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Description**A DISHWASHER**

[0001] The present invention relates to a dishwasher comprising a shelf wherein the items to be washed are placed.

[0002] Washing small items with a large number of recesses in dishwashers is quite difficult. For this reason, baskets are disposed on the washing cabin so that small items such as cutlery are washed thoroughly and are not dispersed around. Thus, the washed items is enabled to be cleaner and any deformation to any items and the machine resulting from dispersing of the items is prevented. These baskets can be disposed on the lower rack as well as in areas in the vicinity of the ceiling of the washing cabin, as preferred recently. Thus, the washing capacity of the lower shelf is increased and larger items such as plates that occupy more space are enabled to be washed. The water directly reaches to the basket that is located near the ceiling. Furthermore, the items are enabled to be placed in an orderly manner. Thereby, small items are enabled to be washed more effectively. However, the cutlery baskets used between the ceiling and the upper rack are very close to the ceiling in most of the cases. Therefore, placement of longer items, such as scoops, on the cutlery basket becomes difficult. Moreover, when placed on the upper rack, longer items get caught on the cutlery basket. This may prevent taller items from being placed onto the upper rack and cause deformations on the items or on the cutlery basket. Therefore, cutlery baskets that can be attached to/detached from the upper rack can be used. However, the upper rack space remaining under the attached cutlery basket can be used in a limited manner. Therefore, the interior space of the dishwasher cannot be used effectively.

[0003] In the state of the art European Patent Document No. EP2292140, a dishwasher comprising a basket that is attached onto the upper rack and can be used in various sizes is disclosed.

[0004] The aim of the present invention is the realization of a dishwasher wherein the interior volume of the washing cabin can be effectively used.

[0005] 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 cabin that is disposed on the body, wherein the items to be washed are placed by the user, and a rack disposed in the washing cabin. The shelf is disposed between the ceiling of the washing cabin and the rack.

- [0006] The dishwasher of the present invention comprises the shelf that is disposed in the vicinity of the ceiling of the washing cabin, wherein small items are placed, that can be attached to and detached from the rack by the user and that has an upper position and a lower position. The shelf is moved between the upper position and the lower position by means of a foot under the shelf. When in the upper position, the shelf moves away from the rack. In the lower position, on the other hand, the distance between the shelf and the rack decreases and the shelf moves away from the ceiling of the washing cabin.
- [0007] In an embodiment of the present invention, the foot comprises an upper position element that enables the shelf to be in the upper position by increasing the distance between the shelf and the rack, and a lower position element that enables the shelf to be in the lower position by bringing the shelf closer to the rack. When on the upper position element, the shelf moves away from the rack and shifts to the upper position.
- [0008] In an embodiment of the present invention, the shelf comprises a holder wherein the lower position element moves by rotating. The foot is fixed on the shelf by means of the holder. When the shelf shifts between the lower position and the upper position, the lower position element rotates in the holder.
- [0009] In an embodiment of the present invention, the foot comprises the upper position element that extends from over the shelf toward the rack when the lower position member rotates by 90 degrees and is concealed under the shelf when the lower position element rotates in reverse direction by 90 degrees. When the upper position element extends from over the shelf toward the rack, the lower position element is concealed under the shelf.
- [0010] In an embodiment of the present invention, the shelf comprises more than one claw that enables the upper position element to be fixed. When

extending from over the shelf toward the rack or being concealed under the shelf, the upper position element is fixed by means of the claws.

[0011] In an embodiment of the present invention, the upper position element and the lower position element are produced as integrated with each other.

[0012] In an embodiment of the present invention, the lower position element is L-shaped.

[0013] The dishwasher realized in order to attain the aim of the present invention is illustrated in the attached figures, where,

[0014] Figure 1 – is the perspective view of the dishwasher.

[0015] Figure 2 - is the perspective view of the rack when the shelf is in the upper position.

[0016] Figure 3 - is the perspective view of the rack when the shelf is in the lower position.

[0017] Figure 4 - is the perspective view of the lower position element, the holder and the claw.

