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(54) A WASHING RACK COMPRISING A HOLDER

GESCHIRRKORB UMFASSEND EINEN HALTER

BAIE DE NETTOYAGE COMPRENANT UN SUPPORT

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EP 3 632 290 B1

Description

Technical Field

[0001] The present invention relates to a holder which is suitable for being mounted to a washing rack provided at washing machines and enables large dishes placed at the washing rack, such as trays or the like, to be supported, and to a washing rack comprising the holder.

Background of the Invention

[0002] Currently, dishwashers are widely used to clean dirty dishes since they save time, water, and amount of cleaning material consumed (e.g. detergent). Conventionally, these dishwashers allowing a large quantity and a wide variety of dish to be washed simultaneously comprise a main body, a washing compartment located in the main body, a door for controlling access into the washing compartment, and washing racks in the form of a grid for allowing water at the washing compartment to reach onto the dishes, in which dishes to be cleaned are placed, and which are located at the washing compartment for cleaning process. In dishwashers there are generally provided a lot of washing racks positioned one above the other, wherein dishes as pots, plates, glasses, cups or the like are placed at these racks. The washing racks comprise various supporting protrusions for supporting the dishes that are placed thereon. However, while the protrusions support dishes such as plates, glasses or the like, they are insufficient to support large dishes having relatively large surface area such as trays, pans etc. Therefore, large dishes that are placed at the washing racks, such as trays, pans or the like may be toppled or placed to occupy more space than necessary.

[0003] Various applications regarding washing racks developed for supporting different sizes of dishes are covered in the known state of art, wherein one of these applications is disclosed in EP3045099A2. According to the application disclosed in said embodiment, there is provided a washing rack comprising a wire support unit which has protrusions thereon for supporting dishes and is fixed at the base thereof such that the wire support unit can be brought into a vertical and a horizontal position by rotating around an axis. However, when the support unit is brought into the horizontal position, it lies on the base and the protrusions thereof remain incapable of supporting dishes having a large surface area, such as trays or the like; and the support unit being made of wire increases the costs.

[0004] In another published document no. WO2012/110319A2 a support rack including a plurality of support elements that are designed to hold items at least partially above a main support surface of the rack is disclosed. The support elements may be movably mounted on the rack so that they can be moved between stowed and deployed positions. The ends of the support elements may have configurations that are designed to securely hold items. Holders on the support elements could hold the support elements in stowed and deployed positions. In some instances, the support elements may also be removably mounted on holders on the rack. However, the support rack of said document is for a laundry dryer and therefore, it is not suitable to hold hard surfaced items such as dishes.

Brief Description of the Invention

[0005] The washing rack according to the present invention, on which dishes to be cleaned are placed, comprises at least one base; at least one frame forming a chamber structure by extending upwards from the base and comprising at least one upper frame wire and at least one lower frame wire located between the upper frame wire and the base; and at least one holder which has at least a first body preferably in the form of a rod; at least a first tab which is located at an end of the first body and allows the first body to be mounted to the lower frame wire such that the first body is able to rotate around an axis formed by the lower frame wire and to move between a first position in which it is vertical with respect to the base and a second position in which it approaches the base so as to have an angle of less than 90° in between; at least one channel provided at the first body; and at least one joint, wherein the joint comprises:

- at least a second body;
- at least one pin located at an end of the second body and positioned in the channel to move back and forth along the channel; and
- at least a second tab located at the other end of the second body and allowing the second body to be mounted to the upper frame wire such that the second body is able to move circularly around the axis formed by the upper frame wire.

Object of the Invention

[0006] An object of the present invention is to provide washing rack provided at washing machines, that comprises a holder that enables large dishes placed at the washing rack, such as tray or the like, to be supported.

[0007] Another object of the present invention is to provide a rack comprising a holder which is foldable such that when not in use, it does not obstruct the dishes placed on the washing rack.

[0008] A further object of the present invention is to provide a rack with a holder which can be easily demounted from the washing rack by the user.

[0009] Yet another object of the present invention is to provide a rack with an easy-to-use, practical and reliable holder which is low in manufacturing costs.

