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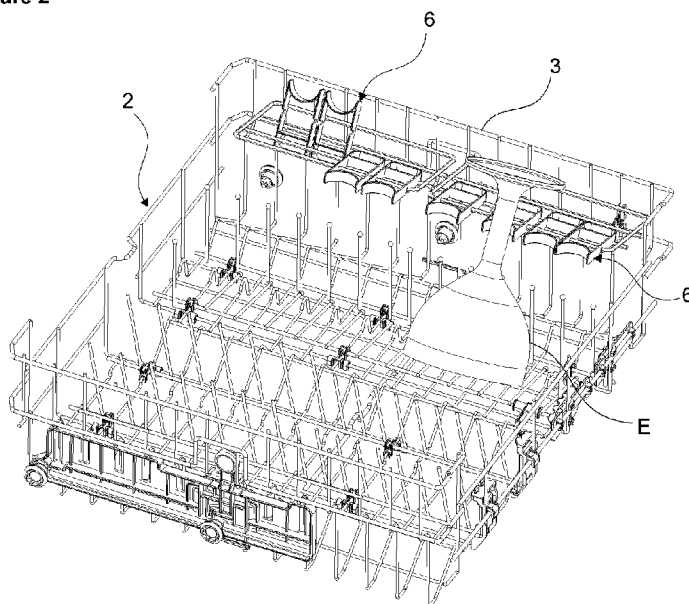
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(54) Title: A RACK SUITABLE FOR USAGE IN A DISHWASHER AND THE DISHWASHER WHEREIN THE RACK IS USED

Figure 2



(57) Abstract: The present invention relates to a rack (2) suitable for use in a dishwasher (1), wherein the items to be washed are placed, comprising a base and side walls (3) surrounding the base and at least one shelf (4) that is mounted to the side walls (3) and whereon kitchenware such as cup, glass, etc. is placed, and relates to the dishwasher (1) wherein the rack (2) is used.



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- *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))*

**Description****A RACK SUITABLE FOR USAGE IN A DISHWASHER AND THE DISHWASHER  
WHEREIN THE RACK IS USED**

- [0001] The present invention relates to a rack wherein long-stemmed items such as wine glass, etc. are provided to be placed thereon in order to use the inner volume efficiently, and relates to the dishwasher wherein the rack is used.
- [0002] Since the center of gravity of long-stemmed items such as wine glass, etc. placed into the dishwasher rack, is at a position closer to the stem part, problems occur while placing these items into the rack. In order to prevent the wine glasses from overturning onto the rack, it is required to support them from their stems. However, since the diameters of the mouth parts and the stem parts of the wine glasses in different sizes are different from each other, problems may occur such as ineffective use of the rack volume during the placement of the wine glasses onto the rack. Moreover, since users place the items to be washed onto the rack in arrangements different from each other, solutions are needed, that provide the rack volume to be used effectively during the washing of the wine glasses.
- [0003] In the state of the art, holders are known, that grasp the wine glass from the stem and prevent it from overturning into the rack.
- [0004] In the state of the art European Patent Application No. EP1424035, a dishwasher rack is described, comprising a cup support having holders with different diameters on its side edge extending into the rack, that provide long-stemmed items in different sizes to be held.
- [0005] The aim of the present invention is the realization of a rack wherein items are provided to be placed thereon so as to use the inner volume effectively, and of the dishwasher wherein the rack is used.
- [0006] The rack realized in order to attain the aim of the present invention, explicated in the first claim and the respective claims thereof comprises a shelf mounted to the side walls of the shelf and at least one holder that is mounted onto the shelf, of which the position in the rack can be changed by being slid and that has at least one housing that at least partially grasps the stem part of the long-stemmed items placed into the rack. The holder

provides the long-stemmed items to be held in a balanced manner in the rack and prevents them from overturning during the washing. The holder is slid over the shelf to change its position perpendicular to the side walls of the rack whereon the shelf is mounted. Thus, while long-stemmed items such as wine glass, etc. in different sizes are placed into the rack, the holders are slid over the shelf, thereby providing the items to be placed so that their stem parts are seated into housings. Thus, long-stemmed items are provided to be placed into the rack so that each stem corresponds to one housing, without any gaps above the rack. Consequently, the inner volume of the rack is effectively used during the realization of the washing process.

