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(54) **DOOR BASKET FOR REFRIGERATOR**

TÜRKORB FÜR KÜHLSCHRANK

PANIER DE PORTE POUR RÉFRIGÉRATEUR

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Description

Technical Field

[0001] The present invention relates to a door basket for a refrigerator.

Background Art

[0002] Generally, a refrigerator is a device that stores foods at a low temperature and is configured to store foods in a freezing state or a refrigerating state according to a state of foods.

[0003] The inside of the refrigerator is cooled by a continuously supplied refrigerant, wherein the refrigerant is continuously generated by a heat exchanging operation with a refrigerant that repetitively subjects to compression-condensation-expansion-evaporation cycles. And, the refrigerant supplied to the inside of the refrigerator is uniformly transferred to the inside of the refrigerator by convection such that foods inside the refrigerator can be stored at a desired temperature.

[0004] And, a rear surface of the refrigerator door and a receiving space inside the refrigerator are provided with a plurality of drawers, shelves, and baskets, and the like that can store foods at an optimum state. Therefore, the receiving space of the door and inside of the refrigerator is partitioned by these drawers, shelves, and baskets, such that foods can be properly stored.

[0005] In particular, when foods, such as cheese and butter, are excessively exposed to a cooling air while maintaining a low temperature state, these foods are excessively cooled to lead to degradation of quality or to evaporate moisture, which leads to discoloration or damage. Therefore, a space is needed to maintain a uniform storage environment for these foods. To this end, a separate storage space should be formed at a rear surface of the door of the refrigerator. And, the storage space is mounted on the rear surface of the door of the refrigerator and can be provided in the basket shape where an upper surface is opened. And, the opened storage space is covered with a separate cover member. And, the cover member is rotatably provided to the basket. A door basket according to the preamble of claim 1 is disclosed in KR 970 055 611 U.

Disclosure of Invention

Technical Problem

[0006] It is an object of the present invention to provide a structure that firmly fixes a rotational shaft of a cover member to a basket to prevent a cover member from separating or shaking.

Technical Solution

[0007] According to the invention this object is achieved by a door basket for a refrigerator as defined in claim 1.

Advantageous Effects

[0008] With the door basket for the refrigerator according to the embodiment of the present invention forming the above-mentioned configuration, there is an effect in that the cover member is rotatably coupled to the basket as well as is separated from the basket.

Brief Description of the Drawings

[0009]

FIG. 1 is a perspective view showing an inside of a refrigerator to which a door basket according to an embodiment of the present invention is applied;

FIG. 2 is a perspective view showing an external appearance of the door basket for the refrigerator according to the embodiment of the present invention;

FIG. 3 is an exploded perspective view showing the door basket for the refrigerator according to the embodiment of the present invention; and

FIG. 4 is a cross-sectional view taken line along I-I of FIG. 2.

Mode for the Invention

[0010] Hereinafter, detailed embodiments of the present invention will be described with reference to the accompanying drawings. An idea of the present invention is not limited to the embodiments, but those skilled in the art understanding the ideas of the present invention can propose other embodiments within the same idea range.

[0011] FIG. 1 is a perspective view showing an inside of a refrigerator to which a door basket according to an embodiment of the present invention is applied.

[0012] Prior to describing the present invention, a refrigerator shown in the drawings is a side y side type but is not limited thereto. In order words, it is to be noted that the present invention can be applied to all types of refrigerators on which a door basket can be mounted, such as a top mount type where a freezing compartment is located at an upper side and a bottom freeze type where a freezing compartment is located at a lower side.

[0013] Referring to FIG. 1, a refrigerator 1 according to an embodiment of the present invention includes a main body 10 having a storage space provided therein, a barrier 12 that partitions the storage space, and a door that selectively shields the storage space.

[0014] In detail, the storage space is partitioned into a freezing compartment 20 and a refrigerating compartment 30 by the barrier 12 and each of the freezing compartment 20 and the refrigerating chamber 30 is selectively shielded by a door 22 for the freezing compartment and a door 32 for the refrigerating compartment.

[0015] Although not shown, a front surface of the door 22 for the freezing compartment may be provided with a dispenser that can take out a purified water or ice without opening the door 22 for the freezing compartment from the external. And, the door 22 for the freezing compartment or the door 32 for the refrigerating compartment is provided with a separate home bar, making it possible to take out foods received in the storage space without opening the door 22 for the freezing compartment or the door for the refrigerating compartment 32.

