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(54) **Dishwasher with additional basket**

(57) A dishwasher is described, comprising a washing tank (3) having two side walls (31, 32), a bottom wall (34) and a top wall (33), a lower basket (4), top basket (2) and an intermediate basket (5) arranged between said

lower basket and said top basket. The top basket (2) is smaller than the intermediate or lower basket and is slidably connected to the top wall (33) of the washing tank. (Fig. 1)

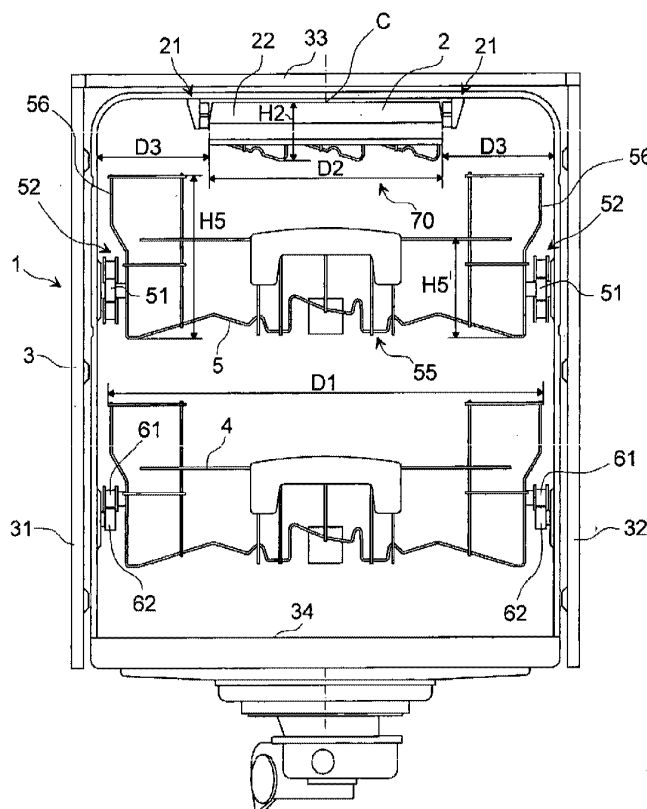


Fig.1

Description

[0001] The present invention concerns a dishwasher with additional basket.

[0002] Dishwashers comprising a lower basket and a top basket for arranging the dishes to be washed are known in the prior art. The dishwasher comprises a lower spraying device and a top spraying device, which spray jets of water onto the dishes for removing dirt.

[0003] Some of the current dishwashers comprise a third basket, in addition to the other two, for arranging knives or other cutlery.

[0004] In view of the prior art, it is the object of the present invention to provide a dishwasher with an additional basket which expands the loading possibilities of the dishwasher.

[0005] In accordance with the present invention, said object is achieved by means of a dishwasher comprising a washing tank having two side walls, a bottom wall and a top wall, a lower basket, a top basket and an intermediate basket arranged between said lower basket and said top basket, characterized in that said top basket is smaller than the intermediate or lower basket and is slidably connected to the top wall of the washing tank.

[0006] The features and advantages of the present invention will be apparent from the following detailed description of a practical embodiment thereof, shown by way of non-limitative example in the accompanying drawings, in which:

figure 1 is a schematic front view of a dishwasher with additional basket in accordance with the present invention;

figure 2 is a schematic side view of the dishwasher in figure 1;

figure 3 is a perspective view of the additional basket of the dishwasher in figure 1;

figure 4 is a perspective view of the basket in figure 3 with a handle applied thereto.

[0007] Figures 1-2 show a dishwasher 1 with additional basket 2 in accordance with the present invention. Dishwasher 1 comprises a tank 3, within which three baskets are accommodated: a lower basket 4, an intermediate basket 5 and an additional or top basket 2. The baskets horizontally slide when the dishwasher door 6 is open, as better shown in figure 2, for loading the dishes to be washed and unloading the washed dishes.

[0008] Baskets 4 and 5 are slidably engaged with the side walls 31, 32 of tank 3; basket 4 preferably comprises wheels 61 sliding on extensions 62 of the walls 31 and 32, while basket 5 comprises guides 51 each sliding on a pair of wheels 52 hinged on the side walls 31, 32 of tank 3. Baskets 4 and 5 both have a width D 1 substantially equal to the distance between the side walls 31, 32 of tank 3.