- [0007] In an embodiment of the present invention, the holder can rotate around the axis where to it is connected on the shelf.
- [0008] In another embodiment of the present invention, more than one guide extending parallel to the side wall, whereon the holder is mounted, is arranged on the shelf. The holder is slid over the guide to change its position on the shelf.
- [0009] In another embodiment of the present invention, the holder is mounted onto the shelf so as to rotate around the guide. With the holder being rotated around the guide, the vertical position of the holder with respect to the shelf is changed. With the guide being the rotational axis, the holder is rotated around the guide and the holder is brought to an angular position with respect to the shelf. Thus, small plastic items are provided to be washed by being squeezed between the shelf and the holder.
- [0010] In another embodiment of the present invention, the rack comprises at least one recess that is arranged on the holder and that is inserted over the guide so as to move over the guide.
- [0011] In another embodiment of the present invention, the rack comprises at least two guides that extend parallel to the side wall whereon the shelf is mounted and at least two recesses that are arranged on the holder, each seated over one guide. The distance between the recesses facing the same direction is equal to the distance between the two guides extending parallel to the side wall whereon the shelf is mounted.

- [0012] In another embodiment of the present invention, the diameters of the housings wherein the stems of the long-stemmed items are seated, are different from each other. Thus, the long-stemmed items such as wine glass, etc., with different diameters from each other are provided to be placed into the track in a balanced manner.
- [0013] By means of the present invention, the long-stemmed items in different sizes are provided to be placed into the rack in a balanced manner so that there remains no dead space in the rack.
- [0014] The model embodiments relating to the rack realized in order to attain the aim of the present invention and the dishwasher wherein the rack is used are illustrated in the attached figures, where:
- [0015] Figure 1 – is the perspective view of a dishwasher.
- [0016] Figure 2 is the perspective view of a rack, a shelf, and a holder when the holder is mounted onto the shelf.
- [0017] Figure 3 is the perspective view of a rack, a shelf, and a holder from a different angle when the holder is mounted onto the shelf.
- [0018] Figure 4 – is the perspective view of a rack, a shelf and a holder relating to an embodiment of the present invention when the holder is inserted over the guide.
- [0019] Figure 5 – is the perspective view of a shelf and a holder wherein the holders are in a different position with respect to the shelf.
- [0020] Figure 6 – is the perspective view of a shelf and a holder when the holders are inserted over the guides.
- [0021] Figure 7 – is the top view of a shelf and a holder when the holders are inserted over the guides.
- [0022] The elements illustrated in the figures are numbered as follows:
1. Dishwasher
  2. Rack
  3. Side wall
  4. Shelf
  5. Housing
  6. Holder
  7. Guide

## 8. Recess

[0023] The rack (2) is suitable for use in the dishwasher (1) and the items to be washed are placed therein. The rack (2) comprises a base and side walls (3) surrounding the base and at least one shelf (4) that is mounted to the side walls (3) and whereon kitchenware such as cup, glass, etc. is placed.

[0024] The rack (2) of the present invention, furthermore, comprises at least one holder (6)

- that is mounted onto the shelf (4) so as to be slid and moved in the horizontal direction and
- that has at least one housing (5) that at least partially grasps the stem part of the long-stemmed items (E) such as wine glass, etc., placed onto the base, preventing such from overturning.

[0025] The stem parts of the long-stemmed items (E) placed into the rack (2) are seated into the housings (5). The housing (5) supports the stem part of the long-stemmed item (E) and provides the item (E) to be supported on the rack (2) in a balanced manner. Thus, the item (E) is prevented from overturning and provided to be effectively cleaned.

[0026] The holder (6) is slid in the horizontal direction so that the position of the holder (6) on the shelf (4) is changed. Thus, the stem parts of the long-stemmed items (E) having different diameters from each other and placed into the rack (2), are enabled to be seated into the housings (5). In other words, the position of each holder (6) is adjusted so that the stem part of each long-stemmed item (E) placed into the rack (2) corresponds to a housing (5). Thus, no gap remains between the long-stemmed items (E) placed into the rack (2) and effective use of the inner volume of the rack (2) is provided.

[0027] In an embodiment of the present invention, the holder (6) can rotate around the axis where to it is connected on the shelf (4). Thus, the sliding movement performed by the holder (6) over the shelf (4) is facilitated.

