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(54) **A BASKET FOR DISHWASHERS**
KORB FÜR GESCHIRRSPÜLER
PANIER POUR LAVE-VAISSELLE

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(73) Proprietor: **Arçelik Anonim Sirketi**
34950 Istanbul (TR)

(72) Inventors:
• **BASTUJI, Cem,**
Arcelik Anonim Sirketi
34950 Istanbul (TR)

• **ALTUN, Umit,**
Arcelik Anonim Sirketi
34950 Istanbul (TR)

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• **PATENT ABSTRACTS OF JAPAN vol. 2000, no. 24, 11 May 2001 (2001-05-11) & JP 2001 178670 A (RINNAI CORP), 3 July 2001 (2001-07-03)**

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Description

[0001] This invention relates to basket used in dishwashers wherein dishes to be washed are placed.

[0002] The baskets used in dishwashers are made by joining together wires in various shapes which are generally covered with plastic material. The basket comprises support wires which enable kitchen utensils such as plates, glasses etc. to stand in an upright position or at a certain angle in order to facilitate their wash and which are perpendicular or inclined to the base plane of the basket and which are fixed to the wires on the base. During the use of the dishwasher, objects with different sizes and dimensions are placed in the basket; as a result, unused volumes appear inside the dishwasher. For instance, in the prior art dishwasher basket (Figure 2) objects are placed at an angle to prevent water to remain on the top part of the glasses after the completion of the washing process and to ensure an effective wash; consequently, unused volumes appear below the inclined plane (A) and when plates which have different heights are placed in the plate section unused volumes are seen above of the small plates (B). The baskets must be designed in such a way that it is possible to place both small and big sized objects in the basket and that in each case it is also possible to place maximum number of objects.

[0003] In state of the art, United States Patent US 3181924, optimum placement of objects having different dimensions is ensured by forming two compartments in the top basket that have different base heights. This solution brings about an unused volume below the higher base when the spray arm which directs washing liquid to the objects is fixed under the basket.

[0004] In state of the art, European Patent EP 0186157, a basket which is placed on or below the basket is used for placing forks and spoons horizontally.

[0005] The object of this invention is to realize a basket used in dishwashers which enables an effective use of the inner volume of the dishwasher by increasing the loading capacity.

[0006] A basket used in dishwashers realized in order to attain the object of this invention has been illustrated in the attached drawings, wherein;

[0007] Figure 1 - is a perspective view of a dishwasher.

[0008] Figure 2 - is a front view of a basket in state of the art.

[0009] Figure 3 - is a front view of a basket which comprises a drawer.

[0010] Figure 4 - is a front perspective view of a basket which comprises a drawer that is pulled out.

[0011] Figure 5 - is a perspective view of a carrier.

[0012] Figure 6 - is a perspective view of a drawer.

[0013] Figure 7 - is a side view of a basket which comprises a drawer that is pulled out.

[0014] Figure 8 - is a side view of a basket which comprises a drawer.

[0015] The components in the figures have each been numbered corresponding the following:

1. Dishwasher
2. Body
3. Door
4. Basket
5. Spray arm
6. Holder
7. Support surface
8. Drawer
9. Carrier
10. Sled
11. Base
12. Protrusion
13. Hook
14. Track

[0016] Dishwashers (1) comprise a body (2), a door (3) which enables access inside the body (2), one or more baskets (4) which are placed inside the body (2) and on which the objects to be washed are placed and one or more spray arms (5) which directs washing liquid on the objects to be washed.

[0017] The basket (4) comprises one or more holders (6) which enable placing objects such as plates at an upright position, one or more support surfaces (7) on which objects to be washed such as glasses, bowls etc. placed, one or more drawers (8) which enable utilizing the unused volumes that appear underneath the support surfaces (7) and/or above the plates that are placed between the holders (6) and a carrier (9) on which a drawer (8) is placed.

[0018] To avoid any collision with the spray arm (5) that is integrated at the bottom part of the basket (4), the drawer (8) is positioned in such a way that the area of use under the basket (4) is not effected in any way and that its base is at the approximately same level with the base of the basket (4).

[0019] The drawer (8) comprises one or more sleds (10) which enable a sliding movement on the carrier (9), a base (11) which has a perforated structure and one or more protrusions (12) which enable resting of objects such as forks and spoons without touching each other.

[0020] Carrier (9) comprises one or more hooks (13) which enable attachment to the basket (4) and one or more tracks (14) on which the sleds (10) rest.