[0009] The additional basket 2 is slidably engaged with the top part or top 33 of tank 3 through the means

21 and is smaller than the baskets 4 and 5, in particular has a width D2 smaller than the width D 1 of the baskets 4 and 5 but equal length L, for example $D2 = \frac{1}{2}D1$.

[0010] Basket 2 comprises a handle 22 for extracting it from inside the washing tank 3 in a horizontally sliding manner.

[0011] The basket is adapted to contain cutlery and/or smaller containers, such as small cups and mugs in general, saucers or even large-sized cutlery, such as ladles or large forks.

[0012] Basket 2 is totally independent from the other baskets in its movement and loading, in particular from basket 5. Indeed, the engagement with the tank top 33 allows its sliding for loading and unloading the dishes independently from basket 5.

[0013] The means 21 for slidably engaging the basket with the top 33 of tank 3 of the dishwasher 1 comprise a plurality of fixed pins 23, preferably four in number, which are integral with the dishwasher top 33 and each carrying a pair of wheels 24 in a revolving engaging manner, as shown in Figure 3.

[0014] The sliding engagement of basket 2 with wheels 24 is obtained by means of wheels 26 rotationally hinged to the side walls 25 of basket 2 and in turn slidably engaged by guides 27 closed at the ends, facing the door 6 of the dishwasher or outwards, by removable plugs 28. The guides 27 are in turn slidably engaged with the wheels 24.

[0015] During horizontal extraction of the shelf 2 there is a first sliding of the wheels 26 on the guides 27 and, once at least two wheels 26 have reached the limit stop, i.e. are engaged by the plugs 28, the guides 27 slide on the pair of wheels 24.

[0016] Basket 2 may also be totally removed from the dishwasher 1 by operating on the removable plugs 28 and removing the basket 2 from the guides 27; the removed basket 2 may also work as drip rack on a sink.

[0017] Basket 2 comprises a bottom 29 consisting of a grid of treated steel rods 40 arranged so as to obtain saw-tooth shaped loops 41 facing the bottom 34 of the dishwasher; said loops are adapted to arrange small cups and mugs thereon for loading the dishes to be washed. Particular protrusions 42 toward the dishwasher top 33 allow to engage the dishes with basket 2.

[0018] The rod structure of basket 2 improves the function of washing and drying the dishes because the basket is therefore free from recesses in which water residues may pool.

[0019] The handle 22 preferably comprises a plastic part containing symbols in relief or printing indicating the dishes which may be contained by the basket 22, as shown in figure 4.

[0020] Basket 2 is arranged in a central position 70 of the dishwasher, i.e. about the central axis C of the tank 3, adjacent to the top wall 33 of the tank, at an equal distance D3 from the side walls 31, 32; this allows a better washing of the supported dishes.

[0021] Basket 2 has a height or depth H2 smaller than

the height or depth of basket 5, preferably smaller than half the maximum depth H5 of basket 5.

[0022] Basket 5 is shaped so as not to obstruct the jets of water from the top spraying device, normally arranged underneath the basket 5, which cross it and reach the top basket 2 for washing the dishes supported by basket 2. The basket 5 comprises a central part 55, about the central axis C, at a given height or depth H5', and side parts 56 at a depth or height H5; the physical configuration of basket 5 does not obstruct the horizontal sliding of basket 2 for loading the dishes to be washed and for unloading the washed dishes.

[0023] Although not shown in the figures, a sprinkling spraying device either over or under basket 2 may also be arranged. A water sprinkling device for the dishes in basket 2 may be provided and arranged on one or both of the sides of basket 2, adjacent to the side walls 25 of the basket 2.