[0028] In another embodiment of the present invention, the rack (2) comprises at least one guide (7) that is arranged on the shelf (4), that extends parallel to the side wall (3) where to the shelf (4) is mounted, and whereon the holder (6) is mounted. The guide (7) forms a line whereon the holder (6) moves.

The holder (6) is slid over the guide (7) so that the position of the holder (6) on the shelf (4) is changed.

[0029] In another embodiment of the present invention, the rack (2) comprises at least one recess (8) that is arranged on the holder (6) and that is inserted over the guide (7) to provide the holder (6) to be fixed onto the guide (7). The recess (8) is inserted over the guide (7) so as to at least partially surround the guide (7) and to move over the guide (7). With the recesses (8) being slid over the guide (7), the position of the holder (6) on the shelf (4) is changed.

[0030] In another embodiment of the present invention, the rack (2) comprises at least two guides (7) that extend parallel to the side wall (3) where to the shelf (4) is mounted and at least two recesses (8) that are inserted over each guide (7) when the holder (6) is mounted onto the guides (7). The recesses (8) are arranged preferably on the lower surface of the holder (6).

[0031] The distance between the recesses (8) facing the same direction is equal to the distance between the guides (7) extending parallel to the side wall (3) where to the shelf (4) is mounted. Each of the recesses (8) arranged on the holder (6), that face the same direction is seated onto one of the guides (7) extending parallel to each other. By inserting the recesses (8) over the guides (7) closer to the side wall (3), the top surface of the holders (6) can be used as supporting surfaces and small items such as glass, cup, etc. can be placed thereon.

[0032] In another embodiment of the present invention, the holder (6) is mounted onto the shelf (4) so as to rotate around the guide (7). In order to form the rotational axis of the guide (7), the holder (6) is rotated around the guide (7) and the holder (6) is brought to a position perpendicular or angular to the shelf (4). Thus, while not in use, the holder (6) can be rotated to be folded onto the side wall (3). Moreover, small plastic items can be squeezed between the shelf (4) and the holder (6) brought to a position angular to the shelf (4) and these items are prevented from falling into the rack (2) during the washing.

[0033] In another embodiment of the present invention, the dishwasher (1)

comprises housings (5) with different diameters from each other. Thus, the long-stemmed items (E), of which the diameters of the stems are different from each other, can be placed into the rack (2) so that each of the stems of these items (E) is seated into the housing (5) with the suitable diameter. Thus, the long-stemmed items (E) are held in the rack (2) in a more balanced manner.

[0034] In another embodiment of the present invention, the holder (6) is produced from plastic.

[0035] The dishwasher (1) of the present invention comprises a rack (2) described as in the above-mentioned embodiments.

[0036] By means of the present invention, the long-stemmed items (E) in different sizes are provided to be washed by being placed onto the rack (2) in a balanced manner so that the inner volume of the rack (2) is effectively used.

[0037] It is to be understood that the present invention is not limited to the embodiments disclosed above and a person skilled in the art can easily introduce different embodiments. These should be considered within the scope of the protection postulated by the claims of the present invention.

## Claims

1. A rack (2) suitable for use in a dishwasher (1), wherein the items to be washed are placed, comprising a base and side walls (3) surrounding the base and at least one shelf (4) that is mounted to the side walls (3) and whereon kitchenware such as cup, glass, etc. is placed  
**characterized by** at least one holder (6)
  - that is mounted onto the shelf (4) so as to be slid and moved in the horizontal direction and
  - that has at least one housing (5) that at least partially grasps the stem part of the long-stemmed items (E) such as wine glass, etc., placed onto the base, preventing them from overturning.
2. A rack (2) as in Claim 1, **characterized by** the holder (6) that can rotate around the axis whereto it is connected on the shelf (4).
3. A rack (2) as in Claim 1 or 2, **characterized by** at least one guide (7) that is arranged on the shelf (4), that extends parallel to the side wall (3) whereto the shelf (4) is mounted, and whereon the holder (6) is mounted.
4. A rack (2) as in Claim 3, **characterized by** the holder (6) that is mounted onto the shelf (4) so as to rotate around the guide (7).
5. A rack (2) as in Claim 3 or 4, **characterized by** at least one recess (8) that is arranged on the holder (6) and that is inserted over the guide (7) to provide the holder (6) to be fixed onto the guide (7)
6. A rack (2) as in Claim 5, **characterized by** at least two guides (7) that extend parallel to the side wall (3) whereto the shelf (4) is mounted and at least two recesses (8) that are inserted over each guide (7) when the holder (6) is mounted onto the guides (7).
7. A rack (2) as in any one of the Claims 5 or 6, **characterized by** the recesses (8) that face the same direction and the distance between which is equal to the distance between the guides (7) extending parallel to the side wall (3) whereto the shelf (4) is mounted.
8. A rack (2) as in any one of the above claims, **characterized by** the housings (5) having different diameters from each other.
9. A rack (2) as in any one of the above Claims, **characterized by** the holder (6) that is produced from plastic.

