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(54) **Basket with cutlery holder for domestic dishwasher**

Besteckhalter zum gebrauch im Geschirrkorb einer Geschirrspülmaschine

Porte-couvert destiné au panier à vaisselle pour lave-vaisselle

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(73) Proprietor: **Candy S.p.A.**
20052 Monza (MI) (IT)

(72) Inventor: **Fumagalli, Silvano**
20052 Monza (MI) (IT)

(74) Representative: **Mittler, Enrico et al**
Mittler & C. S.r.l.
Viale Lombardia, 20
20131 Milano (IT)

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Description

[0001] The present invention refers to a basket with cutlery holder for a domestic dishwasher, particularly to a dishwasher top basket.

[0002] Dishwasher baskets consist of rigid structures made up of steel rods that are welded to each other in interlacement and subsequently plasticised. The dishes are inserted in the appropriate spaces that are formed by the interlacement of the rods, so that they maintain a correct position, during washing, with such an inclination of the surfaces with respect to the washing spray coming from the sprayers as to avoid zones which are hardly reachable, directly or by deviation by the same spray.

[0003] The baskets of the dishwasher are constructed to rationalise the arrangement of the load of dishes inside the baskets, since the surface that is useful for the load has a limited size. In addition a very important prerogative consists in the safety of the load to be washed even when the weight of the latter is considerable.

[0004] At present, baskets for dishwashers comprise small plastic containers for cutlery that are placed in a separate position as regards the grid for the containment of the dishes. In this way the efficiency in the washing and possible drying of the cutlery is subordinated to the search and definition of the optimal position of the dishes. Therefore both the operations of washing and drying of the cutlery are penalised. In addition the capacity of the current cutlery containers is inevitably rather reduced.

[0005] DE 2 962 158 discloses a basket for a dishwasher according to the preamble of claim 1.

[0006] In view of the state of the art herein described, object of the present invention is to realise a basket for dishwasher that has a support for cutlery in order to resolve the problems above exposed.

[0007] According to the present invention, such object is attained by means of a basket for home dishwashers according to claim 1.

[0008] Owing to the present invention it is possible to realise a basket for dishwasher with a cutlery holder that allows a different positioning of the cutlery inside the basket while favouring their washing and possible drying.

[0009] The characteristics and the advantages of the present invention will become evident from the following detailed description of an embodiment thereof, that is illustrated as a non-limiting example in the enclosed drawings, in which:

Figure 1 is a perspective view of the single cutlery holder according to the present invention;
Figure 2 is a front view of the support in Figure 1 fixedly mounted to a mobile shelf;
Figure 3 shows in longitudinal section a basket with a side wall provided with the mobile shelf in Figure 2;
Figure 4 shows, in front view, the basket in Figure 3 inserted in a dishwasher with the mobile shelf rotated in a first inclined position;
Figure 5 is similar to Figure 4, but with the mobile shelf in a second inclined position.

[0010] In Figure 1 there is shown a plastic cutlery holder 1 with rectangular shape that is internally provided with a plurality of holes 2 for the arrangement of various cutlery and with wide areas 30 for the flow of the washing water and/ or for the flow of drying air.

[0011] Two of such holders 1 are arranged at the sides and fixedly mounted to a plastic shelf 3, provided with teeth 4 making up a top rack 5 and with teeth 6 making up a bottom rack 7; the teeth 4 of said top rack 5 are preferably provided with appendixes 8, as visible in Figure 2 where a plastic shelf 3 with a single holder 1 is shown as an example.

[0012] The shelf 3 can be connected in fixed or mobile manner to a side wall 11 of a basket 12 of a dishwasher 20 but in such a way as to create a bottom plane 21 of the basket 12 with an angle smaller than a right angle. In the case of the mobile connection of the shelf 3 with the side wall 11 of the basket 12, the shelf 3 is turningly coupled to a horizontal rod 10 of the side wall 11 by snap insertion of said rod 10 in semi-cylindrical slot housings 13 of the shelf 3, as visible in Figure 3 and as known from the EP-A-1384431. The basket 12 is formed by steel rods that are welded in interlacement and plasticised so as to define a bottom plane 21 and at least one pair of side walls 11 with parallel spaces for containing and positioning dishes that are arranged vertically.

[0013] The shelf 3 is provided with hooks 14 for its locking in a first inclined position shown in Figure 4. Such locking is allowed by the contrast between the ends of said hooks 14 and vertical rods 15 of the wall 11. A second inclined position of the shelf 3 is made possible by simple resting of the lower end of the hooks 14 on the rods 15, as visible in Figure 5.

[0014] In the first inclined position the shelf 3 allows to load the basket 12 with dishes with standard dimensions; in addition the same shelf makes a plane available for the support of small and medium size cups, of ladles, of various tools with handle. In this case, the holder 1 can contain cutlery of various kind in its holes 2 while the top rack 5 can contain, in upside-down position, wine glasses with medium-thin stem.