Claims

1. A dishwasher comprising a washing tank (3) having two side walls (31, 32), a bottom wall (34) and a top wall (33), a lower basket (4), a top basket (2) and an intermediate basket (5) arranged between said lower basket and said top basket, **characterized in that** said top basket (2) is smaller than the intermediate or lower basket and is slidingly connected to the top wall (33) of the washing tank.
2. A dishwasher according to claim 1, **characterized in that** it comprises means (21) for slidingly connecting the top basket (2) to the top wall (33) of the washing tank, said means being adapted to ensure the sliding of the basket in the horizontal direction.
3. A dishwasher according to claim 2, **characterized in that** said means (21) comprise first pins (23) integral with the top wall (33) of the dishwasher and each carrying a first pair of wheels (24) rotationally engaged by said first pins, a pair of side guides (27) slidingly engaged by said first pairs of wheels, and second pairs of wheels (26) rotationally engaged by the side walls (25) of said top basket and by said side guides.
4. A dishwasher according to claim 3, **characterized in that** the guides (27) of said pair of side guides are closed at the ends facing the front part of the dishwasher by means of removable plugs (28), said removable plugs (28) being adapted to allow the top basket to be removed from the pair of side guides.
5. A dishwasher according to claim 1, **characterized in that** said top basket (2) comprises a bottom (29) made of rods (40) adapted to form saw-tooth shaped loops (41) for accommodating the dishes to be sup-

ported.

6. A dishwasher according to claim 1, **characterized in that** said top basket is arranged in a central position (70) within the tank (3) of the dishwasher.
7. A dishwasher according to claim 1, **characterized in that** said intermediate basket (5) comprises a central part at a first depth (H5') and side parts at a second depth (H5) greater than the first (H5').
8. A dishwasher according to claim 1, **characterized in that** said top basket (2) has a depth (H2) smaller than the depth of the intermediate basket (5).
9. A dishwasher according to claim 1, **characterized in that** said intermediate basket (4) is shaped so as to allow the jets from the spraying device underneath the intermediate basket (5) to reach the top basket (2) for washing the dishes.