[0021] The drawer (8) has a form and structure that covers any formation of unused volumes underneath the support surfaces (7) on which glasses are preferably placed and which are inclined in order to prevent water to remain on the top part of the glasses. In this embodiment, the drawer (8) provides an additional space wherein objects to be washed can be placed without changing the size of the basket (4) and reducing the washing performance.

[0022] The drawer (8) can cover the bottom part of the basket (4) entirely or partially.

[0023] In another embodiment of the invention, in order to utilize the unused volumes that appear above plates which are smaller than biggest plates, the drawer (8) is

placed underneath the basket (4) in such a way that it covers the volume obtained by elevating the base of the basket (4) on which some of the holders (6) which enable the plates to stand upright are positioned.

[0024] In another embodiment of the invention, the drawer (8) comprises fixing elements such as hooks, notches etc. which ensures attachment on the basket (4) without using any carriers (9).

[0025] The drawer (8) placed under the basket (4) increases the area of use without taking up an additional volume inside the dish washer (1). In the embodiment wherein the basket (4) structure is not changed, the basket (4) provides convenience in the process of service and production as it can be used in different dishwasher models with or without a drawer (8):

[0026] As forks and spoons can be placed inside the drawer (8) an additional basket is not necessary in dishwashers and space saving is ensured.

Claims

1. A basket (4) which is used in dishwashers and on which utensils are placed, the basket (4) comprising one or more support surfaces (7) on which objects to be washed are placed and which are inclined, the basket (4) comprising one or more drawers (8) placed underneath it, **characterized in that** the drawer (8) has a form which can be placed within the unused volumes that appear underneath the inclined support surfaces (7) of the basket (4).
2. A basket (4) as defined in claim 1 characterized with a drawer (8) having a base at the approximately same level with the base of the basket (4) in order not to effect the area of use under the basket (4).
3. A basket (4) as defined in claim 2 characterized with a drawer (8) which has structure that covers any formation of unused volumes below the support surfaces (7) on which glasses are preferably placed and which are inclined in order to prevent water to remain on the top part of the glasses and which provides an additional space wherein objects to be washed can be placed without changing the size of the basket (4) and reducing the washing performance.
4. A basket (4) as defined in claim 2 characterized with a drawer (8) covers the volume which is obtained by elevating the base of the basket (4) on which some of the holders (6) which enable the plates to stand upright are positioned in order to utilize the unused volumes that appear above plates which are smaller than biggest plates.
5. A basket (4) as defined in any of the above claims characterized with a carrier (9) on which a drawer (8) is placed.

6. A basket (4) as defined in claim 5 characterized with a drawer (8) comprising one or more sleds (10) which enable a sliding movement on the carrier (9), a base (11) which has a perforated structure and one or more protrusions (12) which enable resting of objects such as forks and spoons without touching each other.
7. A basket (4) as defined in claim 6 characterized with a carrier (9) comprising one or more hooks (13) which enable attachment to the basket (4) and one or more tracks (14) on which the sleds (10) rest.
8. A dishwasher (1) comprising a basket (4) as defined in any of the above claims.

Patentansprüche

1. Korb (4), der in Geschirrspülern verwendet wird und in den Gegenstände gelegt werden, wobei der Korb (4) eine oder mehrere Trageflächen (7) umfasst, auf die die zu spülenden Gegenstände gelegt werden und die geneigt sind, wobei der Korb (4) ein oder mehrere darunter angeordnete Schubfächer (8) umfasst, **dadurch gekennzeichnet, dass** das Schubfach (8) eine Form aufweist, die in den ungenutzten Volumina angeordnet werden kann, die unter den geneigten Trageflächen (7) des Korbes (4) auftreten.
2. Korb (4) nach Anspruch 1, **gekennzeichnet durch** ein Schubfach (8), das eine Basis in etwa auf der gleichen Höhe wie die Basis des Korbes (4) aufweist, um den Nutzungsbereich unter dem Korb (4) nicht zu beeinflussen.
3. Korb (4) nach Anspruch 2, **gekennzeichnet durch** ein Schubfach (8), das eine Struktur aufweist, die eine beliebige Formation ungenutzter Volumina unter den Trageflächen (7) abdeckt, auf denen vorzugsweise Gläser angeordnet werden und die geneigt sind, um zu verhindern, dass Wasser auf der Oberseite der Gläser zurückbleibt, und die einen zusätzlichen Raum bieten, in dem zu spülende Gegenstände angeordnet werden können, ohne die Größe des Korbes (4) zu ändern und die Spülleistung zu reduzieren.
4. Korb (4) nach Anspruch 2, **gekennzeichnet durch** ein Schubfach (8), das das Volumen abdeckt, das **durch** Erhöhen der Basis des Korbes (4) erlangt wird, auf der einige der Halter (6), die es den Tellern erlauben, aufrecht zu stehen, angeordnet sind, um die ungenutzten Volumina zu nutzen, die über Tellern auftreten, die kleiner sind als die größten Teller.
5. Korb (4) nach einem der vorangehenden Ansprüche, **gekennzeichnet durch** einen Träger (9), auf dem