[0016] Meanwhile, the storage space of an inner side of the main body 10 of the refrigerator and the rear surfaces of the doors 22 and 32 are provided with a plurality of drawers 16 and shelves 14 for receiving foods.

[0017] In detail, an inner side of the main body 10 of the refrigerator is provided with a plurality of shelves 14 that partition the storage space into a plurality of partitions up and down and is provided with a plurality of drawers 16 that forms separate independent receiving spaces at an inner side of the storage space.

[0018] The rear surfaces of the doors 22 and 32 are provided with one or more basket 15, wherein the basket 15 stores foods that are stored in a container having a long length, such as a bottle or a can.

[0019] Meanwhile, one side of the rear surfaces of the doors 22 and 32 may be provided with a door basket 100 for storing dairy products. A part of the upper part of the door basket 100 may be selectively opened and closed by the cover member. Foods stored inside the door basket 100 can avoid the direct contact with a cooling air by the cover member. Therefore, foods, which are stored inside the door basket 100 can avoid an excessively cooled phenomenon or an evaporation phenomenon of moisture. The detailed structure of the door basket 100 will be described in more detail with reference to the drawings.

[0020] FIG. 2 is a perspective view showing an external appearance of the door basket for the refrigerator according to the embodiment of the present invention, FIG. 3 is an exploded perspective view showing the door basket for the refrigerator according to the embodiment of the present invention, and FIG. 4 is a cross-sectional view taken along line I-I of FIG. 2.

[0021] Referring to FIGS. 2 to 4, the door basket 100 according to an embodiment of the present invention includes a case 120 that forms a receiving space 121, a cover 140 that selectively shields the receiving space 121, and coupling parts 160 that are formed at both sides of the cover 140.

[0022] In detail, the case 120 includes a base 124 that supports foods stored in the door basket 100 and a side wall 126 that is extended from both side ends of the base 124 to an upper part. The side wall 126 is extended to the upper side, having a width occupying about a half of a width of a side surface of the base 124. And, a front end of the side wall 126 is smoothly curved at a predetermined curvature. And, the side surface of the case 120 other than the side wall 126 is inserted into the rear surface of the door for the refrigerator. In other words, the rear surface of the door for the refrigerator is collapsed at a predetermined depth and the side surface of the the case 120 other than the side wall 126 is received in a collapsed part. And, the rear end part of the side surface 126 forms a vertical surface and is closely attached to an upper end of the rear surface of the door for the refrigerator and edges of both side ends thereof (see FIG. 1). And, the rear surface of the case 120 and the side surface part other than the side wall 126 is closely attached to an inner circumferential surface of the collapsed part in the rear surface of the door for the refrigerator. Therefore, in a state where the cover 140 is closed, the storage space is formed by the cover 140, the base 124, and the rear surface of the door for the refrigerator.

[0023] The side surface part of the case 120 other than the part the side wall 126 is formed with the case mounting part 128. And, the rear surface of the door for the refrigerator is formed with a protruding part coupled with the case mounting part 128.

[0024] Also, the front end of the base 124 is formed with a sill protruded toward an upper side, thereby preventing the received foods from falling down. And, any point of the side wall 126 is formed with a coupling hole 127 into which the coupling part 160 is inserted. And, at the upper end of the case mounting part 128, that is, at the upper end of the side surface part of the case 120 other than the side wall 126, a cover hanging end 129 is extended in a horizontal direction. The cover hanging end 129 is interfered with one end of the cover 140, thereby limiting a rotational angle of the cover 140.

[0025] The cover 140 includes a lower surface and a rear surface, which takes in opened form, and a side surface part having the same form as the side wall 126. And, the cover 140 is made of a transparent or translucent material so as to able to easily recognize foods received in an inner side of the case 120 from the external.

[0026] The cover 140 forms an upper surface part 144 of the cover upper surface and a side surface part 146 of the cover. And, a rear end part of the cover 140 is closely attached to the upper end of the rear surface of the door for the refrigerator and the edges of both side surfaces thereof. And, the cover 140 can be rotated until the rear end part thereof contacts the cover hanging end 129.

[0027] And, the lower end of the front surface of the cover upper surface part 144 may be formed with a handle 145. The handle 145 is formed so that a center of the lower end of the upper surface part 144 of the cover is protruded forward so as to able to grip the handle by user' fingers or the handle 145 may be mounted with a separate member for gripping it.