10. A dishwasher (1) comprising a rack (2) as in any one of the above claims.

Figure 1

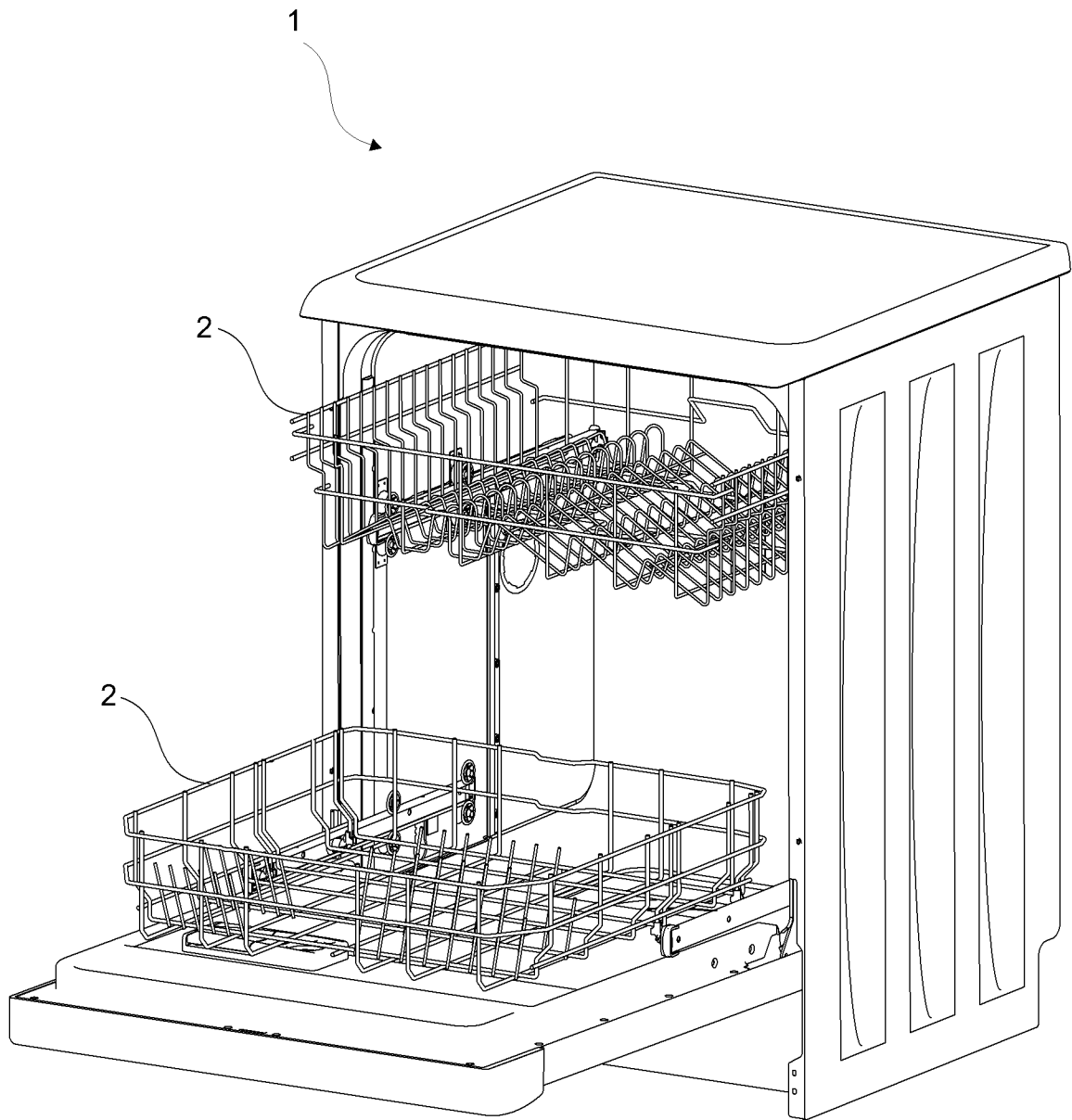


