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(54) Title: A DISHWASHER COMPRISING A MODULAR CUTLERY BASKET

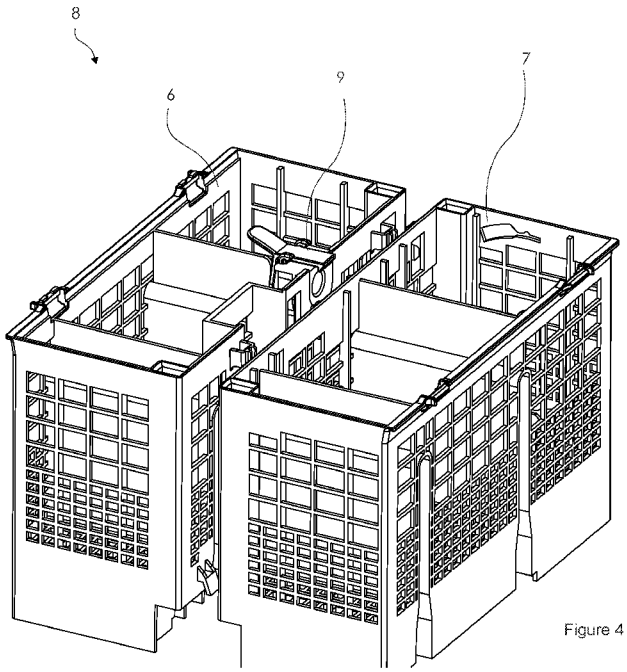


Figure 4

(57) Abstract: The present invention relates to a dishwasher (1) comprising a body (2); a washing tub (3) which is disposed in the body (2) and wherein the washing process is performed; at least one spraying member (4) which sprays water into the washing tub (4); at least one rack (5) which is disposed in the washing tub (3) and whereon the kitchen items are placed; and a cutlery basket (8) which is suitable to be used on the rack (5), whereon items such as forks, spoons, etc. are placed, which has a first basket (6) and a second basket (7) almost symmetrical to each other, and which has a closed position wherein the large surfaces of the first basket (6) and the second basket (7) contact with each other, and an open position wherein the first basket (6) and the second basket (7) are separated from each other.

[Continued on next page]

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A DISHWASHER COMPRISING A MODULAR CUTLERY BASKET

The present invention relates to a dishwasher comprising a cutlery basket.

Washing small items with a large number of recesses in dishwashers is quite difficult. Therefore, cutlery baskets are used in the washing tub such that small items such as cutlery are washed properly and do not move therein. Thus, the washed items are enabled to be cleaner and any deformation to any items and the machine resulting from the movement of the items is prevented. The cutlery baskets can be placed on the racks in the washing tub whereon kitchen items are placed, or as an additional basket in the washing tub. The cutlery baskets placed close to the ceiling as an additional basket may cause a reduction in the washing tub volume. The cutlery baskets placed on the rack generally have the form of a cube, etc. Therefore, the cutlery baskets may prevent kitchen items from being placed on the rack and cannot respond to user requests. The state of the art modular cutlery baskets cannot provide rigidity to keep the basket parts together, especially when there is a load thereon, causing problems in terms of security.

In the state of the art International Patent Application No. WO2011154386, a cutlery basket is disclosed, which provides variable storage space by means of the storing units that move with respect to each other.

The aim of the present invention is the realization of a dishwasher comprising a cutlery basket which can be used according to the needs of the user.

The dishwasher realized in order to attain the aim of the present invention, explicated in the first claim and the respective claims thereof, comprises a body; a washing tub which is disposed in the body; at least one rack which is disposed in the washing tub; at least one spraying member; and a cutlery basket which is suitable to be used on the rack. The kitchen items are placed onto the racks in the washing tub to be washed . The water is sprayed onto the rack by means of the spraying member, thus performing the cleaning process. The cutlery baskets are used for kitchen items such as forks, spoons, etc. Thus, small-sized kitchen items can be cleaned better and washed in a safe manner. The cutlery basket comprises a first basket and a second basket which are almost

symmetrical to each other. The cutlery basket has a closed position wherein the large surfaces of the first basket and the second basket contact with each other, and an open position wherein the first basket and the second basket are separated from each other. Thus, the cutlery basket can be used in various positions.