[0015] In the second inclined position relatively light containers, for instance coffee cups, can be housed on the shelf 3, and the holder 1 can contain light cutlery, as for instance teaspoons. The basket 12 can be loaded with dishes having small, medium or exceptional diameter.

[0016] The arrangement of the cutlery inside the dishwasher allows a more accurate washing of the same by limiting the contact zone of the tools and by favouring a better flow of the washing water. In fact the geometry of the cutlery holder 1 has solids and voids so as to limit the points of contact between tools as much as possible and to favour the drainage of the water.

[0017] In addition such arrangement of the cutlery allows to utilise wide areas for the passage of a constant

heat flow for a more homogeneous drying of the same cutlery.

[0018] The position of the cutlery holder 1 anchored to the plastic shelf 3 allows to relieve the basket 12 of the load of cutlery and to eliminate the corners that are negative to the inlet of the washing water, thus allowing a general result of higher washing and drying efficiency as compared with the standards.

Claims

1. Basket (12) for domestic dishwasher comprising at least one side wall (11) and at least one plastic shelf (3) that is connected with said at least one side wall (11) in order to form an angle smaller than a right angle with the bottom plane (21) of said basket (12), said shelf (3) being made integral with at least one cutlery holder (1) comprising holes (2) for the containment of cutlery and wide areas (30) for the flow of the washing water and/ or of the flow of drying air, said shelf (3) being connected with said at least one side wall (11) so as to be turningly coupled to it in order to be able to rotate around a horizontal axis between at least a first and a second angular working position, **characterized in that** said shelf (3) can be locked in said first and second working position by means of hooks (14) that are locking with vertical rods (15) that are part of said at least one side wall (11) of the basket.

2. Basket according to claim 1, **characterized in that** said shelf (3) is coupled to said at least one side wall (11), of the basket (12) in an independent way, in order to allow an independent adjustment of the position of the basket.

3. Basket according to claim 1, **characterized in that** said shelf (3) is connected with said at least one side wall (11) of the basket (12) so as to be manually removable.

4. Basket according to claim 2, **characterized in that** the turning coupling of said shelf (3) to said at least one side wall (11) of the basket (12) is realised by means of semi-cylindrical slot housings (13) that are suitable for the insertion of a horizontal rod (10) that is a part of the same wall.

Patentansprüche

1. Korb (12) für eine Haushalts-Geschirrspülmaschine mit:

   mindestens einer Seitenwand (11); und
   mindestens einem Kunststoffgestell (3), das mit der mindestens einen Seitenwand (11) derart verbunden ist, dass es bezüglich einer Bodenebene (21) des Korbs (12) einen Winkel bildet, der kleiner ist als ein rechter Winkel,

   wobei das Gestell (3) mit mindestens einem Besteckhalter (1) integral ausgebildet ist, der Löcher (2) zum Aufnehmen von Besteck und breite Öffnungsbereiche (30) für die Strömung von Waschwasser und/oder die Strömung von Trocknungsluft aufweist,
   wobei das Gestell (3) mit der mindestens einen Seitenwand (11) drehbar verbunden und daher mindestens zwischen einer ersten und einer zweiten Betriebsposition um eine horizontale Achse schwenkbar ist;
   dadurch gekennzeichnet, dass
   das Gestell (3) in der ersten und in der zweiten Betriebsposition durch Haken (14) verriegelbar ist, die mit vertikalen Stangen (15) in Eingriff kommen, die Teil der mindestens einen Seitenwand (11) des Korbs sind.

2. Korb nach Anspruch 1, **dadurch gekennzeichnet, dass** das Gestell (3) auf eine unabhängige Weise mit der mindestens einen Seitenwand (11) des Korbs (12) verbunden ist, um eine unabhängige Einstellung der Korbposition zu ermöglichen.

3. Korb nach Anspruch 1, **dadurch gekennzeichnet, dass** das Gestell (3) mit der mindestens einen Seitenwand (11) des Korbs (12) derart verbunden ist, dass es von Hand entfernbar ist.

4. Korb nach Anspruch 2, **dadurch gekennzeichnet, dass** die Drehverbindung zwischen dem Gestell (3) und der mindestens einen Seitenwand (11) des Korbs (12) durch Gehäuseelemente (13) mit einem halbzylinderförmigen Schlitz realisiert wird, in die eine horizontale Stange (10) eingesetzt werden kann, die Teil der gleichen Seitenwand ist.

Revendications

1. Panier (12) pour un lave-vaisselle domestique comprenant au moins une paroi latérale (11) et au moins une clayette en plastique (3) qui est reliée à ladite au moins une paroi latérale (11) afin de former un angle plus petit qu'un angle droit avec le plan inférieur (21) dudit panier (12), ladite clayette (3) étant faite d'un seul bloc avec au moins un support à couverts (1) comprenant des trous (2) pour retenir les couverts et des zones larges (30) pour l'écoulement de l'eau de lavage et/ou l'écoulement d'air de séchage,
   ladite clayette étant reliée à ladite au moins une paroi latérale (11) de façon à être couplée à rotation à elle de façon à pouvoir tourner autour d'un axe horizontal

entre au moins une première et une seconde positions angulaires de travail,
caractérisé en ce que ladite clayette (3) peut être bloquée dans lesdites première et seconde positions angulaires de travail au moyen de crochets (14) qui sont verrouillés avec des tiges verticales (15) qui font partie de ladite au moins une paroi latérale (11) du panier.