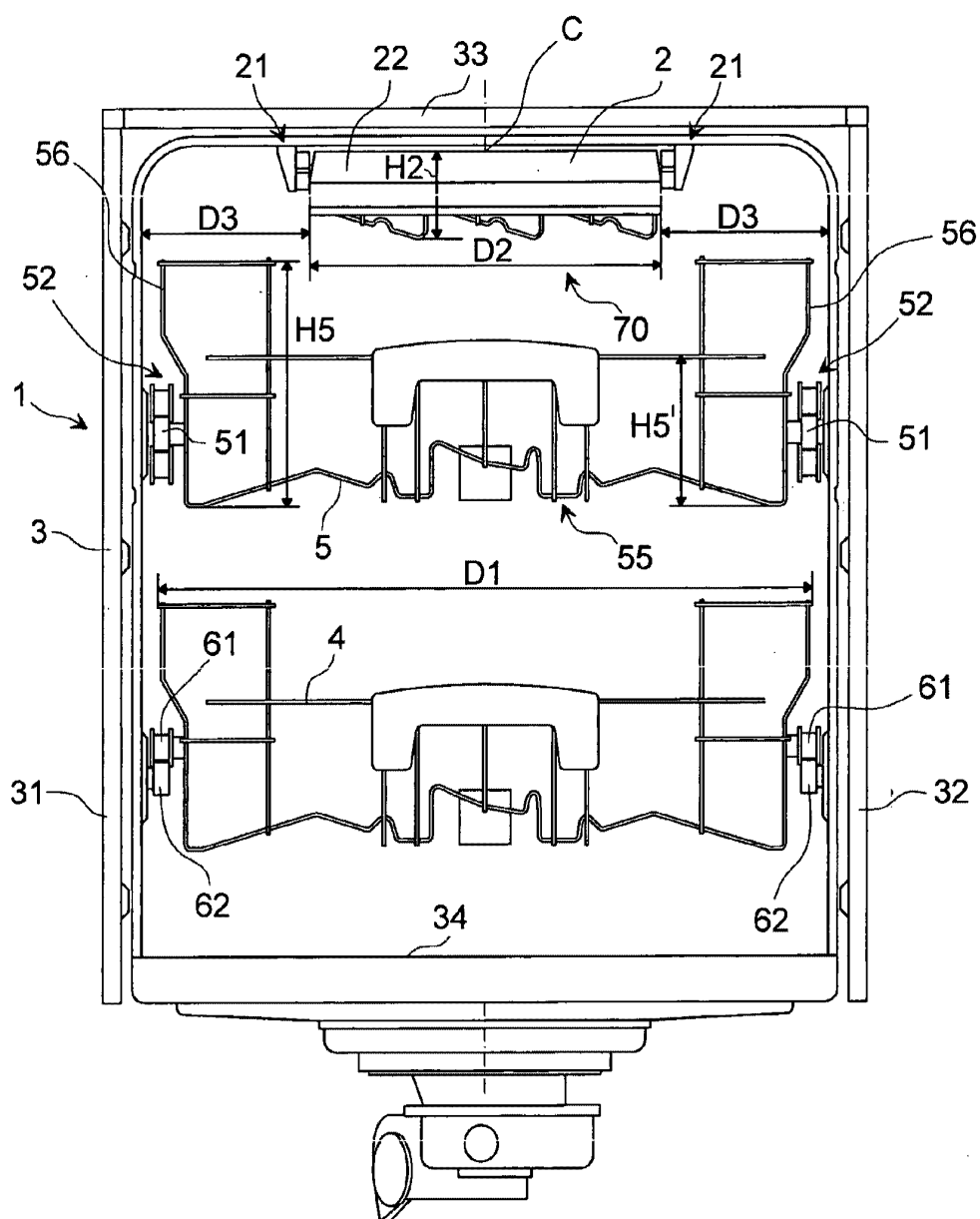


Fig.1

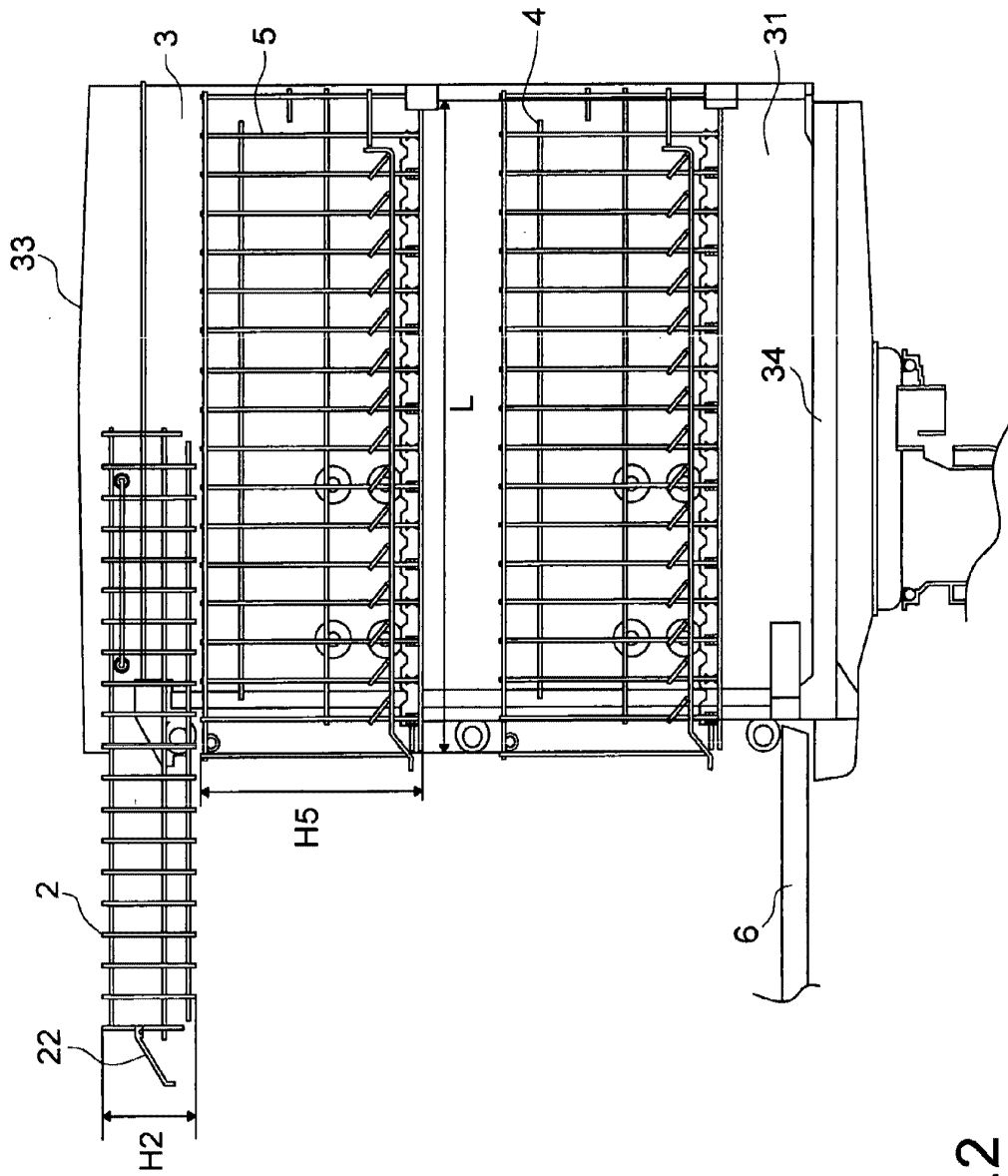


Fig.2

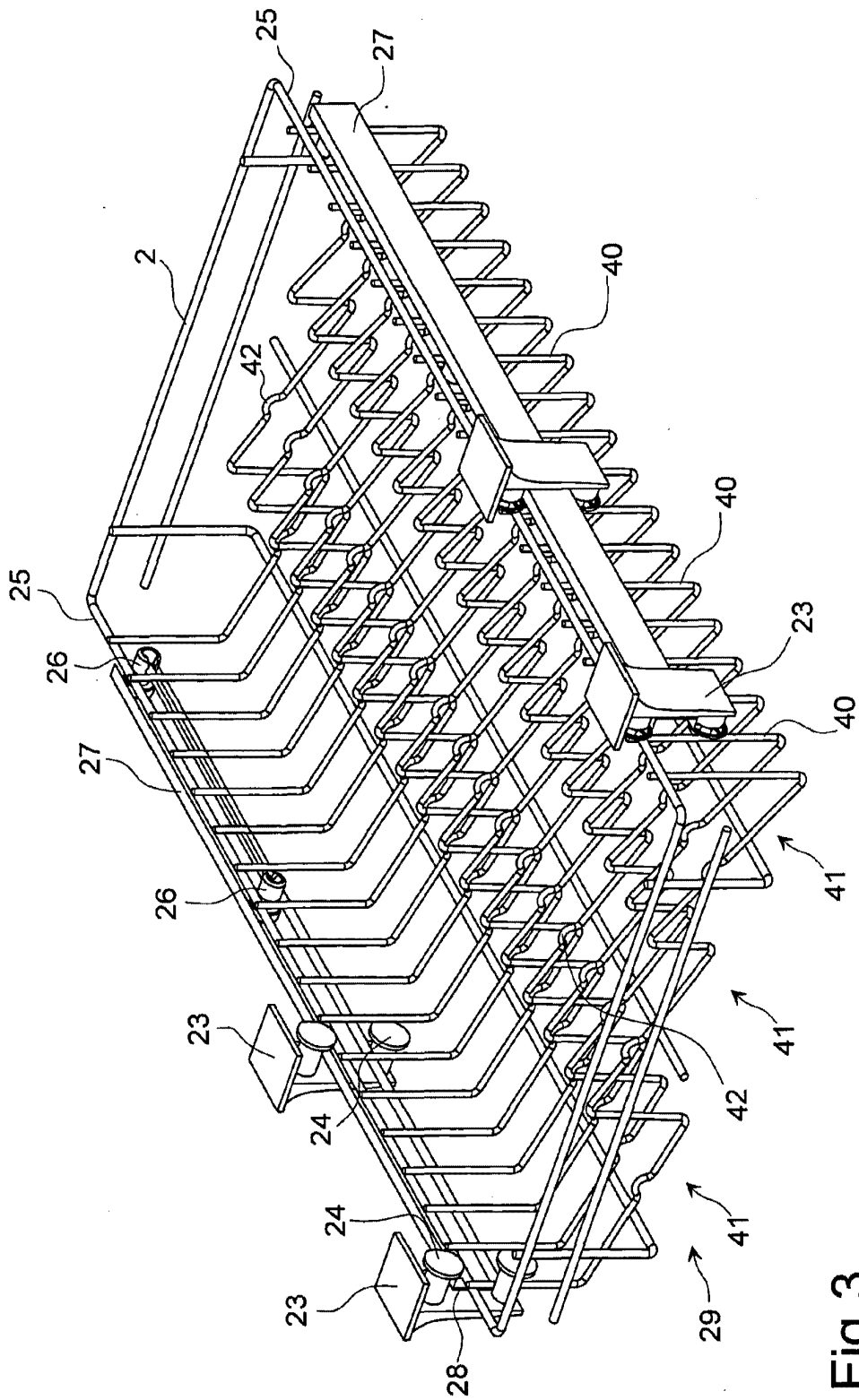


Fig. 3

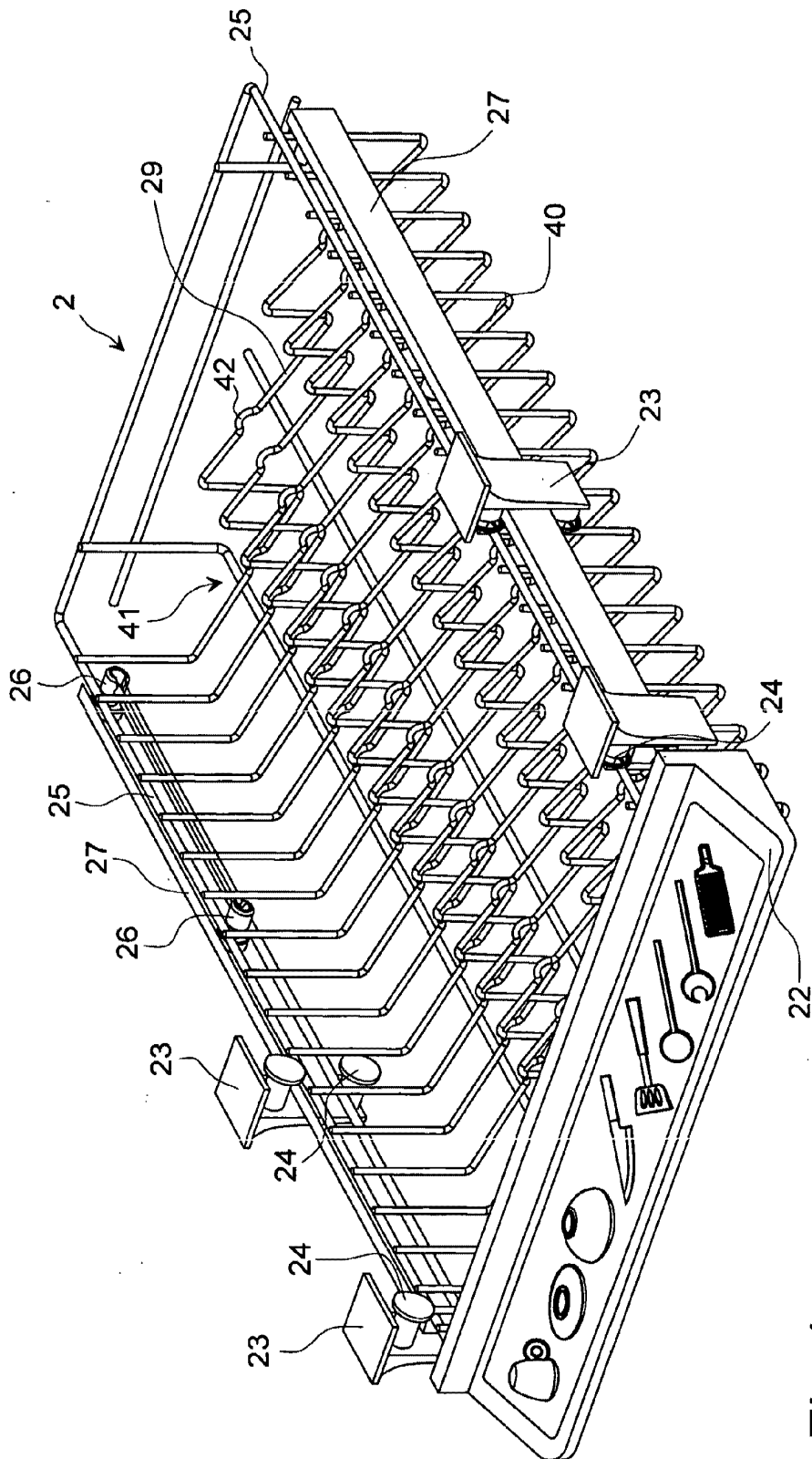


Fig. 4



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 Application Number
EP 10 42 5088

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The present search report has been drawn up for all claims			
Place of search Munich		Date of completion of the search 23 August 2010	Examiner Weinberg, Ekkehard
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			

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**ANNEX TO THE EUROPEAN SEARCH REPORT
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This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
The members are as contained in the European Patent Office EDP file on
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