The dishwasher of the present invention comprises a locking mechanism having a locking member which is provided on the first basket and which extends towards the second basket and a housing which is provided on the second basket and which receives the locking member when the cutlery basket is in the closed position. The locking member extends from the first basket to the second basket and engages with the housing. Thus, the first basket and the second basket are enabled to be locked to each other.

In an embodiment of the present invention, the dishwasher comprises a positioning member which can be attached to/detached from the first basket. By means of a channel provided on the positioning member, the positioning member can be attached to an edge of the first basket. By means of the locking member engaging with a shaft provided on the positioning member, the locking mechanism enables the cutlery basket between the open position and the closed position.

In an embodiment of the present invention, the dishwasher comprises the locking member having a coupling member, a movement transmission member and an actuation member. When the actuation member is triggered, the coupling member moves circularly in the upward direction and thus, the movement transmission member moves circularly in the downward direction. Thus, the coupling member engages with the housing or leaves the housing. The coupling member enables the cutlery basket to move between the open position and the closed position.

In an embodiment of the present invention, the dishwasher comprises the locking mechanism having a spring provided on the positioning member. When the actuation member is triggered, the movement transmission member applies pressure on the spring. Thus, the coupling member leaves the housing by moving circularly in the upward direction. When the actuation member is not triggered, the spring continuously pushes the movement transmission member and ensures that the coupling member

remains in a horizontal position. Thus, the cutlery basket is prevented from moving between the open position and the closed position in an uncontrolled manner.

In an embodiment of the present invention, the dishwasher comprises the locking member having a claw which is provided at the end of the coupling member and which engages with the housing. When the cutlery basket is in the closed position, the claw fits into the housing.

By means of the present invention, a dishwasher is realized, comprising a cutlery basket having an easy-to-use locking mechanism.

The dishwasher realized in order to attain the aim of the present invention is illustrated in the attached figures, where,

Figure 1 - is the perspective view of the dishwasher.

Figure 2 - is the perspective view of the cutlery basket.

Figure 3 - is the exploded view of the locking mechanism.

Figure 4 - is the perspective view of the cutlery basket.

The elements illustrated in the figures are numbered as follows:

1- Dishwasher

2- Body

3- Washing tub

4- Spraying member

5- Rack

6- First basket

7- Second basket

8- Cutlery basket

9- Locking member

10- Housing

11- Locking mechanism

12- Positioning member

13- Shaft

14- Channel

15- Coupling member

16- Movement transmission member

17- Actuation member

18- Spring

19- Claw

The dishwasher (1) comprises a body (2); a washing tub (3) which is disposed in the body (2) and wherein the washing process is performed; at least one spraying member (4) which sprays water into the washing tub (4); at least one rack (5) which is disposed in the washing tub (3) and whereon the kitchen items are placed; and a cutlery basket (8) which is suitable to be used on the rack (5), whereon items such as forks, spoons, etc. are placed, which has a first basket (6) and a second basket (7) almost symmetrical to each other, and which has a closed position wherein the large surfaces of the first basket (6) and the second basket (7) contact with each other, and an open position wherein the first basket (6) and the second basket (7) are separated from each other. The washing process is performed by placing the kitchen items onto the rack (5) and delivering water by the spraying member (4). Small kitchen items such as forks and spoons are washed in the cutlery baskets (8). The cutlery basket (8) comprises the first basket (6) and the second basket (7). The cutlery basket (8) has a closed position where the first basket (6) and the second basket (7) are used together and an open position where the first basket (6) and the second basket (7) can be used separately. Thus, the usage area in the rack (5) can be optimized as per user preference.

The dishwasher (1) of the present invention comprises a locking mechanism (11) having a locking member (9) which is provided on the first basket (6) and which extends towards the second basket (7) and a housing (10) which is provided on the second

basket (7) and which receives the locking member (9) when the cutlery basket (8) is in the closed position. The locking member (9) extends from the first basket (6) towards the second basket (7). The locking member (9) is fixed by engaging with the housing (10) on the second basket (7). Thus, the first basket (6) and the second basket (7) are enabled to be joined.