Description of the Drawings

[0010] Exemplary embodiments of the holder and the

washing rack comprising the holder according to the present invention are illustrated in the attached drawings, in which:

Figure 1 is a perspective view of an exemplary use of the washing rack comprising the holder according to the present invention.

Figure 2 is a front view of an exemplary use of the washing rack comprising the holder according to the present invention.

Figure 3 is another perspective view of an exemplary use of the washing rack comprising the holder according to the present invention.

Figure 4 is a side view of an exemplary use of the washing rack comprising the holder according to the present invention.

Figure 5 is another side view of another exemplary use of the washing rack comprising the holder according to the present invention.

Figure 6 is a zoomed view of an exemplary use of the washing rack comprising the holder according to the present invention.

Figure 7 is a perspective view of the holder that can be mounted on the washing rack according to the present invention

Figure 8 is a perspective view of the joint comprised by the holder that can be mounted on the washing rack according to the present invention.

[0011] All the parts illustrated in figures are individually assigned a reference numeral and the corresponding terms of these numbers are listed below:

Washing rack	(1)
Base	(1a)
Frame	(1b)
Upper frame wire	(1c)
Lower frame wire	(1d)
Holder	(2)
First body	(3)
First tab	(4)
Pin	(5)
Second body	(6)
Joint	(7)
Second tab	(8)
Dishes	(9)

Description of the Invention

[0012] In dishwashers there are generally provided a lot of washing racks positioned one above the other, wherein dishes as pots, plates, glasses, cups or the like are placed at these racks. The washing racks comprise various supporting protrusions for supporting the dishes that are placed thereon. However, while the protrusions support dishes as plates, glasses or the like, they are insufficient to support large dishes having relatively large surface area such as trays, pans etc. Therefore, large dishes placed at the washing racks, such as trays, pans or the like may be toppled or placed to occupy more space than necessary. Therefore, with the present invention, there is provided a holder and a washing rack comprising the holder, wherein the holder is suitable for being mounted to the washing rack, enables large dishes placed on the washing rack, such as trays or the like, to be supported, and is foldable and demountable from the washing rack.

[0013] The holder (2) that can be mounted on the washing rack according to the present invention, exemplary views of which are illustrated in Figures 1-8, is suitable for use in a dishwasher which comprises at least one washing rack (1) on which dishes to be cleaned (9) are placed, wherein the washing rack (1) has at least one base (1a), and at least one frame (1b) forming a chamber structure by extending upwards from the base (1a) and comprising at least one upper frame wire (1c) and at least one lower frame wire (1d) located between the upper frame wire (1b) and the base (1a), the holder (2) comprising at least a first body (3) preferably in the form of a rod; at least a first tab (4) which is located at an end of the first body (3) and allows the first body (3) to be mounted to the lower frame wire (1d) such that the first body (3) is able to rotate around an axis formed by the lower frame wire (1d) and to move between a first position in which it is vertical with respect to the base (1a) and a second position in which it approaches the base (1a) so as to have an angle of less than 90° in between; at least one channel (not shown in the figures) provided at the first body (3); and at least one joint (7) which has at least a second body (6), at least one pin (5) located at an end of the second body (6) and positioned in the channel to move back and forth along the channel, and at least a second tab (8) located at the other end of the second body (6) and allowing the second body (6) to be mounted to the upper frame wire (1c) such that the second body (6) is able to move circularly around the axis formed by the upper frame wire (1c).

[0014] In an exemplary embodiment of the invention, the first body (3) and the joint (7) comprised by the holder (2) are engaged by placing the pin (5) at the channel, which is located at the first body (3), such that the pin (5) is able move back and forth in the channel. The first tab (4) is fastened to the lower frame wire (1d) and the second tab (8) is fastened to the upper frame wire (1c) to mount the holder (2) to the washing rack (1). By means of the first tab (8); the first body (3) which is mounted to the lower frame wire (1d) to be able to move circularly around an axis formed by the lower frame wire (1d) is therefore able to move between a first position in which it is vertical with respect to the base (1a) and approaches the frame (1b) and a second position in which it approaches the base (1a) so as to have an angle of less than 90° in between. By mounting the second tab (8) to the lower frame wire (1d), it is enabled that the joint (7) is mounted