Figure 2

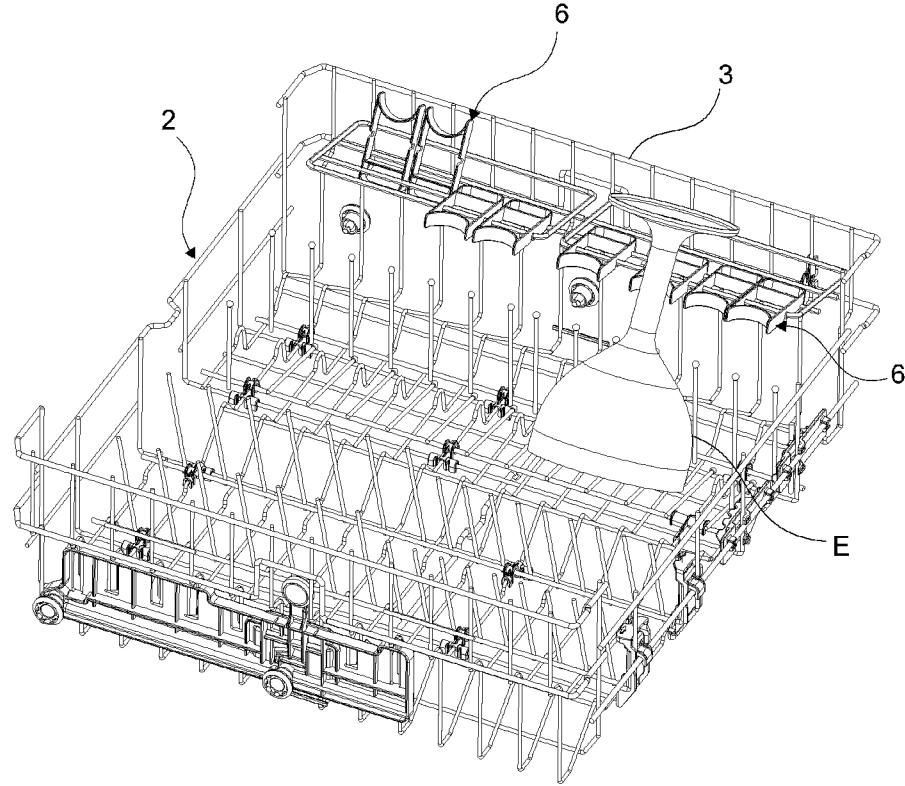
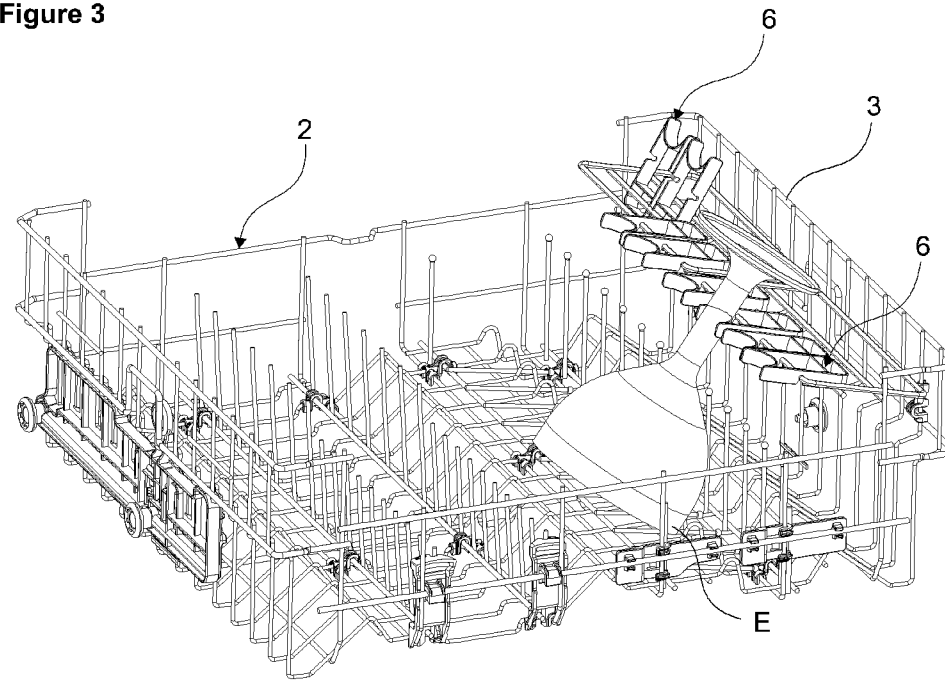


