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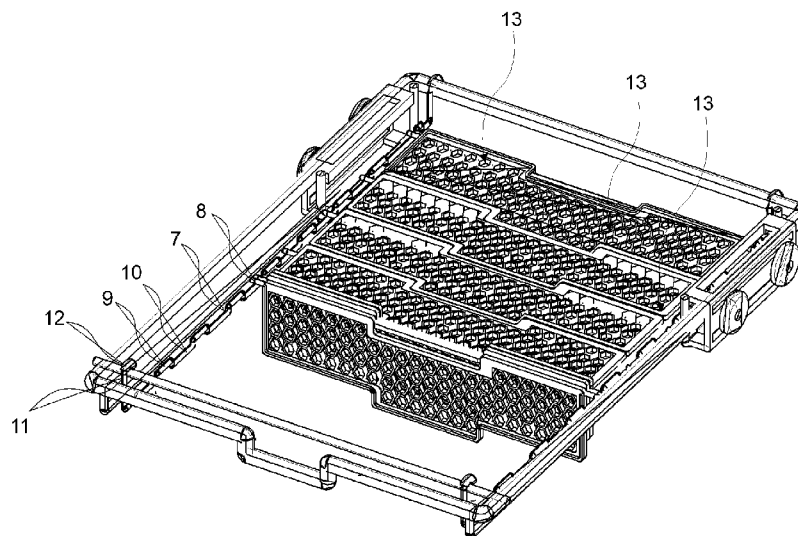
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KR, KW, KZ, LA, LC, LK, LR, LS, LU, LY, MA, MD, ME,
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SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN,
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(54) Title: A DISHWASHER COMPRISING A DRAWER

Figure 3



(57) Abstract: The present invention relates to a dishwasher (1) comprising a body (2); a washing tub (3) which is disposed inside the body (2) and wherein the washing process is performed and a drawer (6) which is disposed at a region close to the ceiling of the washing tub (3) and which has a frame (4) forming the edges thereof and a plurality of shelves (5) provided on the frame (4). The shelves are supported by two positioning elements (7) which are oppositely mounted onto the frame (4) and whereon the shelves (5) slidably move, whereby the shelf (5) has a first position wherein the shelf (5) is parallel to the positioning element (7) so as to be suitable for placing cutlery thereon and a second position wherein the shelf (5) is perpendicular to the positioning element (7) so as to enable the drawer (6) to occupy less space.

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Description**A DISHWASHER COMPRISING A DRAWER**

- [0001] The present invention relates to a dishwasher comprising a drawer 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 tub so that small items such as cutlery are washed thoroughly and are not dispersed around. By this means, more cleanliness of the washed items is ensured and any deformation to any items and the machine resulting from dispersing of the items is prevented. Said baskets can be disposed on the lower rack as well as in areas close to the ceiling of the washing tub, which is preferred recently. Thus, the washing capacity of the lower rack is increased and larger items such as plates are enabled to be washed thereon. Water directly reaches on the basket disposed on the ceiling section. Furthermore, the items are enabled to be placed in an orderly manner. Thereby, smaller items are enabled to be washed more effectively. However, the baskets which are disposed between the ceiling and the upper rack limits the amount of the items which can be placed onto the upper rack. Taller items such as stemware which are placed on the upper rack get stuck to the cutlery basket on the upper rack. This may prevent taller items from being placed onto the upper rack and cause deformations on the items or on the cutlery basket.
- [0003] In the state of the art International Patent Application Document No. WO201402737, a dishwasher comprising a basket which can be used in various sizes is disclosed.
- [0004] The aim of the present invention is the realization of a dishwasher wherein the volume of the washing tub 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 tub which is disposed on the body and wherein the items to be washed are placed, and a drawer which is disposed at a region close to the ceiling of the washing tub. The drawer comprises a frame, which forms the sides of the drawer, and a plurality of shelves provided on the

frame. The shelves can move by sliding on the frame. Thus, the shelves can be displaced as per the user preference, and the volume of the washing tub is enabled to be used effectively.