[0028] The coupling part 160, which is inserted into the coupling hole 127, is protruded from an outer circumferential surface of the side surface part 146 of the cover.

[0029] In detail, the coupling part 160 is formed of a hollow shape and the end part thereof is formed with a

separation preventing means 161 that prevents the separation of the coupling part 160 after the coupling part 10 is inserted into the coupling hole 127.

[0030] The separation preventing means 161 includes a hanging protrusion 162 in a stripe form convexedly protruded in a radial direction from the end of the coupling part 160 and a cutting part and a cutting part 164 that divides the coupling part 160 into a plurality of pieces. In detail, the cutting part 164 starts from any point spaced from an extension starting point of the coupling part 160 and is extended to the end of the coupling part 160. And, the cutting part 164 takes a form where a cutting width is increased as going to the end of the coupling part 160.

[0031] Also, an outer diameter of the hanging protrusion 162 is formed to be larger than an inner diameter of the coupling hole 127, which prevents a phenomenon where the coupling part 160 is spontaneously separated from the coupling hole 127 after it is inserted into the coupling hole 127. And, the coupling part 160 is formed of a plastic injection material having slight elastic force. Therefore, when a part of the hanging protrusion 162 is inserted into the coupling hole 127, pieces forming the coupling part 160 is bent in a central direction of the coupling part 160. In other words, an outer diameter of the end of the coupling part 160 becomes narrower and narrower as an interval of the cutting part 160 becomes narrow. And, when the coupling part 160 is completely inserted into the coupling hole 127, the outer diameter of the end of the coupling part 160 is again expanded while the pieces forming the coupling part 160 is returned to an original state. Then, the hanging protrusion 162 penetrates through the coupling hole 127 and is then hung to the outer circumferential surface of the side wall 126.

[0032] Meanwhile, when the coupling part 160 is inserted into the coupling hole 127, the outer circumferential surface of the coupling part 160 contacting the inner circumferential surface of the coupling hole 127 may be formed with a guide groove 166. In other words, when the inner circumferential surface of the coupling hole 127 is inserted into the guide groove 166, such that when the cover 140 is rotated, the shaking of the cover in the left and right directions can be prevented.

[0033] Hereinafter, the operation of the door basket 100 having the above-mentioned configuration will be described.

[0034] In order to assembly the door basket 100, the coupling part 160 formed at both sides of the case 120 is inserted into the coupling hole 127 formed at the side wall 126. In other words, the hanging protrusion 162 having a larger diameter than the coupling hole 127 is forcibly inserted into the coupling hole 127. At this time, the coupling part 160 is shrunk by the cutting part 164 formed by cutting a part of the coupling part 160 and then, when the coupling part 160 is completely inserted into the coupling hole 127, it is spread, such that the coupling part 160 is firmly coupled with coupling hole 127 so as not to be separated from the coupling hole.

[0035] Therefore, the cover 140 is firmly coupled with the case 140, which prevents the cover 140 from moving and/or separated left and right. In addition, the outer circumferential surface of the coupling part 160 is formed with the guide groove 160 and the inner circumferential surface of the coupling hole 127 is received in the guide groove 160, such that the cover 140 can be rotated without the shaking.

Claims

1. A door basket for a refrigerator comprising:

a case (120) that is coupled to a rear surface of a door for the refrigerator and defines a receiving space (121), said case (120) has coupling holes (127) at both side surfaces thereof;
a cover (140) that is rotatably coupled to the case (120) to selectively shield the storage space;
characterized in that the door basket comprises:

coupling parts (160) that respectively protrude from outer circumferential surfaces of both side surface parts (146) of the cover (140) and penetrate through the coupling holes (127) of the case (120),
wherein each coupling part (160) is formed in a hollow shape and is provided with a separation preventing part that prevents the cover (140) from being separated from the case (120),
wherein the coupling part (160) includes:

a guide groove (166) that is formed on an outer circumferential surface of the coupling part (160), and wherein an inner circumferential surface of the coupling hole (127) contacts the guide groove (166) of the coupling part (160);
a hanging protrusion (162) that is protruded in a radial direction from an end of the coupling part;
a plurality of cutting parts (164) that divide the coupling part (160) into a plurality of pieces,
wherein each cutting part (164) starts from any point spaced from an extension starting point of the coupling part (160) and extends to the end of the coupling part.