ein Schubfach (8) angeordnet ist.

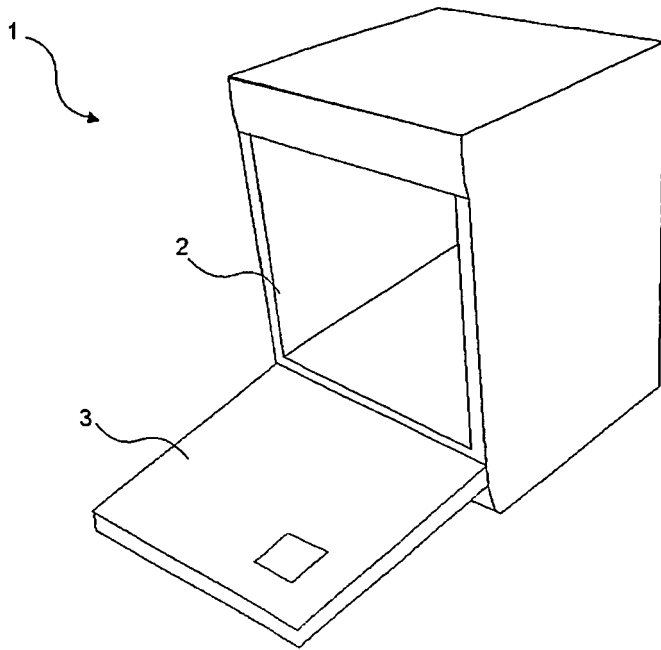
6. Korb (4) nach Anspruch 5, **gekennzeichnet durch** ein Schubfach (8), das einen oder mehrere Schlitten (10) aufweist, die eine Gleitbewegung auf dem Träger (9) ermöglichen, eine Basis (11), die eine perforierte Struktur aufweist, und einen oder mehrere Vorsprünge (12), die es Gegenständen wie Gabeln und Löffeln erlauben, in einer Ruheposition zu bleiben, ohne einander zu berühren.
7. Korb (4) nach Anspruch 6, **gekennzeichnet durch** einen Träger (9), der einen oder mehrere Haken (13) umfasst, die das Anbringen am Korb (4) ermöglichen, und eine oder mehrere Schienen (14), auf denen die Schlitten (10) ruhen.
8. Geschirrspüler (1), umfassend einen Korb (4) nach einem der vorangehenden Ansprüche.

5. Un panier (4) selon l'une quelconque des revendications précédentes, **caractérisé par** un porteur (9) sur lequel un tiroir (8) est placé.
- 5 6. Un panier (4) selon la Revendication 5, **caractérisé par** un tiroir (8) comprenant une ou plusieurs glissières (10) qui permettent un mouvement de glissement sur le porteur (9), une base (11) qui a une structure perforée et une ou plusieurs protubérances (12) qui permettent aux objets comme des fourchettes et cuillers de rester sans toucher les uns les autres.
- 10 7. Un panier (4) selon la Revendication 6, **caractérisé par** un porteur (9) comprenant une ou plusieurs crochets (13) qui le permettent d'être attaché au panier (4) et un ou plusieurs rails (14) sur lesquels les glissières (10) restent.
- 15 8. Un lave-vaisselle (1) comprenant un panier (4) selon l'une quelconque des revendications précédentes.
- 20