Figure 3



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Figure 4

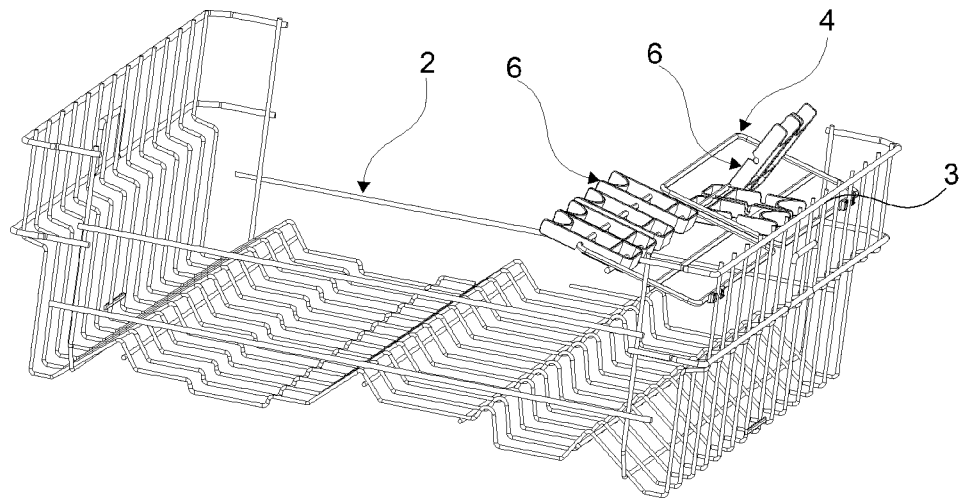
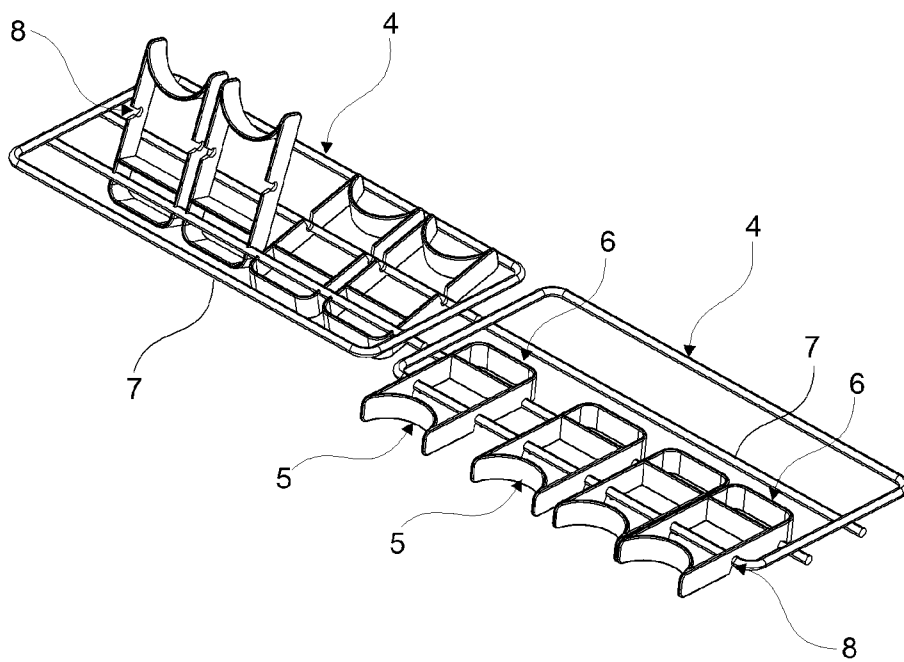