2. The door basket for a refrigerator according to 1, wherein a width of the cutting part (164) is widened as going to the end of the coupling part (160).

3. The door basket for a refrigerator according to 1, wherein the plurality of pieces of the coupling part

(160) are bent in a direction where the width of the cutting part becomes narrow while the pieces are inserted into the coupling hole (127), and after the plurality of pieces of the coupling part (160) pass through the coupling hole, they are spread in an original state such that they are hung to the side surface of the case (120).

Patentansprüche

1. Türkorb für einen Kühlschrank, aufweisend:

ein Gehäuse (120), das mit einer Rückfläche einer Tür des Kühlschranks gekoppelt ist und einen Aufnahmeraum (121) definiert, wobei das Gehäuse (120) an seinen beiden Seitenflächen Kopplungslöcher (127) hat;
einen Deckel (140), der drehbar mit dem Gehäuse (120) gekoppelt ist, um den Aufbewahrungsraum selektiv zu bedecken;
dadurch gekennzeichnet, dass der Türkorb aufweist:

Kopplungsteile (160), die jeweils aus Außenumfangsflächen beider Seitenflächenteile (146) des Deckels (140) vorspringen und durch die Kopplungslöcher (127) des Gehäuses (120) hindurch dringen,
wobei jeder Kopplungsteil (160) in einer hohlen Form gebildet ist und mit einem Trennverhinderungsteil versehen ist, der verhindert, dass der Deckel (140) von dem Gehäuse (120) getrennt wird,
wobei der Kopplungsteil (160) aufweist:

eine Führungsrille (166), die an einer Außenumfangsfläche des Kopplungsteils (160) gebildet ist, und wobei eine Innenumfangsfläche des Kopplungslochs (127) die Führungsrille (166) des Kopplungsteils (160) kontaktiert;
einen hängenden Vorsprung (162), der von einem Ende des Kopplungsteils in eine radiale Richtung vorspringt;
mehrere eingeschnittene Teile (164), die den Kopplungsteil (160) in mehrere Stücke unterteilen,
wobei jeder eingeschnittene Teil (164) an irgendeinem Punkt, der von einem Erstreckungsstartpunkt des Kopplungsteils (160) beabstandet ist, beginnt und sich zu dem Ende des Kopplungsteils erstreckt.

2. Türkorb für einen Kühlschrank nach Anspruch 1, wobei eine Breite des eingeschnittenen Teils (164) sich zum Ende des Kopplungsteils (160) hin erweitert.

3. Türkorb für einen Kühlschrank nach Anspruch 1, wobei, während die Stücke in das Kopplungsloch (127) eingesetzt werden, die mehreren Stücke des Kopplungsteils (160) in eine Richtung gebogen werden, so dass sich die Breite des eingeschnittenen Teils verengt, und nach Durchgang der mehreren Stücke des Kopplungsteils (160) durch das Kopplungsloch sie sich in einen ursprünglichen Zustand ausdehnen, so dass sie zur Seitenfläche des Gehäuses (120) hängen.

Revendications

1. Panier de porte pour un réfrigérateur comprenant :

un carter (120) qui est couplé à une surface arrière d'une porte pour le réfrigérateur et définit un espace de réception (121), ledit carter (120) comportant des trous de couplage (127) sur les deux surfaces latérales de celui-ci ;
un couvercle (140) qui est couplé, de manière à pouvoir tourner, au carter (120) pour protéger sélectivement l'espace de stockage ;
caractérisé en ce que le panier de porte comprend :

des parties de couplage (160) qui font respectivement saillie depuis des surfaces circonférentielles extérieures de deux parties de surfaces latérales (146) du couvercle (140) et qui pénètrent à travers les trous de couplage (127) du carter (120),
dans lequel chaque partie de couplage (160) présente une forme creuse et est pourvue d'une partie de prévention de séparation qui empêche que le couvercle (140) ne soit séparé du carter (120),
dans lequel la partie de couplage (160) comprend :

une rainure de guidage (166) qui est formée sur une surface circonférentielle extérieure de la partie de couplage (160), et
dans lequel une surface circonférentielle intérieure du trou de couplage (127) est en contact avec la rainure de guidage (166) de la partie de couplage (160) ;