to the frame (1b) so as to move circularly around an axis formed by the lower frame wire (1d). In said embodiment, when the first body (3) is brought into the first position, the joint (7) moves circularly around an axis formed by the upper frame wire (1c), and at the same time, the pin (5) moves forward inside the channel towards a first point of the channel that is relatively away from the base (1a). When the first body (3) is in the first position, the holder (2) is located at closest position to the frame (1b) such that it does not occupy space inside the washing rack (1). If it is desired to place a dish (9) to the washing rack (1) which has a large surface area, such as a tray or the like, the first body (3) is moved to approach the base (1a). When the first body (3) approaches towards the base (1a), the pin (5) moves inside the channel towards a second point of the channel that is relatively closer to the base, and the second body (6) rotates around the axis formed by the upper frame wire (1c), taking a relatively horizontal position with respect to the base (1a). When the pin (5) reaches to the second point of the channel, the holder (2) is fixed in its position. When the holder (2) is in said position, the first body (3) forms a protrusion by which dishes (9) to be placed at the washing rack (1), such as tray or the like, are supported, and the dishes (9) lean against the first body (3) to be placed inside the washing rack (1).

[0015] The washing rack (1) according to the present invention, on which dishes (9) to be cleaned are placed, comprises at least one base (1a); at least one frame (1b) forming a chamber structure by extending upwards from the base (1a) and comprising at least one upper frame wire (1c) and at least one lower frame wire (1d) located between the upper frame wire (1c) and the base (1a); and at least one holder which has at least a first body (3) preferably in the form of a rod; at least a first tab (4) which is located at an end of the first body (3) and allows the first body (3) to be mounted to the lower frame wire (1d) such that the first body (3) is able to rotate around an axis formed by the lower frame wire (1d) and to move between a first position in which it is vertical with respect to the base (1a) and a second position in which it approaches the base (1a) so as to have an angle of less than 90° in between; at least one channel provided at the first body (3); and at least one joint (7), wherein the joint (7) comprises:

- at least a second body (6);
- at least one pin (5) located at an end of the second body (6) and positioned in the channel to move back and forth along the channel; and
- at least a second tab (8) located at the other end of the second body (6) and allowing the second body (6) to be mounted to the upper frame wire (1c) such that the second body (6) is able to move circularly around the axis formed by the upper frame wire (1c).

[0016] In a preferred embodiment of the invention, the washing rack (1) comprises at least two holders (2) which are positioned in an opposed manner so that the dishes (9) as trays or the like can be positioned by leaning against the first bodies (3) which extend in an opposed manner.

[0017] In a preferred embodiment of the invention, length of the second body (6) (length between the second tab (8) and the pin (5)) is smaller than length of the first body (3) (length between the first tab (4) and the other end of the first body (3) that is located opposite the first tab (4)). Therefore, when the first body (3) is in the second position, the second body (6) can be positioned parallel to the base (1a).

[0018] In a preferred embodiment of the invention, the holder (2) comprises at least one fixing member which is located at the channel and allows the pin (5) to be fixed at the first point and the second point of the channel. The fixing member is preferably a protrusion located at the first body (3) and acts as a lock for the joint (7) to keep the first body (3) fixed in the vertical position.

[0019] In a preferred embodiment of the invention, the first body (3) comprises at least one extension in the form of a clamp which enables dishes (9) placed at the washing rack (1) to be fixed, and is provided at the other end of the first body (3) opposite the end where the first tab (4) is provided.

[0020] Thanks to the holder (2) according to the present invention, it is enabled that dishes (9) having a relatively large surface area, such as trays, pans or the like, are placed inside the washing rack (1) such that they occupy less space and are not toppled. Since the holder (2) is movable, it can be fixed at a position at the washing rack (1) so as not to occupy space, when not in use. Thanks to the first tab (4) and the second tab (8) comprised by the holder (2), the holder (2) can be mounted to the washing rack (1) by the user so that it can be easily removed from the washing rack (1) if desired.

