



12

EUROPEAN PATENT SPECIFICATION

45 Date of publication of patent specification :
13.04.94 Bulletin 94/15

51 Int. Cl.⁵ : **A47L 15/50**

21 Application number : **91850033.1**

22 Date of filing : **13.02.91**

54 **Device for a dishwasher.**

30 Priority : **23.03.90 SE 9001061**

43 Date of publication of application :
25.09.91 Bulletin 91/39

45 Publication of the grant of the patent :
13.04.94 Bulletin 94/15

84 Designated Contracting States :
DE FR GB IT SE

56 References cited :
DE-A- 3 022 484
DE-A- 3 130 627
DE-A- 3 135 458
DE-A- 3 417 744

73 Proprietor : **AKTIEBOLAGET ELECTROLUX**
Luxbacken 1
S-105 45 Stockholm (SE)

72 Inventor : **Wrangberth, Jan Stellan**
Hunnerydsvägen 88
S-561 00 Huskvarna (SE)

74 Representative : **Erixon, Bo et al**
c/o AB ELECTROLUX Corporate Patents &
Trademarks
S-105 45 Stockholm (SE)

EP 0 448 531 B1

Note : Within nine months from the publication of the mention of the grant of the European patent, any person may give notice to the European Patent Office of opposition to the European patent granted. Notice of opposition shall be filed in a written reasoned statement. It shall not be deemed to have been filed until the opposition fee has been paid (Art. 99(1) European patent convention).

Description

This invention relates to a device for a dishwasher comprising a tub in which the dish is inserted on one or several baskets one of the baskets comprising means for storing plates in a mainly vertical position. See for example DE-A-3022484.

For dishwashers it is previously known to use baskets of the type mentioned above the baskets being placed in a suitable position with respect to each other and to the surrounding walls and the roof so that the space in the tub is used maximally. At floor supported machines an upper basket is used for glasses and cups and a lower basket for plates whereas table-top dishwashers usually have only one basket one half of the basket being used for plates and the other half for cups and glasses. At the last mentioned type of machines also a foldable additional shelf may be used. This shelf is placed above the space which is used for cups and glasses.

It has proved that it is difficult to design the baskets of the dishwasher in accordance with the various space-demands of the households for different types of dish if the baskets also should be used maximally. Usually the operator when the ordinary space for the cups and glasses is filled tries to place them at the space which is used for plates, the design of the bottom and the means projecting from the bottom which keep the plates in a vertical position making it difficult to place cups and glasses so that they stay firm and in the right position in the basket.

To avoid this drawback it has been suggested - see DE 3,135,458 - to use projecting means which can be folded to a position where the bottom of the basket is mainly flat. However, this type of surface is not particularly suited for storing objects like glasses and cups since the objects will slide and tilt in different directions when the basket is moved. After the dishwashing procedure also water will remain on the top of the objects which are placed upside down in the basket depending on that the cups and glasses are not inclined with request to the horizontal.

It should also be mentioned that it is also sometimes desirable, in particular for floor supported dishwashers, to start the washing procedure when the machine is partly filled, the best washing result and the smallest water and energy consumption being achieved if solely the lower basket is used.

The purpose of this invention is to make it possible to convert a part of the basket which is used for storing plates into a means for storing other objects such as glasses and cups and to keep the objects in a proper position during washing and when the basket is moved.

This is achieved by means of a device having the characteristics mentioned in the claims.

The invention will now be described with reference to accompanying drawing in which Fig. 1 is a

perspective view of an holder according to the invention whereas Fig. 2 and 3 is a vertical projection of a dishwasher basket where the holder has been placed at different positions in the basket.

Fig. 1 shows a glass and cup holder 10 comprising a wire grating having several parallel horizontal wires 11, 12, 13 which are arranged at a distance from each other and being fastened at several zigzag-shaped supporting wires 14 these wires at its upper part having a bend 15. The wires 12 at each end have a mainly vertical projecting bend 16 whereas the end of the wires 13 are so bent that a support 17 for the holder is created. In this way three shelves 18, 19 and 20, sloping with respect to the horizontal plane, are formed.

Fig. 2 shows how the holder 10 is placed in a basket 21 consisting of a wire grating comprising wall parts 22 and a bottom 23 resp., the bend 15 of the holder against the upper horizontal wire of the wall part 22 and the support 17 resting against the bottom 23. At the bottom of the basket there are projecting means 24 and 25 resp., intended to keep plates in a vertical position in the basket. Moreover a removable cutlery basket 26 is shown in the Figure. Since the holder, at the two positions shown in Fig. 2 and 3, covers the main part of the projecting means 24, 25 cups and glasses 27 can be placed on the shelves 18, 19, 20 of the holder, the bends 16 preventing the objects from falling down at the ends of the shelves. Preferably the holder has a length and/or width which is half the length and width of the basket so that the holder covers about 1/4 of the total area of the basket.