Figure 5



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Figure 6

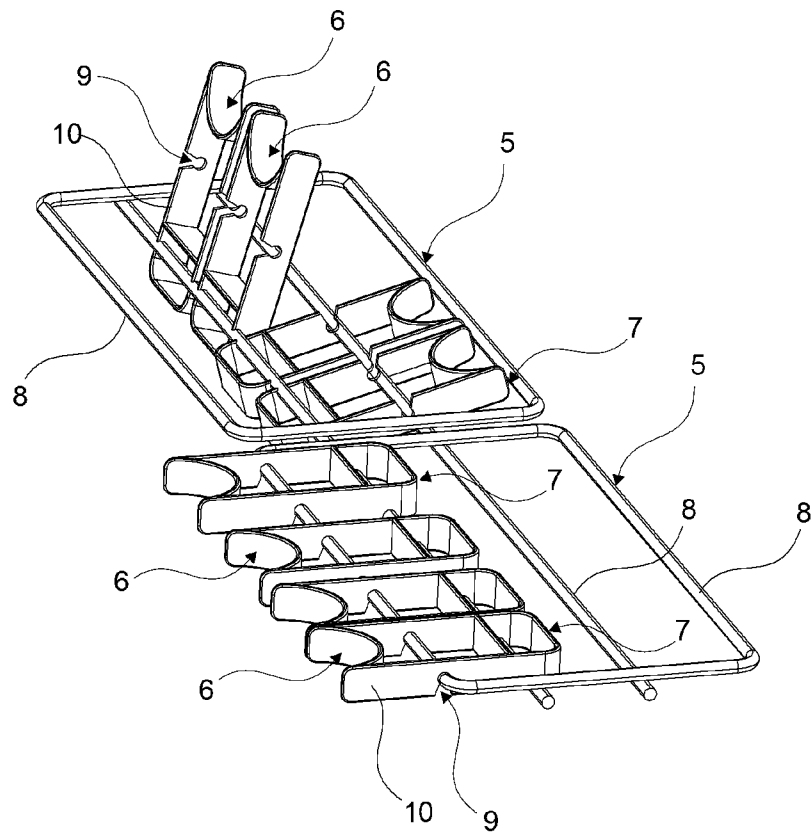
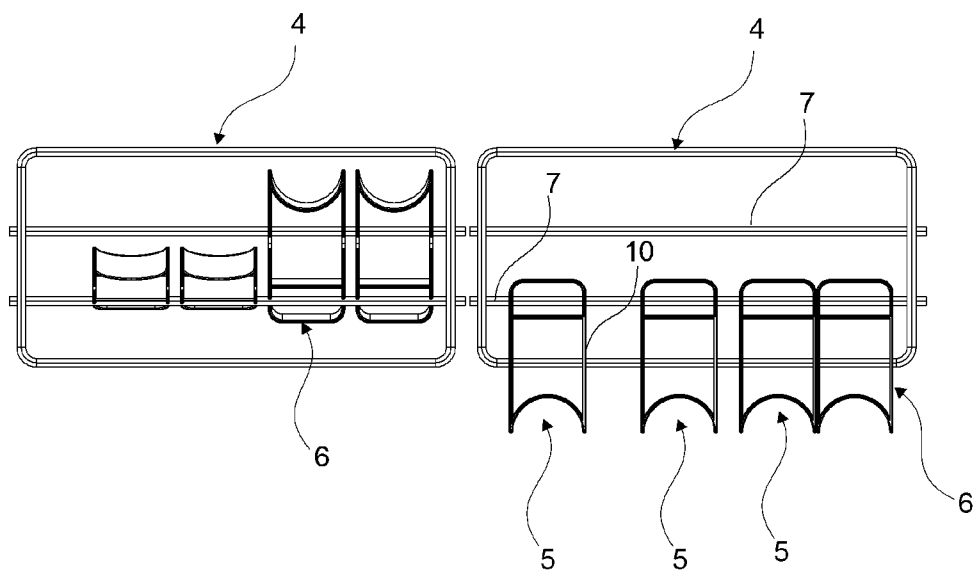


Figure 7



## INTERNATIONAL SEARCH REPORT

International application No

PCT/EP2012/069069

## 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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|           | -----<br>-/-                                                                                                                                   |                       |



Further documents are listed in the continuation of Box C.



See patent family annex.

## \* Special categories of cited documents :

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## INTERNATIONAL SEARCH REPORT

International application No  
PCT/EP2012/069069

| C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT |                                                                                                                                                   |                       |
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Information on patent family members

International application No

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