- [0006] The dishwasher of the present invention comprises two positioning elements which are oppositely mounted onto the frame and the shelf which is mounted onto the positioning element. The shelves have a first position wherein the shelves are parallel to the positioning element and a second position wherein the shelves extend perpendicularly to the positioning element. In the first position, the shelf is suitable for placing kitchen utensils thereon. In the second position, the shelf extends from the frame towards the base of the washing tub. Thus, the size of the drawer is reduced without occupying much space.
- [0007] In another embodiment of the present invention, the dishwasher comprises a plurality of shafts which are arranged on the shelf and which enable the shelf to be mounted onto the positioning element, and a plurality of movement housings and housings which are arranged on the positioning element. While the shelf shifts between the first position and the second position, the shaft moves by sliding on the movement housing. When the shelf is in the first position or the second position, the shaft is on the housing.
- [0008] In an embodiment of the present invention, the dishwasher comprises the shelf which moves from one positioning element to another while shifting between the first position and the second position. Thus, a plurality of shelves can be located on the same positioning element. By gathering the shelves in the second position, the size of the drawer is reduced and the volume of the washing tub is used more efficiently.
- [0009] In an embodiment of the present invention, the dishwasher comprises two fixing elements which are disposed on the positioning element. The fixing elements are in the form of hooks and positioned oppositely. Thus, the positioning element is enabled to be mounted onto the drawer.
- [0010] In an embodiment of the present invention, the dishwasher comprises an elastic element which is arranged on the fixing element. By means of the elastic element, the positioning element is prevented from sliding on the

drawer.

- [0011] In an embodiment of the present invention, the dishwasher comprises a plurality of openings which are arranged on the shelf. The openings are hexagonal. Thus, the durability of the shelf is increased while water is prevented from accumulating on the shelf.
- [0012] In an embodiment of the present invention, the dishwasher comprises a peripheral protrusion which is arranged on the shelf. By means of the peripheral protrusion, the kitchen utensils are prevented from falling off the shelf. The peripheral protrusion can be produced from an elastic material in order to improve the quality perception and to increase friction.
- [0013] By means of the present invention, a dishwasher is realized, comprising a drawer which provides the efficient use of the washing tub volume.
- [0014] The dishwasher realized in order to attain the aim of the present invention is illustrated in the attached figures, where:
- [0015] Figure 1 - is the perspective view of the dishwasher.
- [0016] Figure 2 – is the perspective view of the drawer.
- [0017] Figure 3 - is the perspective view of the drawer when the shelves are in the first position and the second position.
- [0018] The elements illustrated in the figures are numbered as follows:
1. Dishwasher
 2. Body
 3. Washing tub
 4. Frame
 5. Shelf
 6. Drawer
 7. Positioning element
 8. Shaft
 9. Movement housing
 10. Housing
 11. Fixing element
 12. Elastic element
 13. Opening
 14. Peripheral protrusion

- [0019] The dishwasher (1) comprises a body (2); a washing tub (3) which is disposed inside the body (2) and wherein the washing process is performed and a drawer (6) which is disposed at a region close to the ceiling of the washing tub (3) and which has a frame (4) forming the edges thereof and a plurality of shelves (5) provided on the frame (4). The kitchen utensils to be washed are placed onto the shelves (5). The shelves (5) are arranged on the frame (4) in a manner adjacent to each other. Thus, the shelves (5) can move in tandem.
- [0020] The dishwasher (1) of the present invention comprises two positioning elements (7) which are oppositely mounted onto the frame (4) and whereon the shelves (5) slidably move, and the shelf (5) which has a first position wherein the shelf (5) is parallel to the positioning element (7) so as to be suitable for placing cutlery thereon and a second position wherein the shelf (5) is perpendicular to the positioning element (7) so as to enable the drawer (6) to occupy less space. In the first position, the shelf (5) extends parallel to the ceiling of the washing tub (3) and the kitchen utensils can be placed onto the shelf (5). When in the second position, the shelf (5) is perpendicular to the ceiling of the washing tub (3). Thus, the shelf (5) does not occupy space on the frame (4). The volume of the washing tub (3) under the drawer (6) can be used more efficiently. The shelf (5) shifts between the first position and the second position by sliding on the positioning element (7).
- [0021] In an embodiment of the present invention, the dishwasher (1) comprises a plurality of shafts (8) which are provided on the two opposite sides of the shelf (5) and which enable the shelf (5) to be mounted onto the frame (4), a plurality of movement housings (9) which are arranged on the positioning element (7) and whereon the shaft (8) slidably moves, and a plurality of housings (10) wherein the shaft (8) is fitted when the shelf (5) is in the first position or the second position. The positioning element (7) is formed by arranging the movement housing (9) and the housing (10) successively. The shaft (8) slides on the positioning element (7) and changes place between the movement housing (9) and the housing (10). When the shelf (5) is in the first position or the second position, the shaft (8) is on the