Revendications

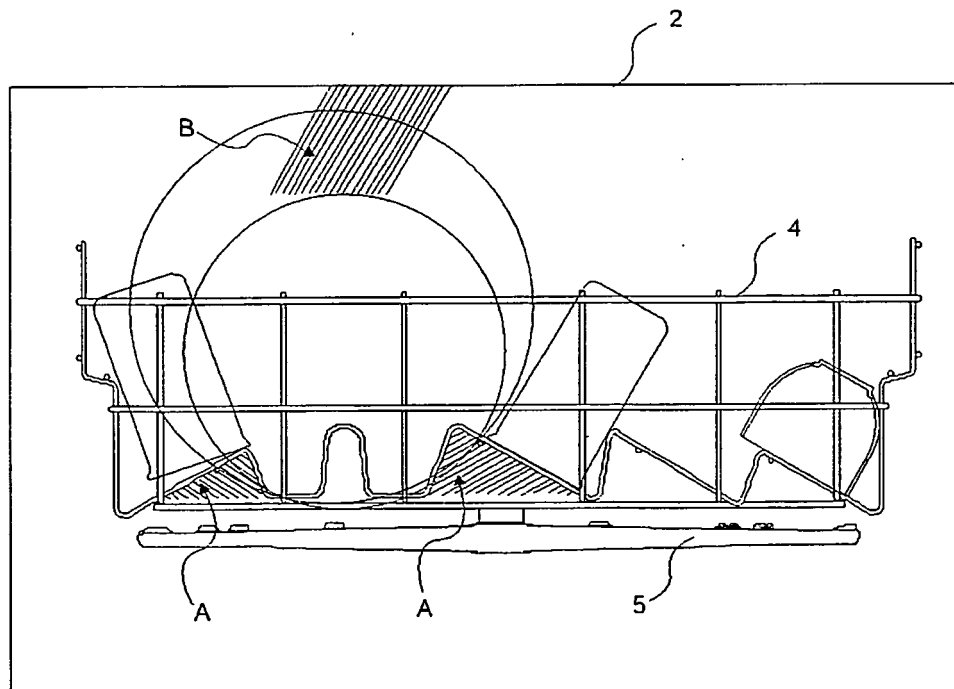
1. Un panier (4) qui est utilisé dans des lave-vaisselles et sur lequel des ustensiles sont placés, le panier (4) comprenant une ou plusieurs surfaces de support (7) sur lesquelles des objets à laver sont placés et qui sont inclinées, le panier (4) comprenant un ou plusieurs tiroirs (8) placés en dessous de celui-ci, **caractérisé en ce que** le tiroir (8) a une forme qui peut être placée à l'intérieur des volumes inutilisés qui apparaissent au-dessous des surfaces de support (7) inclinées du panier (4).
- 25 30
2. Un panier (4) selon la Revendication 1, **caractérisé par** un tiroir (8) ayant une base à peu près le même niveau avec la base du panier (4) afin de ne pas effectuer la zone d'utilisation sous le panier (4).
- 35
3. Un panier (4) selon la Revendication 2, **caractérisé par** un tiroir (8) qui a une structure qui couvre toute formation de volumes inutilisés en dessous des surfaces de support (7), sur lesquelles de préférence des verres sont placés et qui sont inclinées afin d'empêcher l'eau de rester sur la partie supérieure des verres et qui fournit un espace supplémentaire dans lequel des objets à laver peuvent être placés sans modifier la taille du panier (4) et réduire la performance de lavage.
- 40 45 50
4. Un panier (4) selon la Revendication 2, **caractérisé par** un tiroir (8) couvrant le volume qui est obtenu par l'élévation de la base du panier (4), sur lequel une partie des supports (6) qui permettent aux plaques de se tenir debout est positionnée afin d'utiliser les volumes inutilisés qui apparaissent au-dessus des plaques qui sont plus petites que les plaques plus grandes.
- 55

[Fig. 001]

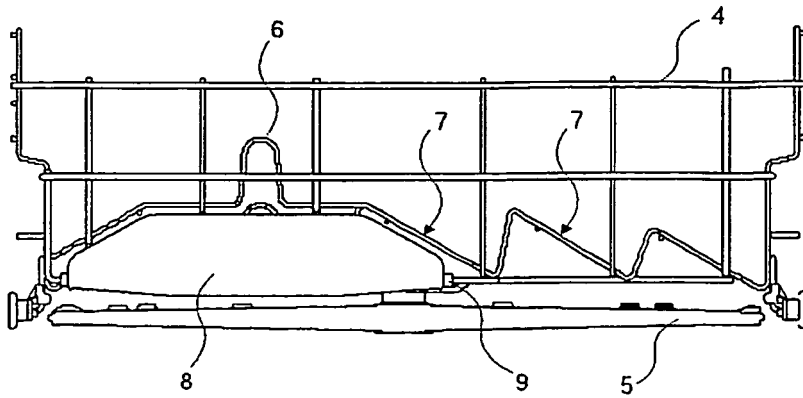


[Fig. 002]