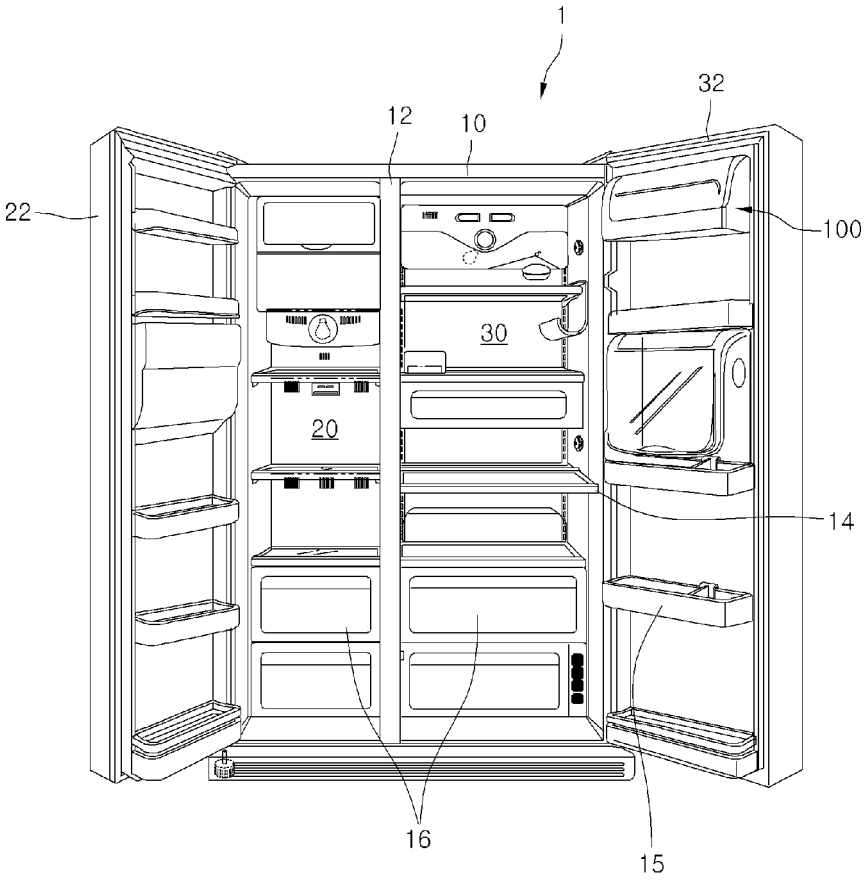
une protubérance en suspension (162) qui fait saillie dans un sens radial depuis une extrémité de la partie de couplage ;
une pluralité de parties de découpe (164) qui divisent la partie de couplage (160) en une pluralité de portions,
dans lequel chaque partie de découpe (164)

commence à n'importe quel point espacé d'un point de début d'extension de la partie de couplage (160) et s'étend jusqu'à l'extrémité de la partie de couplage.

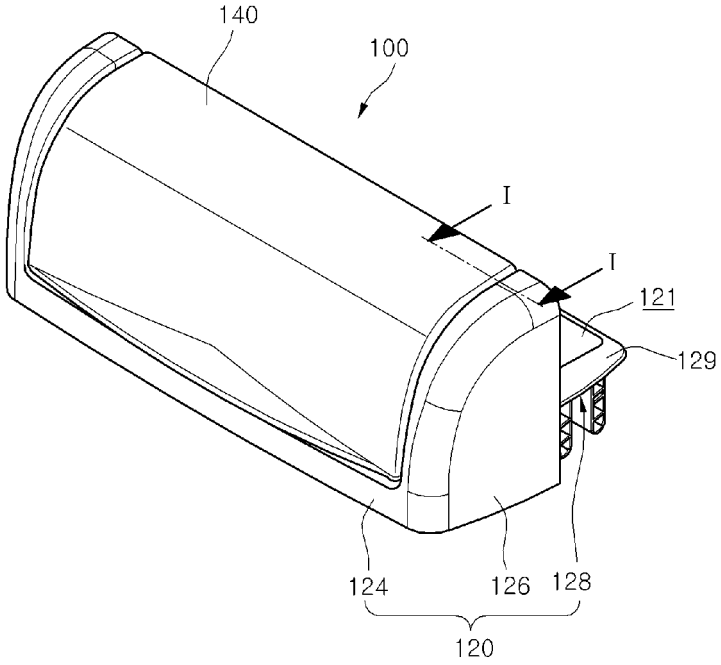
2. Panier de porte pour un réfrigérateur selon la revendication 1, dans lequel une largeur de la partie de découpe (164) augmente en se rapprochant de l'extrémité de la partie de couplage (160).