In an embodiment of the present invention, the dishwasher (1) comprises a positioning member (12) which can be attached to and detached from the first basket (6), the locking member (9) which can move circularly on a shaft (13) provided on the positioning member (12), and a channel (14) which enables the positioning member (12) to be attached to/detached from the first basket (6) and which can engage with one side of the first basket (6). The channel (14) provided on the positioning member (12) engages with one side of the first basket (6) and enables the positioning member (12) to be attached to the first basket (6). By means of the locking member (9) which can move circularly on the shaft (13) provided on the positioning member (12), the first basket (6) and the second basket (7) are locked to each other.

In an embodiment of the present invention, the dishwasher (1) comprises the locking member (9) having a coupling member (15) extending onto the second basket (7) when the cutlery basket (8) is in the closed position so as to ensure the joining of the first basket (6) and the second basket (7) from their upper surfaces, a movement transmission member (16) which extends downwards at an angle of almost 90° with the coupling member (15) and an actuation member (17) which is provided between the coupling member (15) and the movement transmission member (16). The locking member (9) comprises the coupling member (15) through which the shaft (13) passes, the actuation member (17) and the movement transmission member (16). By means of the ability to rotate on the shaft (13), the coupling member (15) and the movement transmission member (16) make circular movements in the opposite direction.

In an embodiment of the present invention, the dishwasher (1) comprises the locking mechanism (11) having a spring (18) which is provided on the positioning member (12), which is pressed on by the movement transmission member (16), when the actuation member (17) is triggered, such that the coupling member (15) is separated from the

housing (10), and which is continuously pushed by the movement transmission member (16), when the actuation member (17) is not triggered, such that the coupling member (15) remains in a horizontal position. The spring (18) is provided on the positioning member (12). The movement transmission member (16) presses on the spring (18). Thus, the coupling member (15) is enabled to remain on the housing (10). When the actuation member (17) is triggered, the movement transmission member (16) compresses the spring (18) and the coupling member (15) makes a circular movement in the upward direction. Thus, the cutlery basket (8) shifts to the open position.

In an embodiment of the present invention, the dishwasher (1) comprises the locking mechanism (11) having a claw (19) which is provided at the end of the coupling member (15) and which engages with the housing (10). The coupling member (15) is enabled to fit into the housing (10) by means of the claw (19) provided at the end thereof.

By means of the present invention, a dishwasher (1) is realized, having a cutlery basket (8) which can move between the open position and the closed position thanks to the locking mechanism (11). By means of the movement of the locking member (9), the first basket (6) and the second basket (7) are easily locked to and separated from each other.

CLAIMS

1- A dishwasher (1) **comprising** a body (2); a washing tub (3) which is disposed in the body (2) and wherein the washing process is performed; at least one spraying member (4) which sprays water into the washing tub (4); at least one rack (5) which is disposed in the washing tub (3) and whereon the kitchen items are placed; and a cutlery basket (8) which is suitable to be used on the rack (5), whereon items such as forks, spoons, etc. are placed, which has a first basket (6) and a second basket (7) almost symmetrical to each other, and which has a closed position wherein the large surfaces of the first basket (6) and the second basket (7) contact with each other, and an open position wherein the first basket (6) and the second basket (7) are separated from each other, **characterized by** a locking mechanism (11) having a locking member (9) which is provided on the first basket (6) and which extends towards the second basket (7) and a housing (10) which is provided on the second basket (7) and which receives the locking member (9) when the cutlery basket (8) is in the closed position.

2- A dishwasher (1) as in Claim 1, **characterized by** a positioning member (12) which can be attached to and detached from the first basket (6), the locking member (9) which can move circularly on a shaft (13) provided on the positioning member (12), and a channel (14) which enables the positioning member (12) to be attached to/detached from the first basket (6) and which can engage with one side of the first basket (6).

3- A dishwasher (1) as in Claim 2, **characterized by** the locking member (11) having a coupling member (15) extending onto the second basket (7) when the cutlery basket (8) is in the closed position so as to ensure the joining of the first basket (6) and the second basket (7) from their upper surfaces, a movement transmission member (16) which extends downwards at an angle of almost 90° with the coupling member (15) and an actuation member (17) which is provided between the coupling member (15) and the movement transmission member (16).