housing (10). While the shelf (5) shifts between the first position and the second position, the shaft (8) moves on the movement housing (9).

- [0022] In an embodiment of the present invention, the dishwasher (1) comprises the shelf (5) which shifts between the first position and the second position by means of the shaft (8) sliding between one housing (10) and the other. While the shaft (8) moves from one housing (10) to the other, the shelf (5) shifts between the first position and the second position.
- [0023] In an embodiment of the present invention, the dishwasher (1) comprises two opposite fixing elements (11) which enable the positioning element (7) to be mounted onto the drawer (6). By means of the fixing elements (11), the positioning element (7) is detachably mounted onto the frame (4). The fixing elements (11) are in the form of hooks. The fixing elements (11) extend from the positioning element (7) towards the frame (4) so as to be engaged.
- [0024] In an embodiment of the present invention, the dishwasher (1) comprises an elastic element (12) which is arranged on the fixing element (11) and which prevents the positioning element (7) from sliding on the frame (4). By means of the elastic element (12), the fixing element (11) is prevented from sliding on the frame (4).
- [0025] In an embodiment of the present invention, the dishwasher (1) comprises the shelf (5) having a plurality of hexagonal openings (13). By means of the openings (13), the water delivered onto the shelf (5) trickles down to be discharged from the drawer (6). By means of the hexagonal shape of the openings (13), the mechanical strength of the shelf (5) is increased.
- [0026] In an embodiment of the present invention, the dishwasher (1) comprises a peripheral protrusion (14) which is arranged around the shelf (5) and which prevents the kitchen utensils from sliding off the shelf (5). By means of the peripheral protrusion (14), the kitchen utensils placed onto the shelf (5) are prevented from sliding off the shelf (5) in an uncontrolled manner. The peripheral protrusion (14) can be produced from a material which increases the friction force.
- [0027] By means of the present invention, a dishwasher (1) is realized, wherein the volume of the washing tube (3) is more effectively used. A plurality of

shelves (5) arranged on the drawer (6) have a first position for placing the kitchen utensils thereon and a second position wherein the shelves (5) extend perpendicularly to the ceiling of the washing tub (3). In the second position, the shelves (5) occupy less space on the drawer (6). Thus, the volume of the washing tub (3) under the drawer (6) can be used more efficiently.

Claims

1. A dishwasher (1) **comprising** a body (2); a washing tub (3) which is disposed inside the body (2) and wherein the washing process is performed and a drawer (6) which is disposed at a region close to the ceiling of the washing tub (3) and which has a frame (4) forming the edges thereof and a plurality of shelves (5) provided on the frame (4), **characterized by** two positioning elements (7) which are oppositely mounted onto the frame (4) and whereon the shelves (5) slidably move, and the shelf (5) which has a first position wherein the shelf (5) is parallel to the positioning element (7) so as to be suitable for placing cutlery thereon and a second position wherein the shelf (5) is perpendicular to the positioning element (7) so as to enable the drawer (6) to occupy less space.
2. A dishwasher (1) as in Claim 1, **characterized by** a plurality of shafts (8) which are provided on the two opposite sides of the shelf (5) and which enable the shelf (5) to be mounted onto the frame (4), a plurality of movement housings (9) which are arranged on the positioning element (7) and whereon the shaft (8) slidably moves, and a plurality of housings (10) wherein the shaft (8) is fitted when the shelf (5) is in the first position or the second position.
3. A dishwasher (1) as in Claim 2, **characterized by** the shelf (5) which shifts between the first position and the second position by means of the shaft (8) sliding between one housing (10) and the other.
4. A dishwasher (1) as in any one of the above claims, **characterized by** two opposite fixing elements (11) which enable the positioning element (7) to be mounted onto the drawer (6).
5. A dishwasher (1) as in Claim 4, **characterized by** an elastic element (12) which is arranged on the fixing element (11) and which prevents the positioning element (7) from sliding on the frame (4).
6. A dishwasher (1) as in any one of the above claims, **characterized by** the shelf (5) which comprises a plurality of hexagonal openings (13).
7. A dishwasher (1) as in any one of the above claims, **characterized by** a peripheral protrusion (14) which is arranged around the shelf (5) and which prevents the kitchen utensils from sliding off the shelf (5).