[0018] Figure 5 - is the perspective view of the upper position element, the holder and the claw.

[0019] The elements illustrated in the figures are numbered as follows:

1. Dishwasher
2. Body
3. Washing cabin
4. Shelf
5. Rack
6. Foot
7. Upper position element
8. Lower position element
9. Holder
10. Claw

[0020] T- Ceiling of the washing cabin

[0021] B- Base of the washing cabin

[0022] U- Upper position

[0023] L- Lower position

[0024] The dishwasher (1) comprises a body (2), a washing cabin (3) that is

disposed on the body (2), wherein the washing process is performed, and a rack (5) disposed in the washing cabin (3). The rack (5) can move up and down in the washing cabin (3) depending on the preference of the user and the size of the items placed on the rack (5).

[0025] The dishwasher (1) of the present invention comprises a shelf (4) wherein small size items are placed, that can be attached to and detached from the rack (5) by the user so as to remain between the ceiling (T) of the washing cabin (3) and the rack (5), that has an upper position (U) to which the shelf (4) is shifted when moved from the rack (5) toward the ceiling (T) of the washing cabin (3) and a lower position (L) to which the shelf (4) is shifted when moved from the upper position (U) toward the rack (5) and at least one foot (6) that enables the shelf (4) to shift between the upper position (U) and the lower position (L). When the rack (5) is moved up and down in the washing cabin (3), the shelf (4) can be used in the upper and the lower position (U, L). When the shelf (4) is used in the lower position (L), any items with partially large volume, such as scoops, can be placed thereon. When the shelf (4) is in the upper position (U), the usable volume of the rack (5) increases. Placement of large items on the rack (5) is enabled. When the rack (5) is moved toward the ceiling (T) of the washing cabin (3), the shelf (4) is used in the lower position (L) or can be completely removed from the rack (5). Since the shelf (4) is fixed on the rack (5) by means of the feet (6), the cost of mounting is reduced.

[0026] In an embodiment of the present invention, the foot (6) comprises an upper position element (7) that enables the shelf (4) to remain in the upper position (U) by increasing the distance between the shelf (4) and the rack (5) and a lower position element (8) that enables the shelf (4) to approach the rack (5) and remain in the lower position (L). The upper position element (7) enables the shelf (4) to move away from the rack (5). Thus, the rack (5) is enabled to be used more effectively while the shelf (4) can be used as well. The upper position element (7) is in the form of a hook that enables the shelf (4) to be fixed on the rack (5) when in the upper position (U).

[0027] The lower position element (8) is shorter than the upper position element

(7). Thus, the distance between the rack (5) and the shelf (4) decreases when the shelf (4) is on the lower position element (8). When the shelf (4) is in the lower position (L), placement of larger items such as scoops is enabled depending on the distance to the ceiling (T) of the washing cabin (3).

[0028] In an embodiment of the present invention, the dishwasher (1) comprises a holder (9) that enables the foot (6) to be fixed on the shelf (4) and wherein the lower position member (8) rotates. The lower position element (8) rotates by 90 degrees in the holder (9) so as to enable the shelf (4) to shift to the lower position (L) or the upper position (U). By means of the holder (9), the foot (6) is rotatably fixed on the shelf (4).

[0029] In an embodiment of the present invention, the foot (6) comprises the upper position element (7) that extends from over the shelf (4) toward the rack (5) when the lower position member (8) rotates by 90 degrees in the holder (9) and is concealed under the shelf (4) when the lower position element (8) rotates in reverse direction by 90 degrees. The lower position element (8) and the upper position element (7) are integrated. When the lower position element (8) rotates by 90 degrees in the holder (9), the upper position element (7) also rotates. Thus, when the upper position element (7) extends from over the shelf (4) toward the rack (5), the lower position element (8) is concealed under the shelf (4). When the lower position element (8) extends from over the shelf (4) toward the rack (5), the upper position element (7) is concealed under the shelf (4). Thus, the shelf (4) is enabled to move between the lower position (L) and the upper position (U).