Claims

1. A washing rack (1) on which dishes (9) to be cleaned are placed and which comprises at least one base (1a); at least one frame (1b) forming a chamber structure by extending upwards from the base (1a) and comprising at least one upper frame wire (1c) and at least one lower frame wire (1d) located between the upper frame wire (1c) and the base (1a); said washing rack comprising at least one holder which has at least a first body (3); at least a first tab (4) which is located at an end of the first body (3) and allows the first body (3) to be mounted to the lower frame wire (1d) such that the first body (3) is able to rotate around an axis formed by the lower frame wire (1d) and to move between a first position in which it is vertical with respect to the base (1a) and a second position in which it approaches the base (1a) so as to have an angle of less than 90° in between, **characterized in that** at least one channel is provided at

the first body (3); and **in that** said washing rack further comprises at least one joint (7), wherein the joint (7) comprises:

- at least a second body (6);
- at least one pin (5) located at an end of the second body (6) and positioned in the channel to move back and forth along the channel; and
- at least a second tab (8) located at the other end of the second body (6) and allowing the second body (6) to be mounted to the upper frame wire (1c) such that the second body (6) is able to move circularly around the axis formed by the upper frame wire (1c).

2. A washing rack (1) according to Claim 1, **characterized in that** length of the second body (6) is smaller than length of the first body (3).

3. A washing rack (1) according to any of the Claims 1 or 2, **characterized by** comprising at least one fixing member which is located at the channel and allows the pin (5) to be fixed at the first point and the second point of the channel.

4. A washing rack (1) according to any of the Claims 1 to 3, **characterized by** comprising at least two holders (2) which are positioned in an opposed manner.

5. A washing rack (1) according to any of the Claims 1 to 4, **characterized in that** the first body (3) comprises at least one extension in the form of a clamp which enables dishes (9) placed at the washing rack (1) to be fixed, and is provided at the other end of the first body (3) opposite the end where the first tab (4) is provided.

Patentansprüche

1. Geschirrkorb (1), in dem zu reinigendes Geschirr (9) platziert wird und der wenigstens eine Basis (1a), wenigstens einen Rahmen (1b) aufweist, der eine Kammerstruktur bildet, indem er von der Basis (1a) nach oben ausgedehnt ist und wenigstens einen oberen Rahmendraht (1c) und wenigstens einen unteren Rahmendraht (1d) aufweist, der sich zwischen dem oberen Rahmendraht (1c) und der Basis (1a) befindet, wobei der Geschirrkorb wenigstens einen Halter mit einem ersten Körper (3), wenigstens einen ersten Aufhänger (4) aufweist, der sich an einem Ende des ersten Körpers (3) befindet und der es erlaubt, den ersten Körper (3) an dem unteren Rahmendraht (1d) anzubringen, so dass der erste Körper (3) dazu in der Lage ist, sich um eine durch den unteren Rahmendraht (1d) gebildete Achse zu drehen und sich zwischen einer ersten Stellung, in der er vertikal zu der Basis (1a) ist, und einer zweiten Stellung zu bewegen, in der er an die Basis (1a) angenähert ist, um so einen Winkel von weniger als 90° dazwischen zu bilden, **dadurch gekennzeichnet, dass** wenigstens ein Kanal an dem ersten Körper (3) vorgesehen ist und dass der Geschirrkorb wenigstens eine Verbindung (7) aufweist, wobei die Verbindung (7) aufweist:

- wenigstens einen zweiten Körper (6),
- wenigstens einen Stift (5), der sich an einem Ende des zweiten Körpers (6) befindet und in dem Kanal positioniert ist, um sich entlang des Kanals vor und zurück zu bewegen, und
- wenigstens einen zweiten Aufhänger (8), der sich an dem anderen Ende des zweiten Körpers (6) befindet und der es erlaubt, den zweiten Körper (6) an dem oberen Rahmendraht (1c) anzubringen, so dass der zweite Körper dazu in der Lage ist, sich im Kreis um die von dem oberen Rahmendraht (1c) gebildete Achse zu bewegen.

2. Geschirrkorb (1) nach Anspruch 1, **dadurch gekennzeichnet, dass** die Länge des zweiten Körpers (6) geringer als die Länge des ersten Körpers (3) ist.