3. Panier de porte pour un réfrigérateur selon la revendication 1, dans lequel la pluralité de portions de la partie de couplage (160) sont pliées dans un sens dans lequel la largeur de la partie de découpe se réduit pendant que les portions sont insérées dans le trou de couplage (127), et
après que la pluralité de portions de la partie de couplage (160) ont traversé le trou de couplage, elles sont déployées dans un état initial de manière à être suspendues à la surface latérale du carter (120).

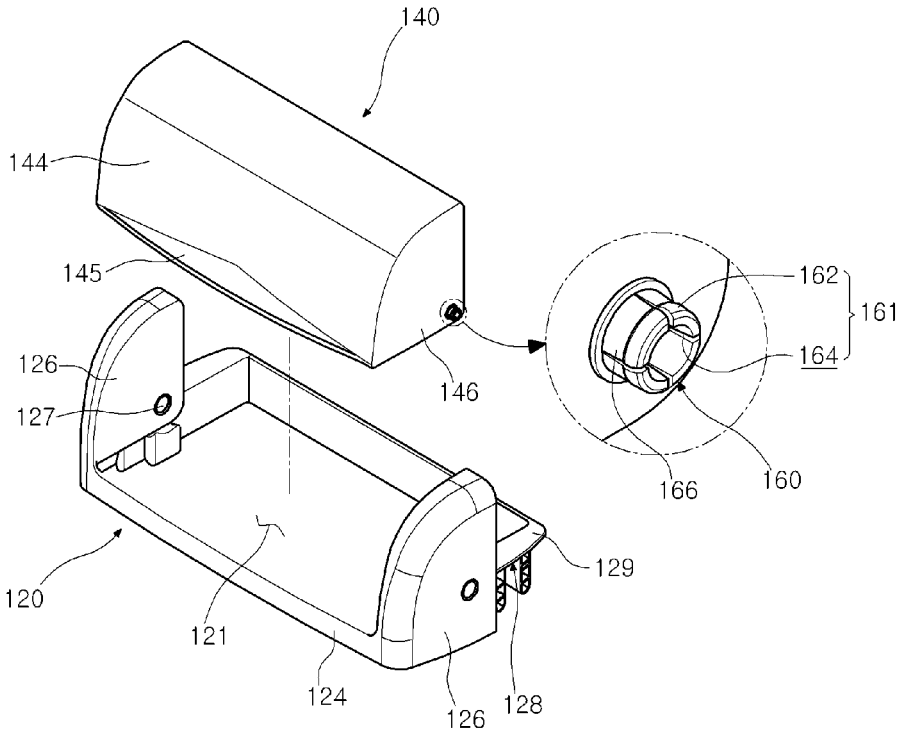
[Fig. 1]



[Fig. 2]



[Fig. 3]


140
144
145
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127
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121
124
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128
129
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162
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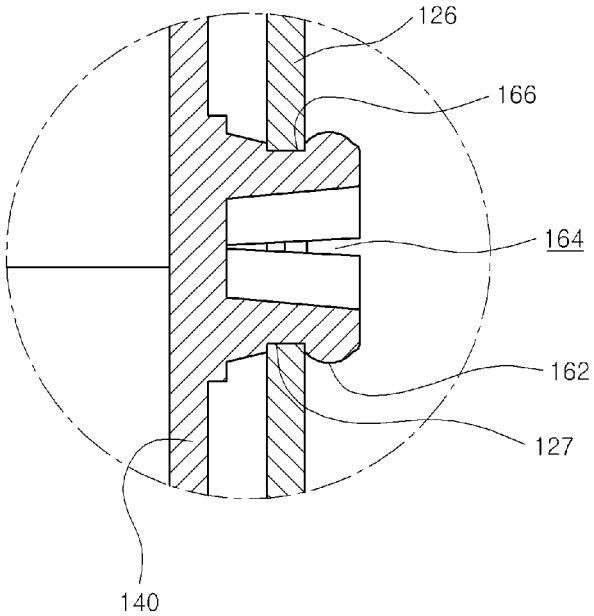
160

[Fig. 4]


126
166
164
162
127
140

REFERENCES CITED IN THE DESCRIPTION

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