Figure 1

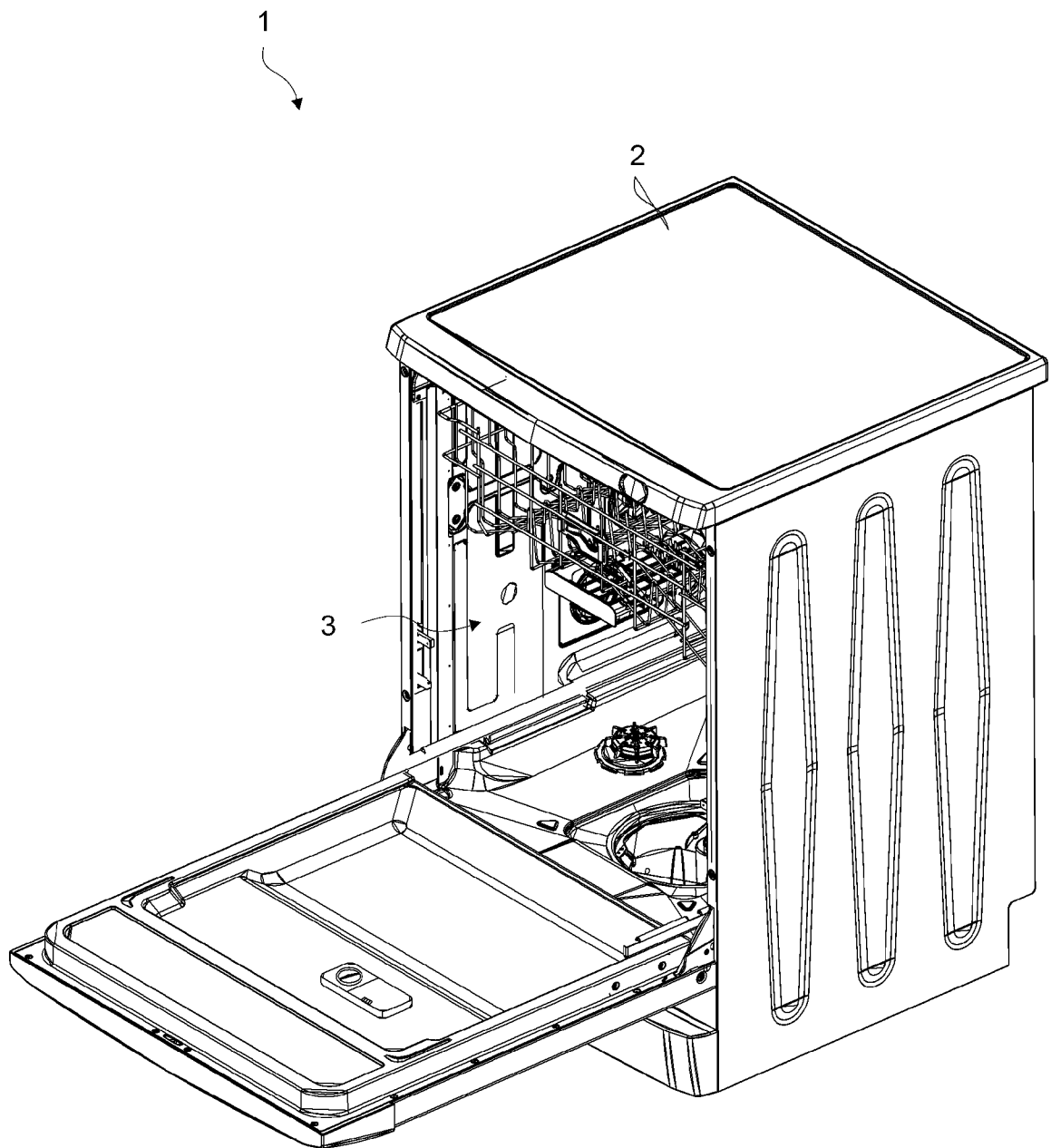


Figure 2

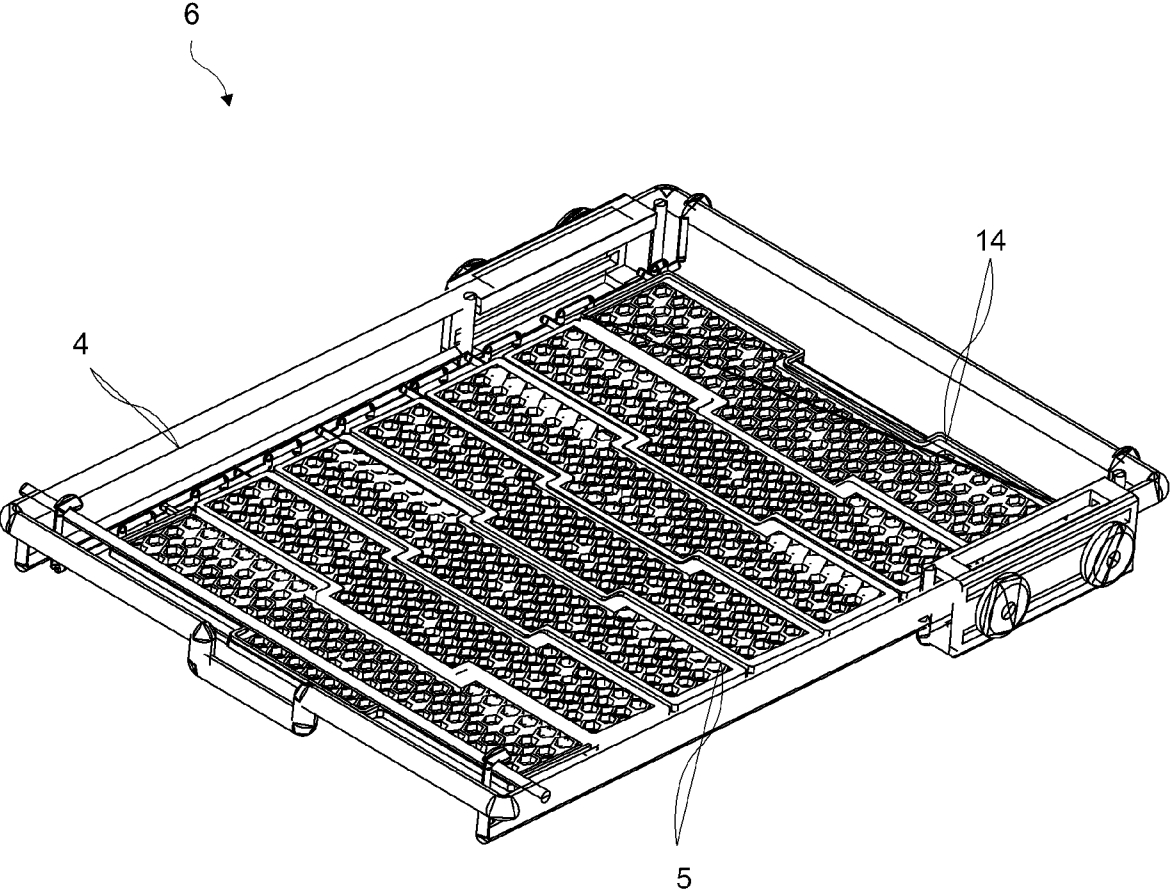
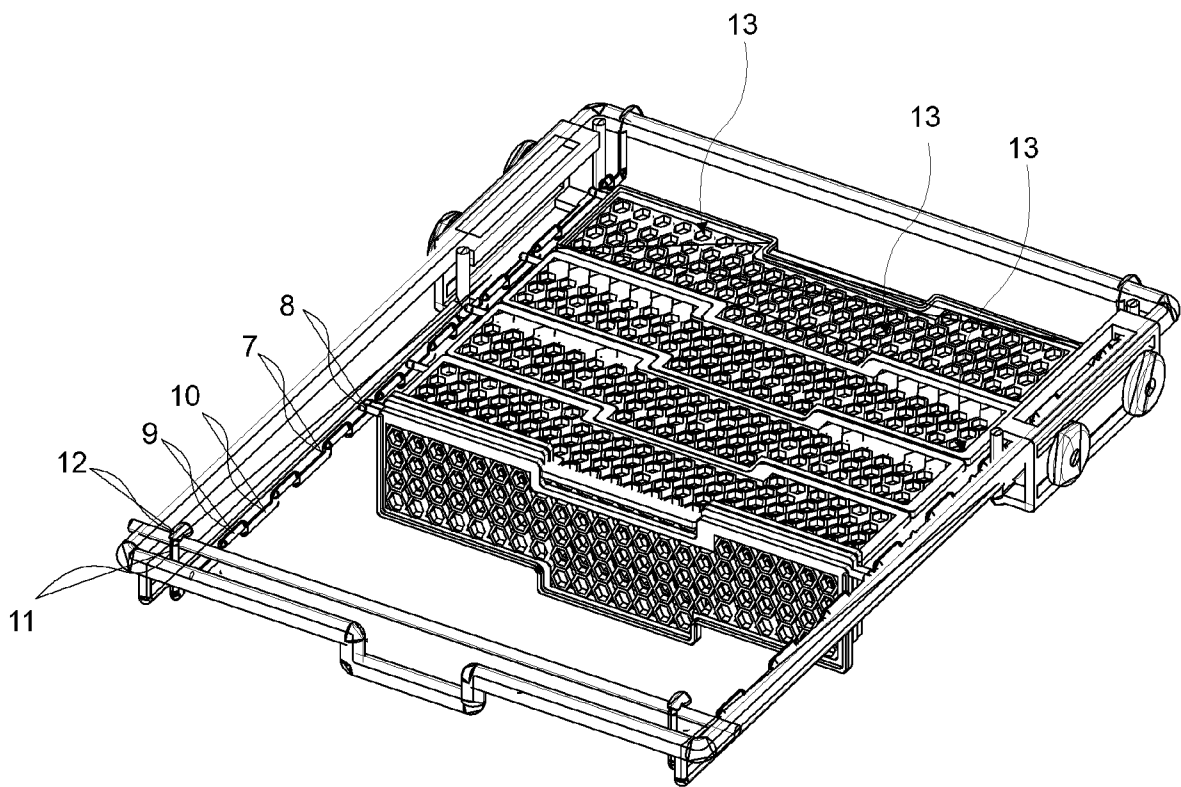


Figure 3



INTERNATIONAL SEARCH REPORT

International application No
PCT/EP2019/076353

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

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Y	paragraphs [0014] - [0016]; figures -----	6
Y	US 2015/053237 A1 (LEE JOON J [US]) 26 February 2015 (2015-02-26) abstract paragraphs [0056] - [0069]; figures 1,4-10 -----	6
Y	JP 2016 030165 A (RINNAI KK) 7 March 2016 (2016-03-07) the whole document -----	1-7
Y	WO 2016/192797 A1 (ARCELIK AS [TR]) 8 December 2016 (2016-12-08) abstract paragraph [0040]; figures 5,8,9 ----- -/-	1-7



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Date of the actual completion of the international search

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Name and mailing address of the ISA/

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INTERNATIONAL SEARCH REPORT

International application No
PCT/EP2019/076353

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
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Information on patent family members

International application No

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