3. Geschirrkorb (1) nach einem der Ansprüche 1 oder 2, **dadurch gekennzeichnet, dass** er wenigstens ein Fixierelement aufweist, das sich an dem Kanal befindet und es dem Stift (5) ermöglicht, an dem ersten Punkt und dem zweiten Punkt des Kanals fixiert zu werden.

4. Geschirrkorb (1) nach einem der Ansprüche 1 bis 3, **dadurch gekennzeichnet, dass** er wenigstens zwei Halter (2) aufweist, die in gegenüberliegender Weise positioniert sind.

5. Geschirrkorb (1) nach einem der Ansprüche 1 bis 4, **dadurch gekennzeichnet, dass** der erste Körper (3) wenigstens eine Verlängerung in der Form einer Klammer aufweist, die es ermöglicht, in dem Geschirrkorb platziertes Geschirr zu fixieren, und die an dem anderen Ende des ersten Körpers (3) gegenüber dem Ende, an dem der erste Aufhänger (4) vorgesehen ist, angeordnet ist.

Revendications

1. Panier de lavage (1) sur lequel sont placés la vaisselle (9) à nettoyer et qui comprend au moins une base (1a) ; au moins un cadre (1b) formant une structure de chambre en s'étendant vers le haut depuis la base (1a) et comprenant au moins un fil de cadre supérieur (1c) et au moins un fil de cadre inférieur (1d) situé entre le fil de cadre supérieur (1c) et la base (1a) ; ledit panier de lavage comprenant au

moins un support qui a au moins un premier corps (3) ;
au moins une première patte (4) qui est située à une extrémité du premier corps (3) et permet au premier corps (3) d'être monté sur le fil de cadre inférieur (1d) de sorte que le premier corps (3) est capable de tourner autour d'un axe formé par le fil de cadre inférieur (1d) et de se déplacer entre une première position dans laquelle il est vertical par rapport à la base (1a) et une seconde position dans laquelle il s'approche de la base (1a) de façon à avoir un angle inférieur à 90° entre les deux,
caractérisé en ce qu'au moins
un canal est prévu au niveau du premier corps (3) ;
et **en ce que** ledit panier de lavage comprend en outre au moins un joint (7), dans lequel le joint (7) comprend :

- au moins un second corps (6) ;
- au moins une broche (5) située à une extrémité du second corps (6) et positionnée dans le canal pour se déplacer en va-et-vient le long du canal ; et
- au moins une seconde patte (8) située à l'autre extrémité du second corps (6) et permettant au second corps (6) d'être monté sur le fil de cadre supérieur (1c) de telle sorte que le second corps (6) soit capable de se déplacer circulairement autour de l'axe formé par le fil de cadre supérieur (1c).

2. Panier de lavage (1) selon la revendication 1, **caractérisé en ce que** la longueur du second corps (6) est inférieure à la longueur du premier corps (3).

3. Panier de lavage (1) selon l'une quelconque des revendications 1 ou 2, **caractérisé en ce qu'il** comprend au moins un élément de fixation qui est situé au niveau du canal et permet à la broche (5) d'être fixée au premier point et au second point du canal.

4. Panier de lavage (1) selon l'une quelconque des revendications 1 à 3, **caractérisé en ce qu'il** comprend au moins deux supports (2) qui sont positionnés de manière opposée.

5. Panier de lavage (1) selon l'une quelconque des revendications 1 à 4, **caractérisé en ce que** le premier corps (3) comprend au moins une extension en forme de pince qui permet de fixer la vaisselle (9) placée sur le panier de lavage (1), et qui est prévue à l'autre extrémité du premier corps (3) opposée à l'extrémité où est prévue la première patte (4).