4- A dishwasher (1) as in Claim 3, **characterized by** the locking mechanism (11) having a spring (18) which is provided on the positioning member (12), which is pressed on by the movement transmission member (16), when the actuation member (17) is triggered, such that the coupling member (15) is separated from the housing (10), and which is continuously pushed by the movement transmission member (16), when the actuation member (17) is not triggered, such that the coupling member (15) remains in a horizontal position.

5- A dishwasher (1) as in any one of Claims 2 to 4, **characterized by** the locking mechanism (11) having a claw (19) which is provided at the end of the coupling member (15) and which engages with the housing (10).

Figure 1

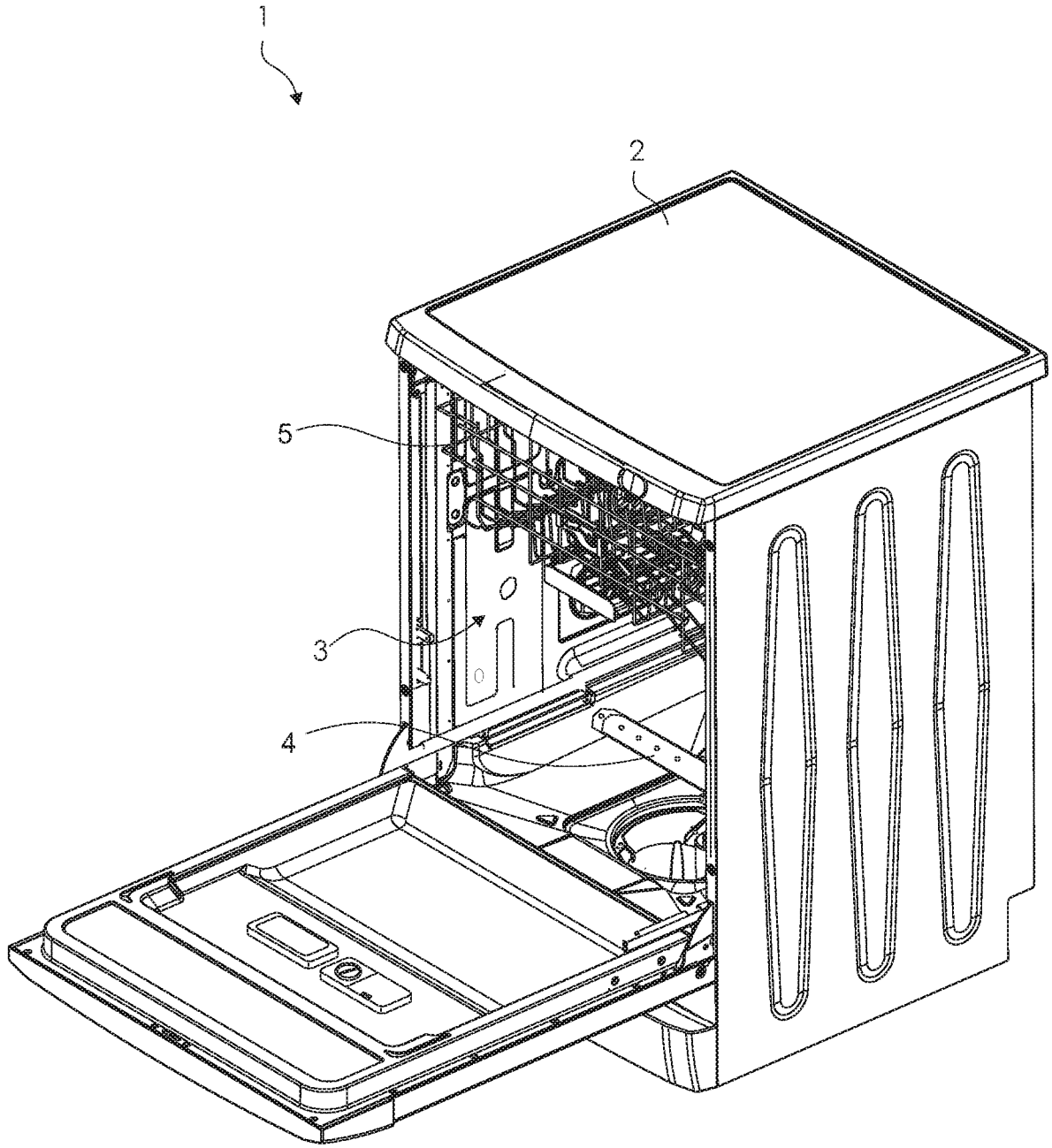


Figure 2

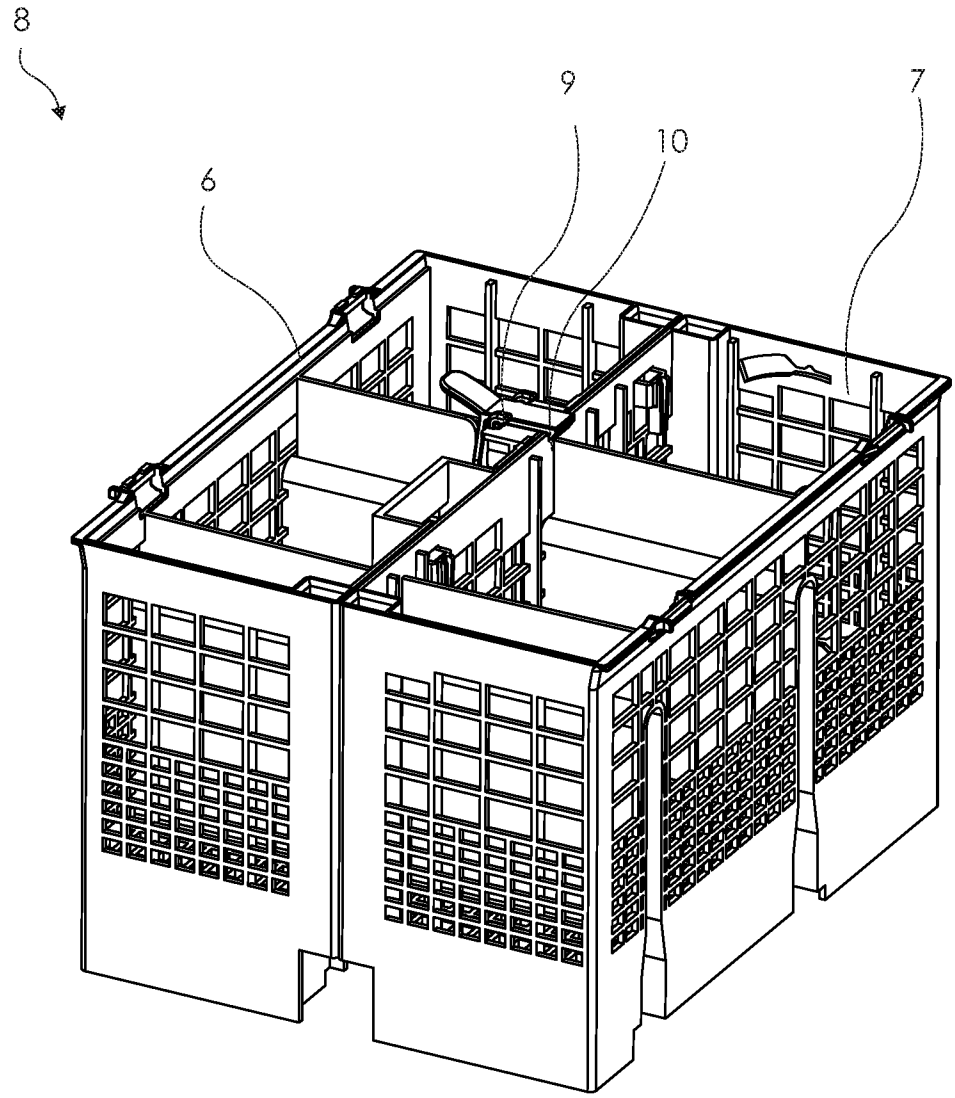


Figure 3

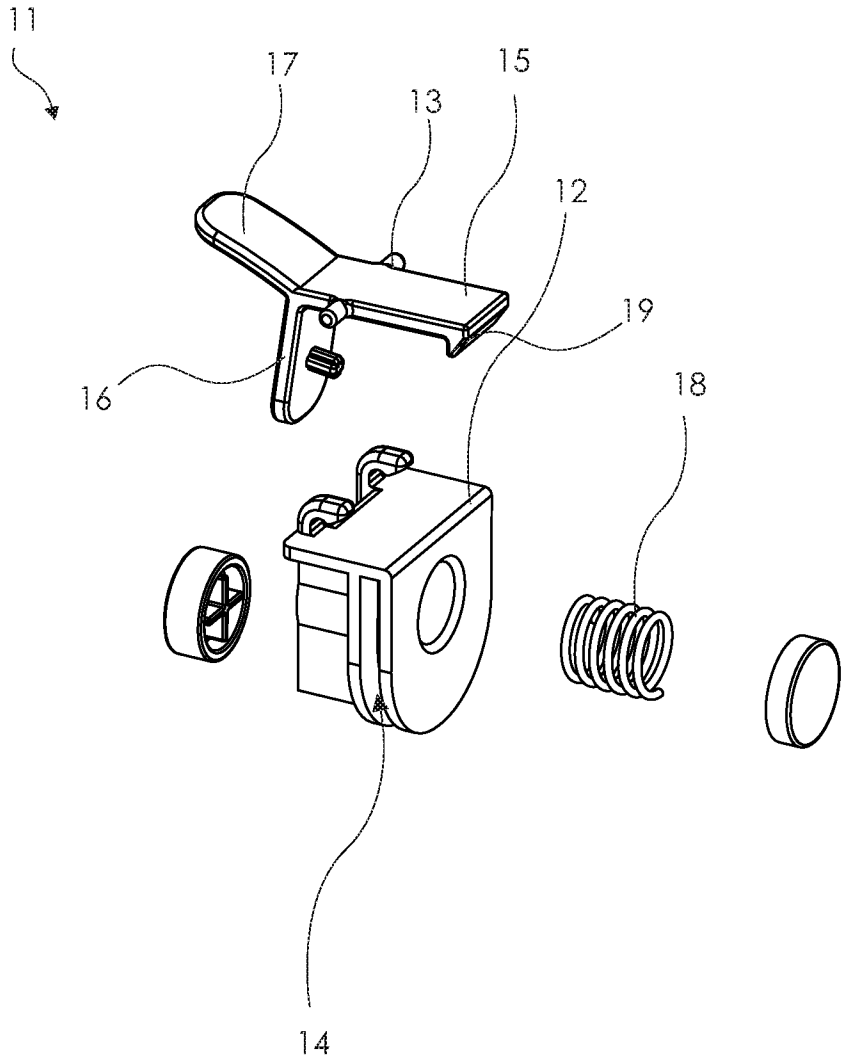
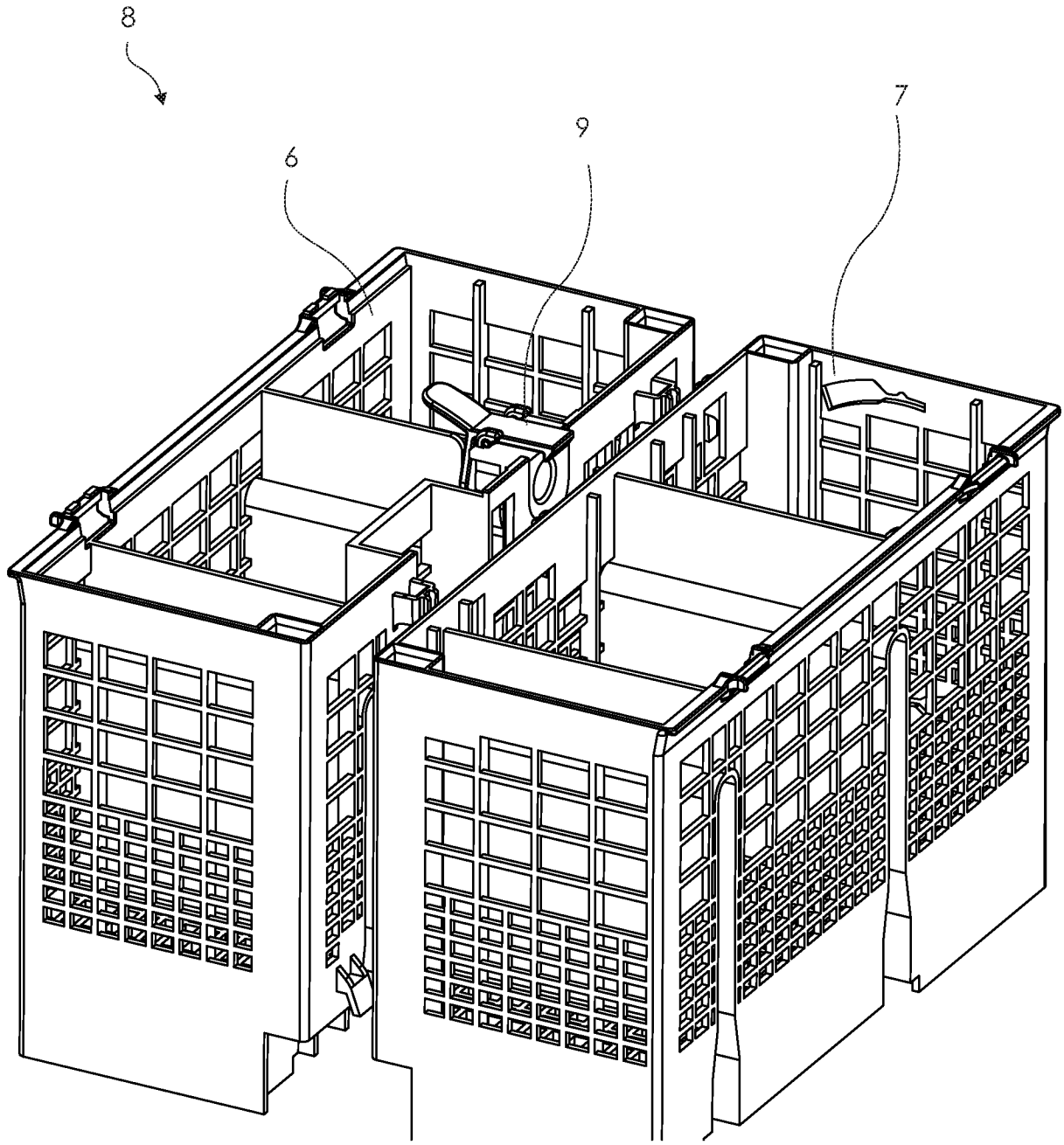