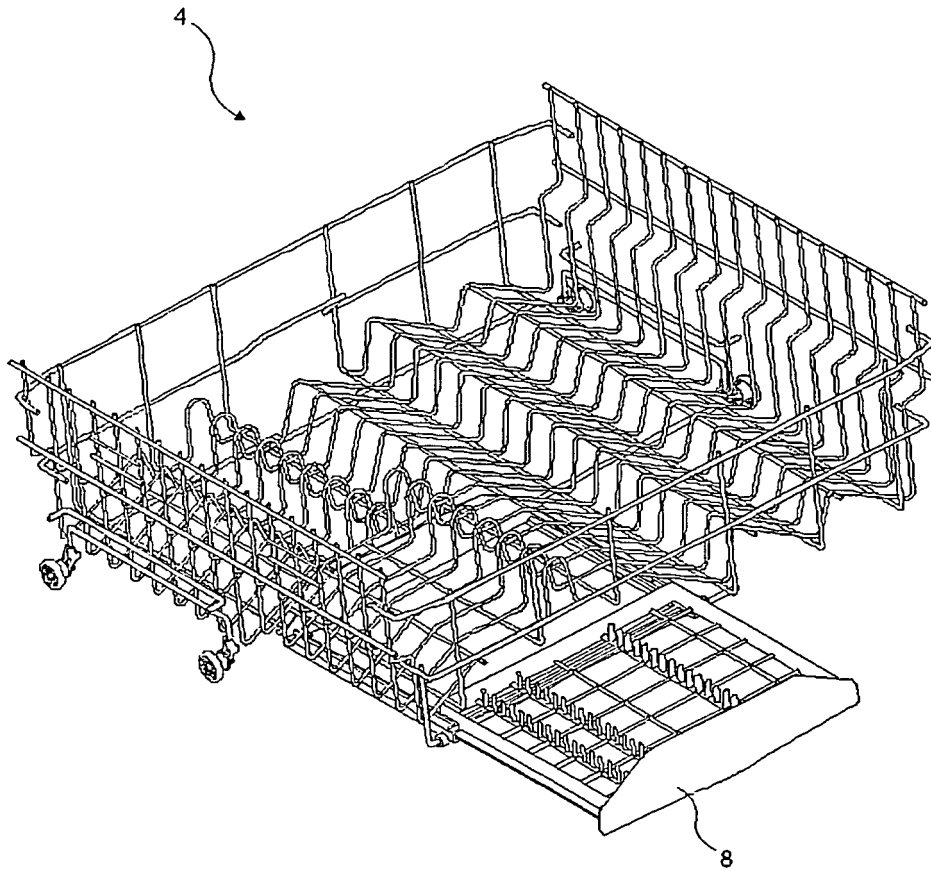
PRIOR ART



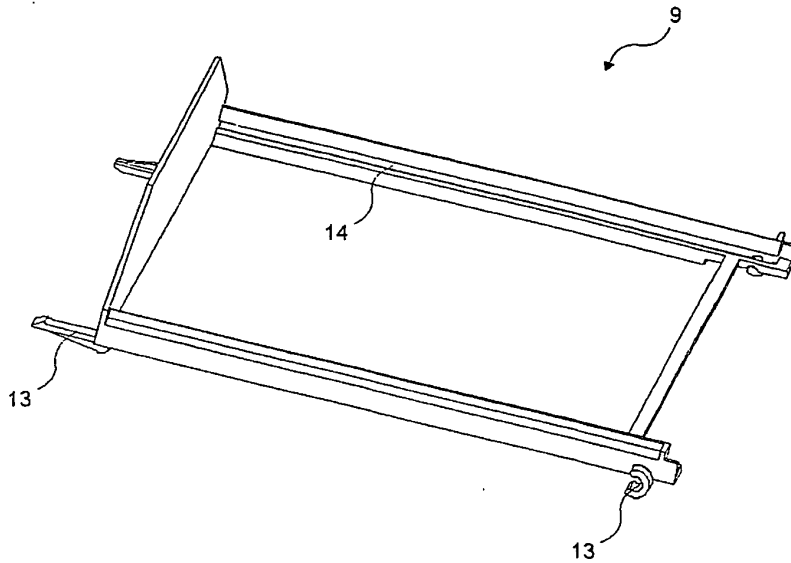
[Fig. 003]