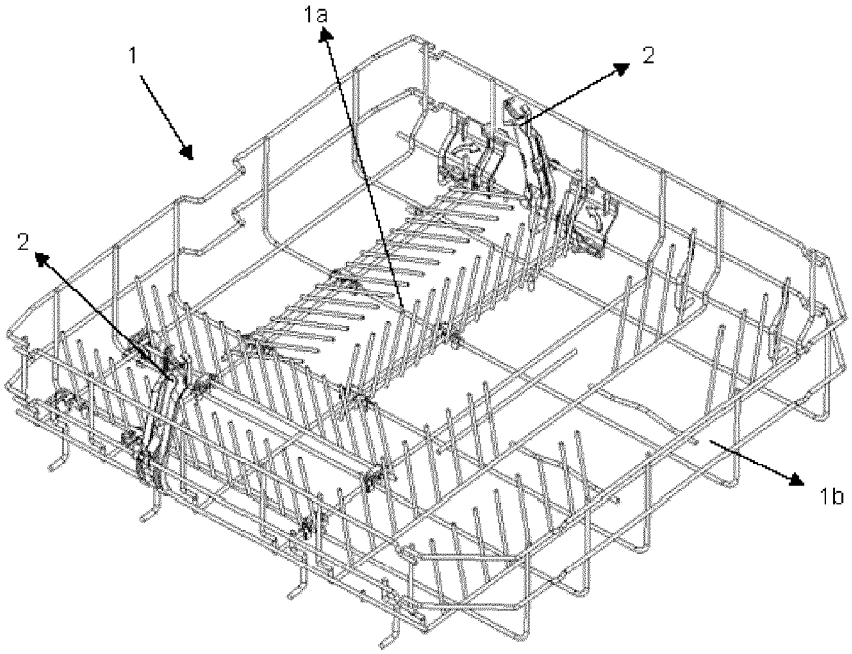


Figure – 1

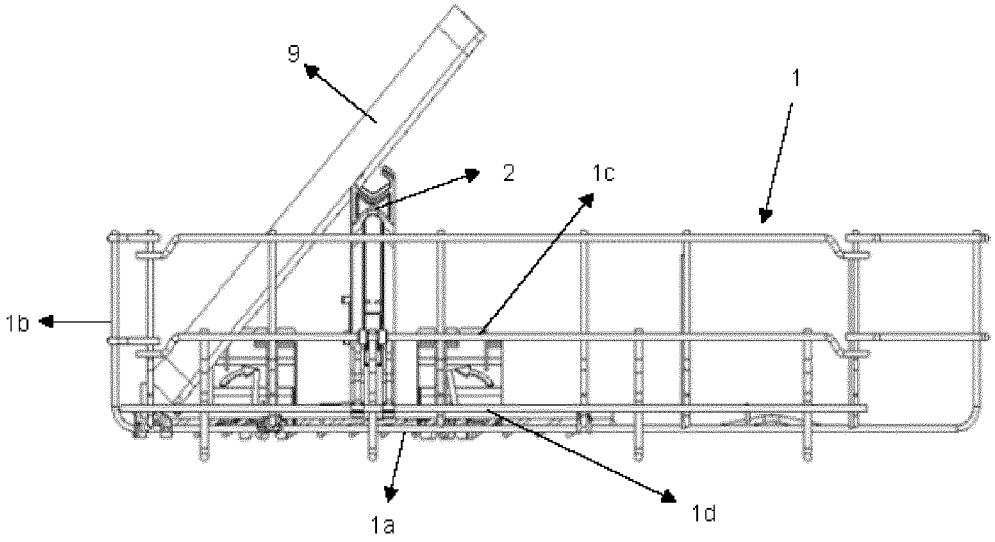


Figure – 2

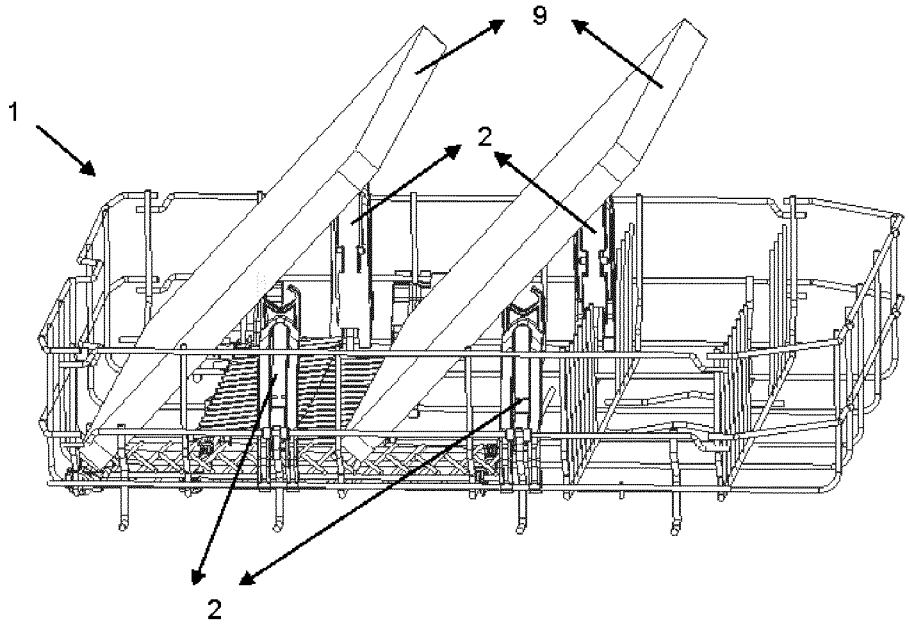


Figure – 3