[0030] In an embodiment of the present invention, the dishwasher (1) comprises more than one claw (10) that is disposed under the shelf (4) and that enables the upper position element (7) to be fixed when the upper position element (7) extends from over the shelf (4) toward the rack (5) and is concealed under the shelf (4). By means of the claws (10), the upper position element (7) is enabled to be fixed, thus providing a fixed structure on the rack (5).

[0031] In an embodiment of the present invention, the dishwasher (1) comprises

the lower position element (8) and the upper position element (7) that are produced as integrated with each other.

[0032] In an embodiment of the present invention, the lower position element (8) is L-shaped.

[0033] By means of the present invention, a dishwasher (1) that has a shelf (4) that enables the washing capacity to be increased by being used at different heights is realized. The shelf (4) that can be attached onto the rack (5) by the user has a lower position (L) and an upper position (U). Thus, it becomes possible to place more and larger items on the rack (5) or on the shelf (4). When the user does not want to use the shelf (4), the shelf (4) can be removed completely from the rack (5). Thus, the internal volume of the washing cabin (3) is enabled to be used more effectively.

Claims

1. A dishwasher (1) **comprising** a body (2), a washing cabin (3) that is disposed on the body and wherein the washing process is performed, and a rack (5) disposed in the washing cabin (3), **characterized by** a shelf (4) wherein small size items are placed, that can be attached to and detached from the rack (5) by the user so as to remain between the ceiling (T) of the washing cabin (3) and the rack (5), that has an upper position (U) to which the shelf (4) is shifted when moved from the rack (5) toward the ceiling (T) of the washing cabin (3) and a lower position (L) to which the shelf (4) is shifted when moved from the upper position (U) toward the rack (5) and at least one foot (6) that enables the shelf (4) to shift between the upper position (U) and the lower position (L).
2. A dishwasher (1) as in Claim 1, **characterized by** the foot (6) comprising an upper position element (7) that enables the shelf (4) to remain in the upper position (U) by increasing the distance between the shelf (4) and the rack (5) and a lower position element (8) that enables the shelf (4) to approach the rack (5) and remain in the lower position (L).
3. A dishwasher (1) as in Claim 2, **characterized by** a holder (9) that enables the foot (6) to be fixed on the shelf (4) and wherein the lower position element (8) rotates.
4. A dishwasher (1) as in any one of Claim 2 and Claim 3, **characterized by** the upper position element (7) that extends from over the shelf (4) toward the rack (5) when the lower position member (8) rotates by 90 degrees in the holder (9) and is concealed under the shelf (4) when the lower position element (8) rotates in reverse direction by 90 degrees.
5. A dishwasher (1) as in any of Claim 2 and Claim 4, **characterized by** more than one claw (10) that is disposed under the shelf (4) and that enables the upper position element (7) to be fixed when the upper position element (7) extends from over the shelf (4) toward the rack (5) and is concealed under the shelf (4).
6. A dishwasher (1) as in any one of Claim 2 to Claim 5, **characterized by** the lower position element (8) and the upper position element (7) that are produced as integrated with each other.
7. A dishwasher (1) as in any one of Claim 2 to Claim 6, **characterized by** the L-shaped lower position element (8).