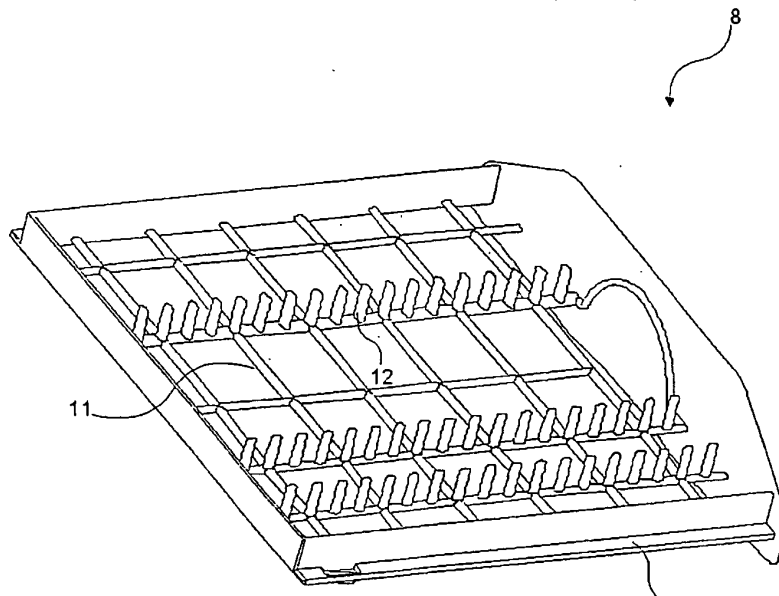
[Fig. 004]



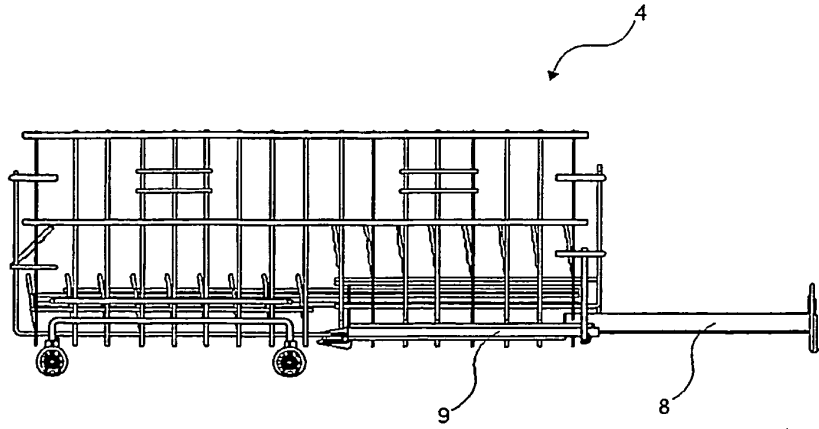
[Fig. 005]



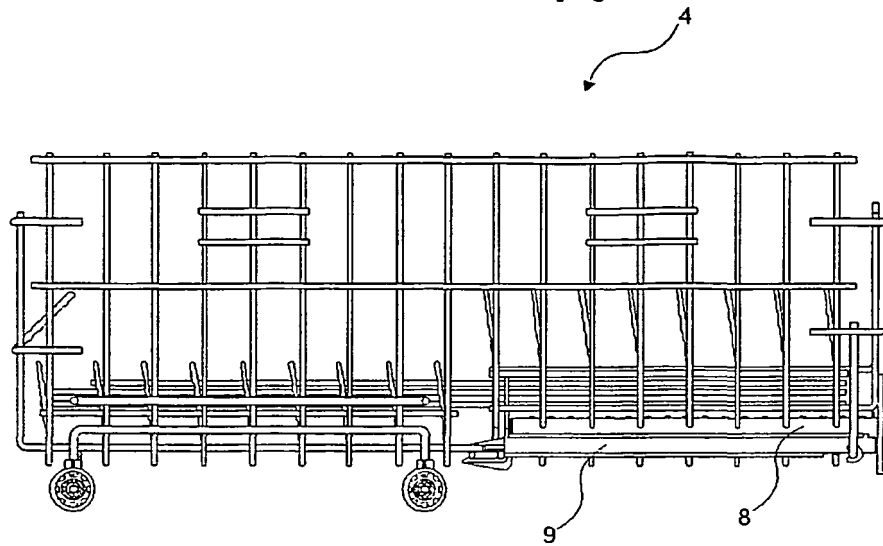
[Fig. 006]



[Fig. 007]



[Fig. 008]



REFERENCES CITED IN THE DESCRIPTION

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