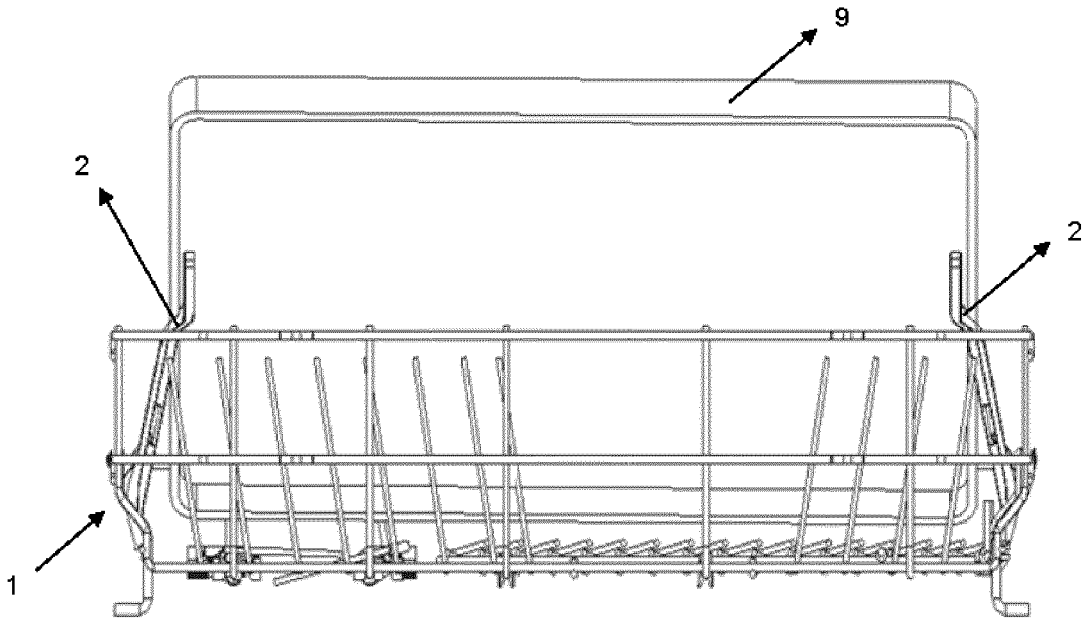


Figure – 4

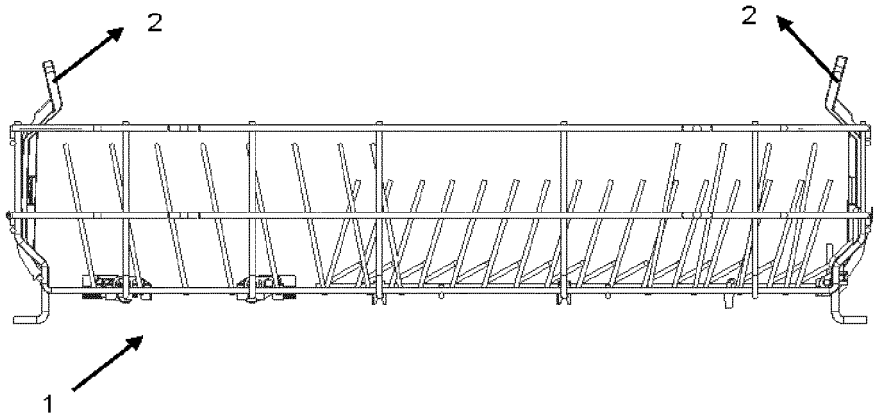


Figure – 5

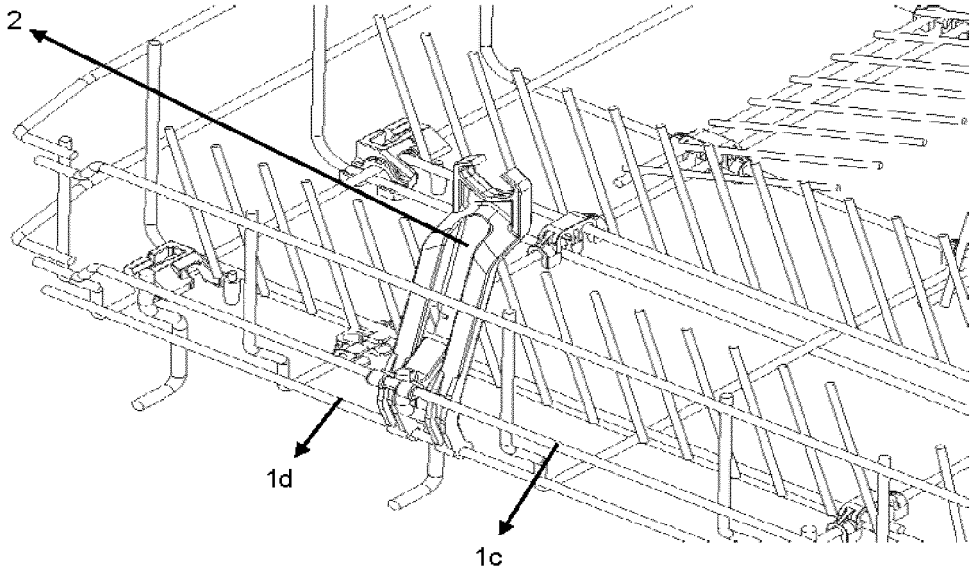


Figure – 6

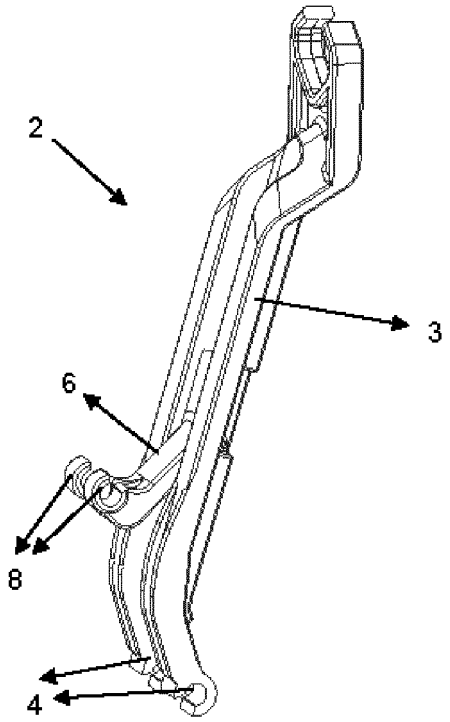


Figure – 7

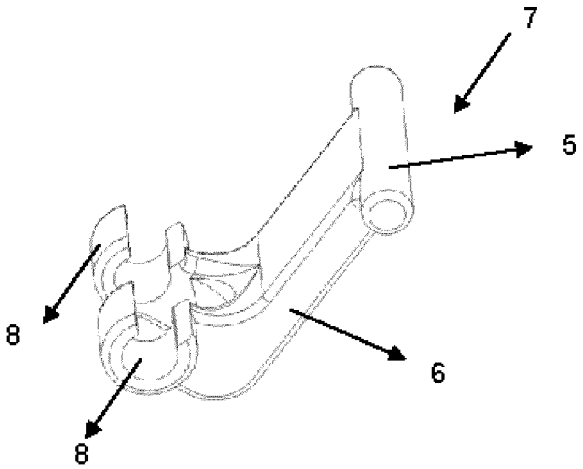


Figure – 8

REFERENCES CITED IN THE DESCRIPTION

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