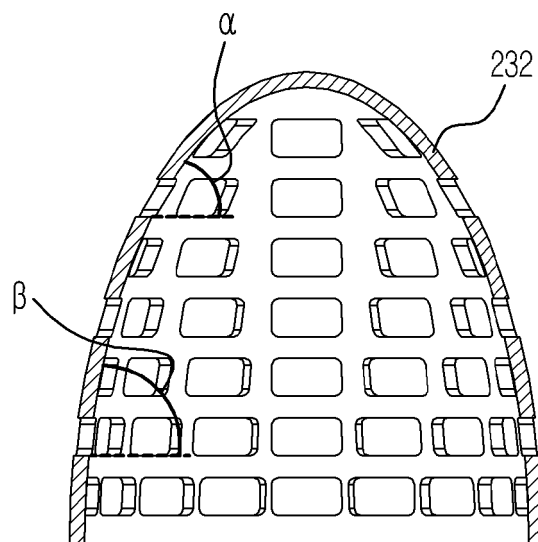


FIG. 11



REFERENCES CITED IN THE DESCRIPTION

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