Figure 1

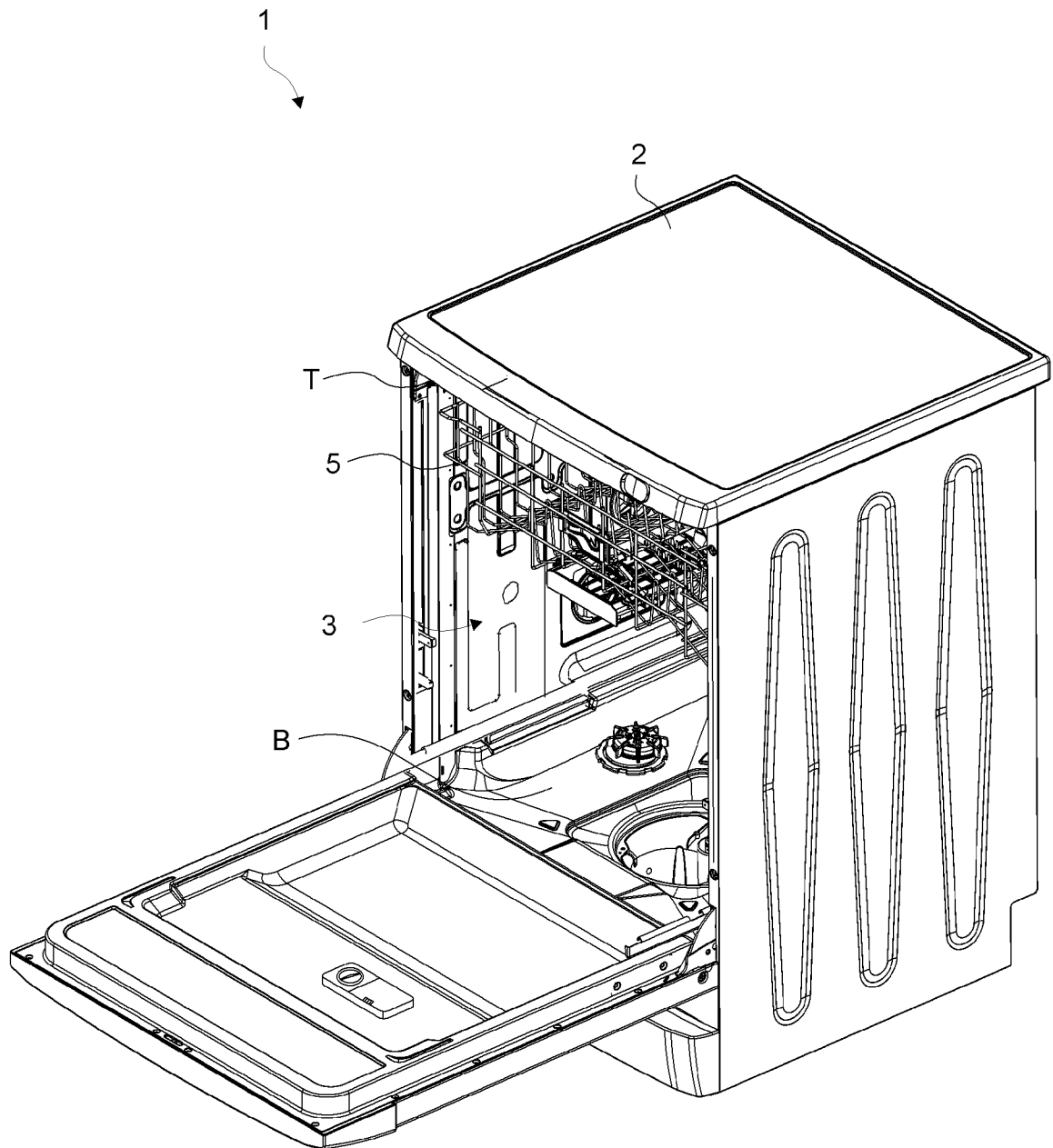


Figure 2

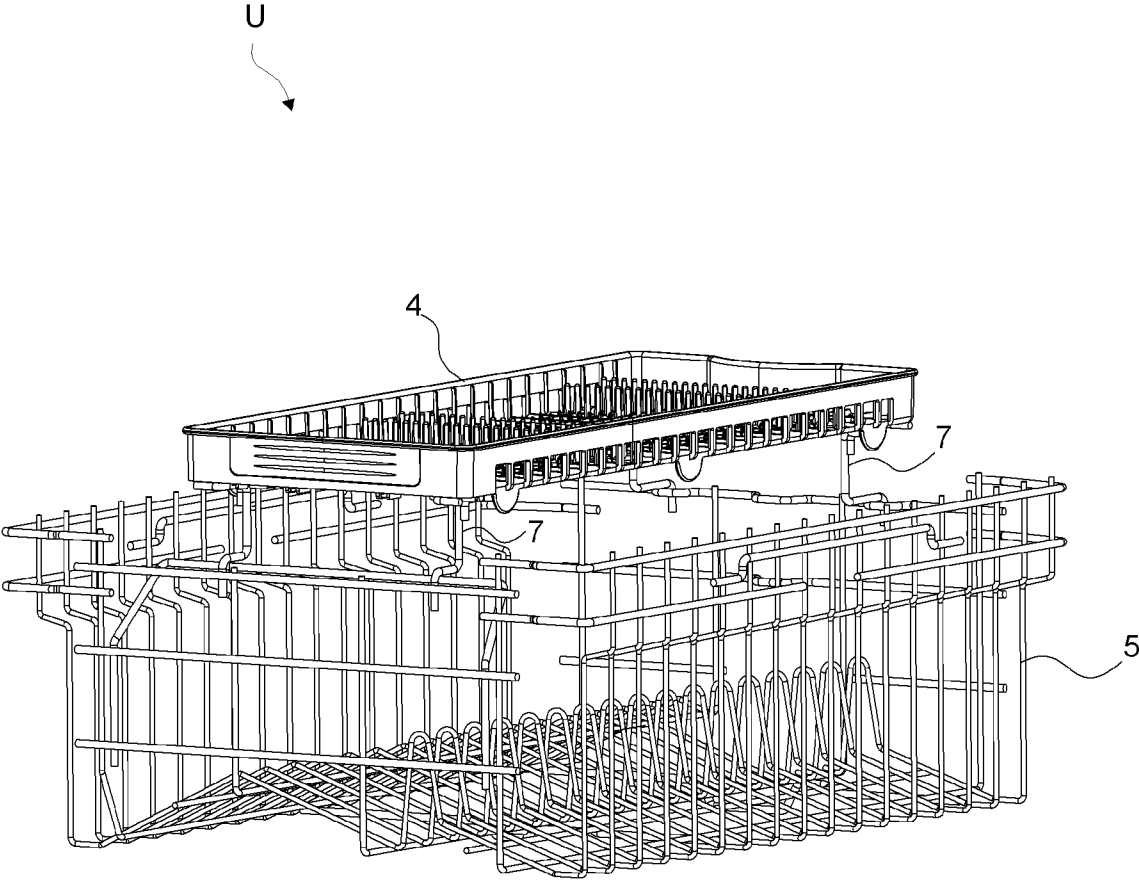


Figure 3

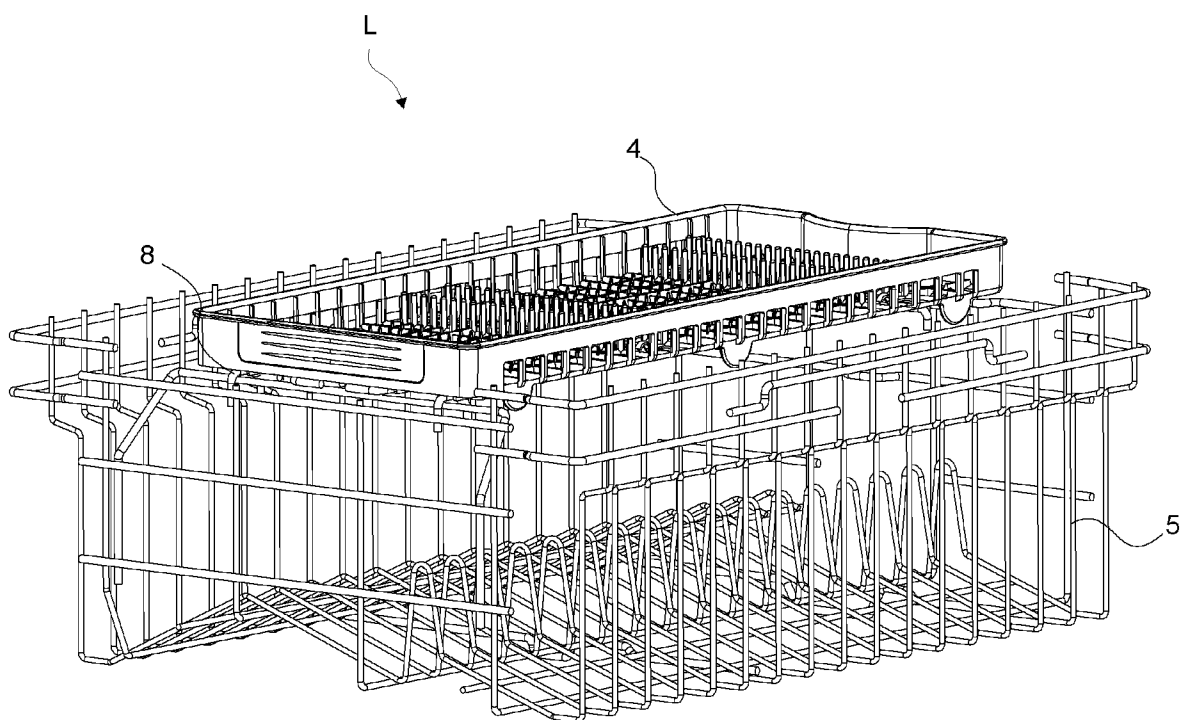


Figure 4

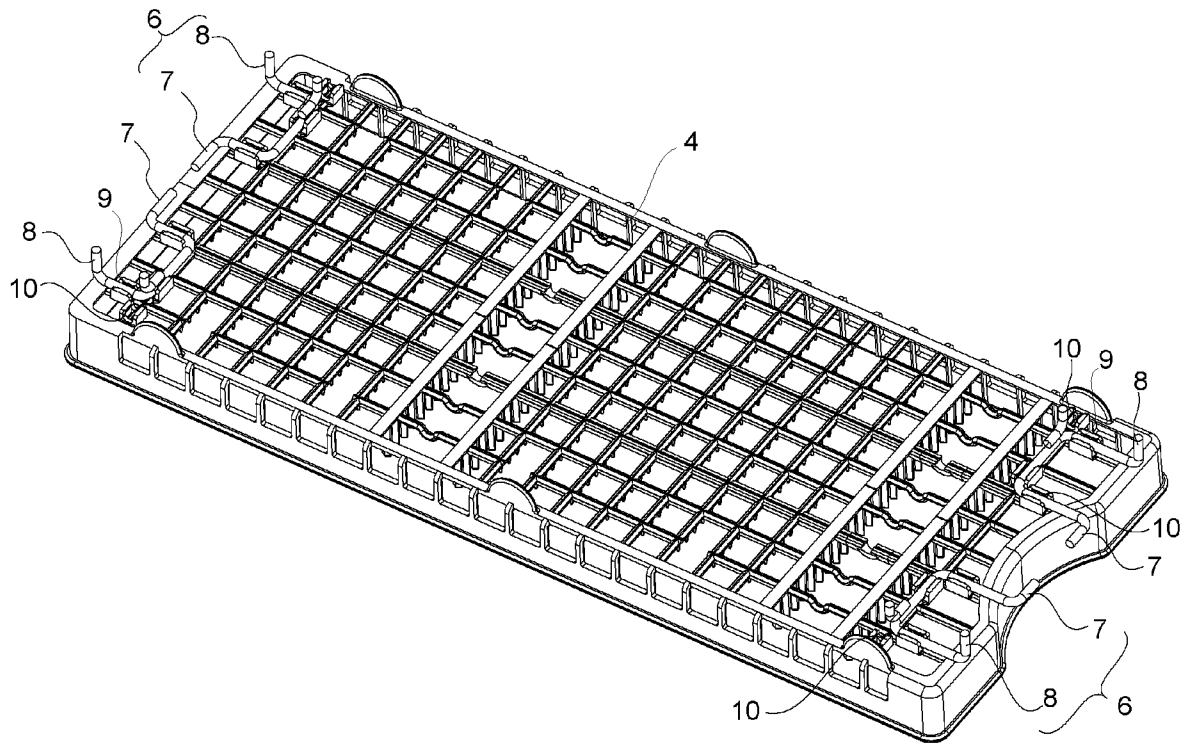
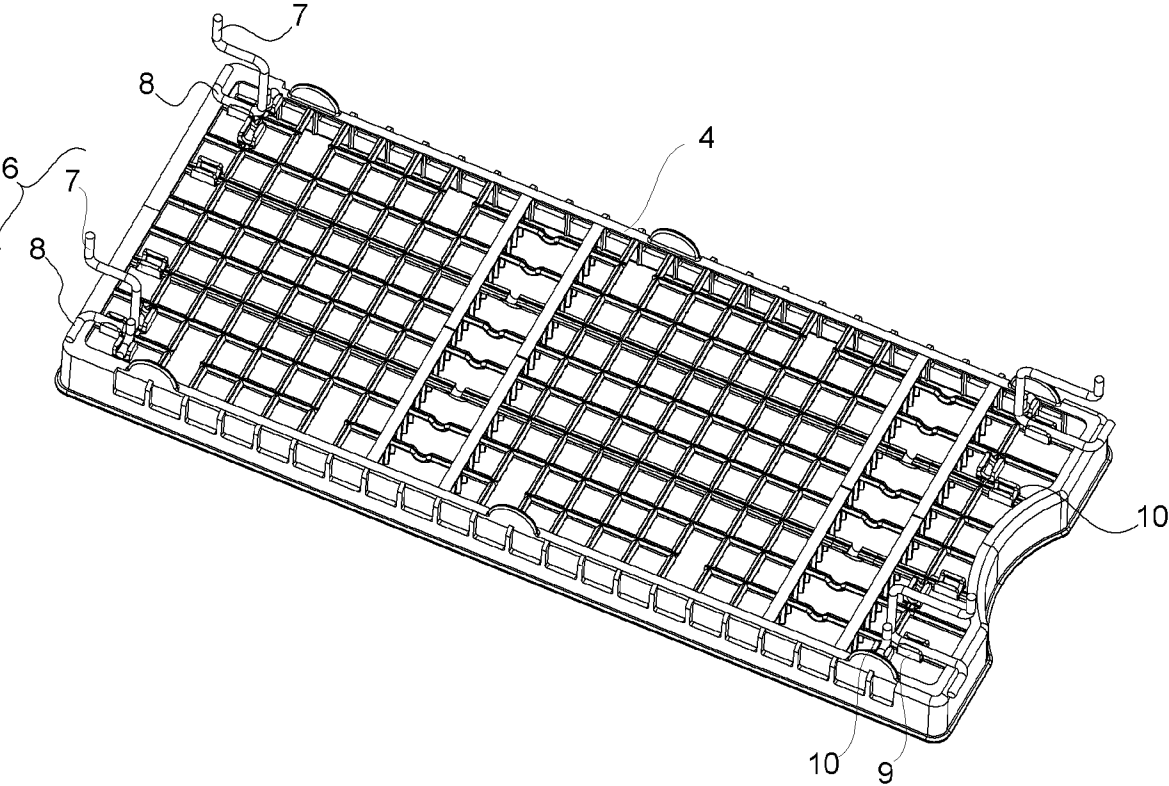


Figure 5



INTERNATIONAL SEARCH REPORT

International application No
PCT/EP2017/061002

A. CLASSIFICATION OF SUBJECT MATTER
INV. A47L15/50
ADD.

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

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

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

EPO-Internal, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 2015/101877 A1 (INDESIT CO SPA [IT]) 9 July 2015 (2015-07-09)	1
A	page 5, line 20 - page 7, line 21 -----	2-7
A	US 2010/078048 A1 (SCHESSL BERND [DE] ET AL) 1 April 2010 (2010-04-01) paragraph [0004] - paragraph [0011] -----	1-7
A	US 2004/079713 A1 (WENDT KARL R C [US] ET AL) 29 April 2004 (2004-04-29) paragraph [0018] - paragraph [0022] -----	1-7



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

"&" document member of the same patent family

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INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/EP2017/061002

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
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