Claims

1. Device for a dishwasher comprising a tub in which the dish is inserted on one or several baskets (21) one of the baskets comprising means (24, 25) for retaining plates in a mainly vertical position, the lastmentioned basket being convertible to such a shape that at least a part of the space of the basket which is used for plates can be adapted for supporting glasses, cups or similar objects, said shape is achieved by means of removable holder (10) **characterized** by having several stair-shaped shelves (18, 19, 20) the holder (10) when being placed in the basket mainly covering the plate retaining means (24, 25) of the basket.
2. Device according to claim 1, **characterized** in that one end (17) of the holder rests against the bottom (23) of the basket whereas the other end (15) rests against the side wall of the basket.
3. Device according to claim 2, **characterized** in that at least one of the side edges of the holder (10) is provided with means (16) keeping the dish

at the shelves of the insert.

4. Device according to any of claims 1 - 3, **characterized** in that the holder (10) comprises a wire grating.
5. Device according to any of claims 1 - 4, **characterized** in that the shelves (18, 19, 20) slope with respect to the horizontal plane.
6. Device according to any of claims 1 - 5, **characterized** in that the length and/or width of the holder (10) is mainly half the length and width of the basket (21).

Patentansprüche

1. Vorrichtung für eine Geschirrspülmaschine, umfassend eine Aufnahmevorrichtung, in die das Geschirr auf einem oder mehreren Körben (21) eingesetzt wird, wobei einer der Körbe Vorrichtungen (24, 25) umfaßt, um die Teller in einer im wesentlichen vertikalen Stellung zu halten, wobei letzterer Korb in eine derartige Form übergeführt werden kann, in der mindestens ein Teil des Raumes des für Teller verwendeten Korbes angepaßt werden kann, um Gläser, Tassen oder ähnliche Gegenstände zu halten, wobei die Form mit Hilfe einer herausnehmbaren Haltevorrichtung (10) gebildet wird, **dadurch gekennzeichnet**, daß diese verschiedene stufenförmige Fächer (18, 19, 20) besitzt, wobei die Haltevorrichtung (10) beim Einsatz in den Korb die Vorrichtungen (24, 25) des Korbes für die Halterung von Tellern im wesentlichen bedeckt.
2. Vorrichtung nach Anspruch 1, **dadurch gekennzeichnet**, daß ein Ende (17) der Haltevorrichtung auf dem Boden (23) des Korbes ruht, während das andere Ende (15) auf der Seitenwand des Korbes ruht.
3. Vorrichtung nach Anspruch 2, **dadurch gekennzeichnet**, daß mindestens eine der Seitenkanten der Haltevorrichtung (10) mit Vorrichtungen (16) ausgestattet ist, die das Geschirr in den Fächern des Einsatzes halten.
4. Vorrichtung nach einem der Ansprüche 1 bis 3, **dadurch gekennzeichnet**, daß die Haltevorrichtung (10) ein Drahtgitter umfaßt.
5. Vorrichtung nach einem der Ansprüche 1 bis 4, **dadurch gekennzeichnet**, daß die Fächer (18, 19, 20) bezüglich der Horizontalebene geneigt sind.

6. Vorrichtung nach einem der Ansprüche 1 bis 5, **dadurch gekennzeichnet**, daß die Länge und/oder Breite der Haltevorrichtung (10) im wesentlichen halb so groß ist wie die Länge und Breite des Korbes (21).

Revendications

1. Dispositif destiné à un lave-vaisselle comprenant une cuve dans laquelle la vaisselle est introduite dans un ou plusieurs panier(s) (21), l'un des paniers comprenant des moyens (24, 25) pour retenir des assiettes dans une position principalement verticale, le panier cité en dernier lieu étant convertible en une forme telle qu'au moins une partie de l'espace du panier, utilisé pour des assiettes, puisse être adaptée pour supporter des verres, des tasses ou objets similaires, ladite forme étant obtenue au moyen d'un support amovible (10), caractérisé par le fait qu'il présente plusieurs clayettes (18, 19, 20) de forme étagée, le support (10), lorsqu'il est placé dans le panier, recouvrant pour l'essentiel les moyens (24, 25) du panier qui retiennent des assiettes.
2. Dispositif selon la revendication 1, caractérisé par le fait que l'une (17) des extrémités du support repose contre le fond (23) du panier, tandis que l'autre extrémité (15) repose contre la paroi latérale du panier.
3. Dispositif selon la revendication 2, caractérisé par le fait qu'au moins l'un des bords latéraux du support (10) est pourvu de moyens (16) retenant la vaisselle sur les clayettes de l'insert.
4. Dispositif selon l'une quelconque des revendications 1-3, caractérisé par le fait que le support (10) comprend un treillis métallique.
5. Dispositif selon l'une quelconque des revendications 1-4, caractérisé par le fait que les clayettes (18, 19, 20) sont inclinées par rapport au plan horizontal.
6. Dispositif selon l'une quelconque des revendications 1-5, caractérisé par le fait que la longueur et/ou la largeur du support (10) représente, pour l'essentiel, la moitié de la longueur et de la largeur du panier (21).