Figure 4



INTERNATIONAL SEARCH REPORT

International application No.
PCT/TR2024/050752

A. CLASSIFICATION OF SUBJECT MATTER

A47L 15/50(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)

A47L 15/50

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

TURKPATENT Database

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

EPODOC (search terms: diswasher, cutlery, silverware, basket, lock, riegel, verschluss, couple, connect, fasten, bracket, attach, latch, catch, clip, pin, tab, pawl, teeth, plug, projection, protrusion, recess, slot, socket, dent, cavity)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
	WO 2004000090 A1 (ARCELIK AS [TR]) 31 December 2003 (2003-12-31)	
X	Whole document	1
A		2-5
	DE 102014208843 A1 (BSH HAUSGERAETE GMBH [DE]) 12 November 2015 (2015-11-12)	
X	Paragraphs 44-49, figures 2A, 2B	1
A		2-5

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

☑ See patent family annex.

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"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

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Date of the actual completion of the international search	Date of mailing of the international search report
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INTERNATIONAL SEARCH REPORT
Information on patent family members

International application No.
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Patent document cited in search report			Publication date (day/month/year)	Patent family member(s)			Publication date (day/month/year)
WO	2004000090	A1	31 December 2003	AT	E326172	T1	15 June 2006
				AU	2003279105	A1	06 January 2004
				DE	60305317	D1	22 June 2006
				DE	60305317	T2	01 February 2007
				EP	1517634	A1	30 March 2005
				EP	1517634	B1	17 May 2006
				ES	2265109	T3	01 February 2007
				TR	200402805	T1	21 March 2005
DE	102014208843	A1	12 November 2015	DE	102014208843	B4	06 April 2017