2. Panier selon la revendication 1, **caractérisé en ce que** ladite clayette (3) est couplée à ladite au moins une paroi latérale (11) du panier (12) d'une manière indépendante, afin de permettre un réglage indépendant de la position du panier.

3. Panier selon la revendication 1, **caractérisé en ce que** ladite clayette (3) est reliée à ladite au moins une paroi latérale (11) du panier (12) de façon à être manuellement amovible.

4. Panier selon la revendication 2, **caractérisé en ce que** le couplage de ladite clayette (3) à ladite au moins une paroi latérale (11) du panier (12) est réalisé au moyen de logements à fente semi-cylindrique (13) qui conviennent pour l'insertion d'une tige horizontale (10) qui est une partie de la même paroi.

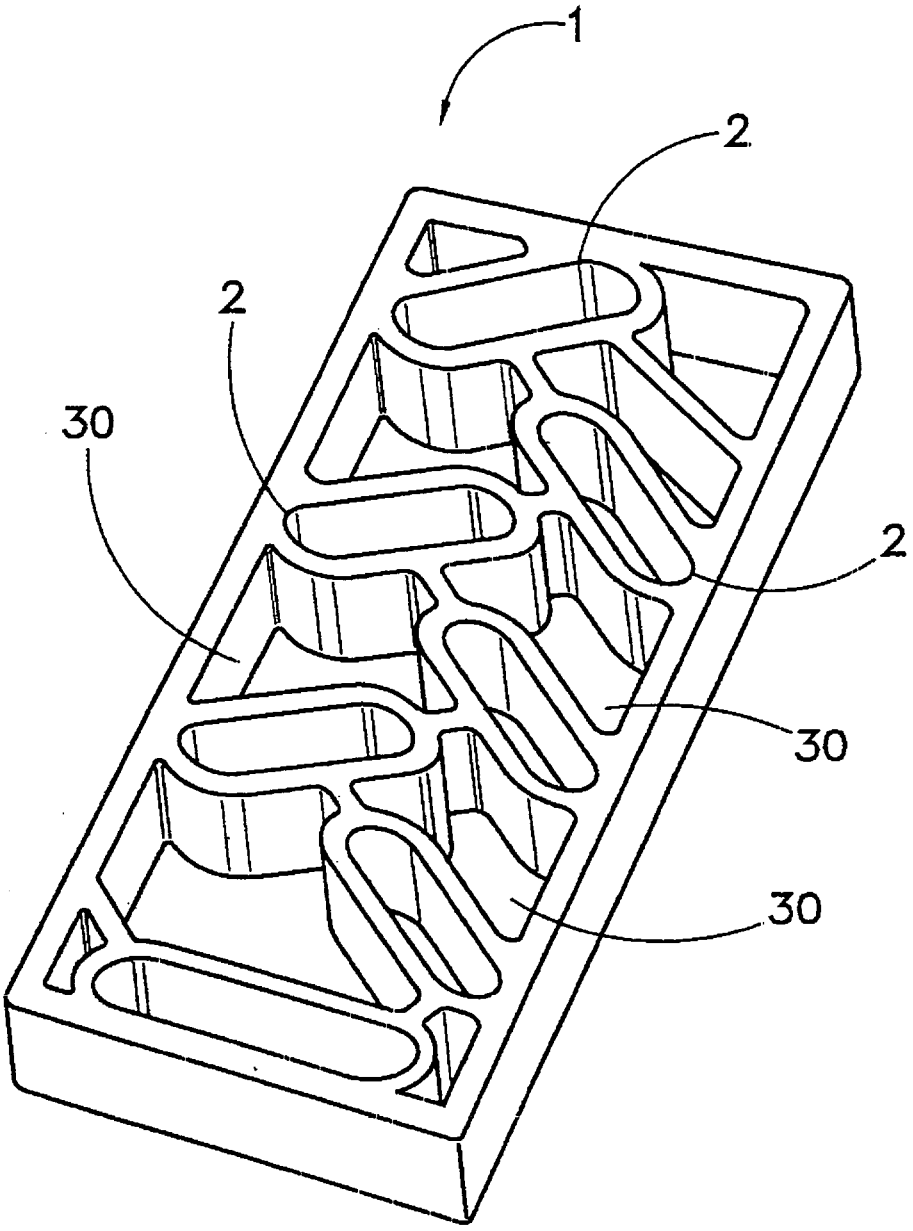


FIG.1

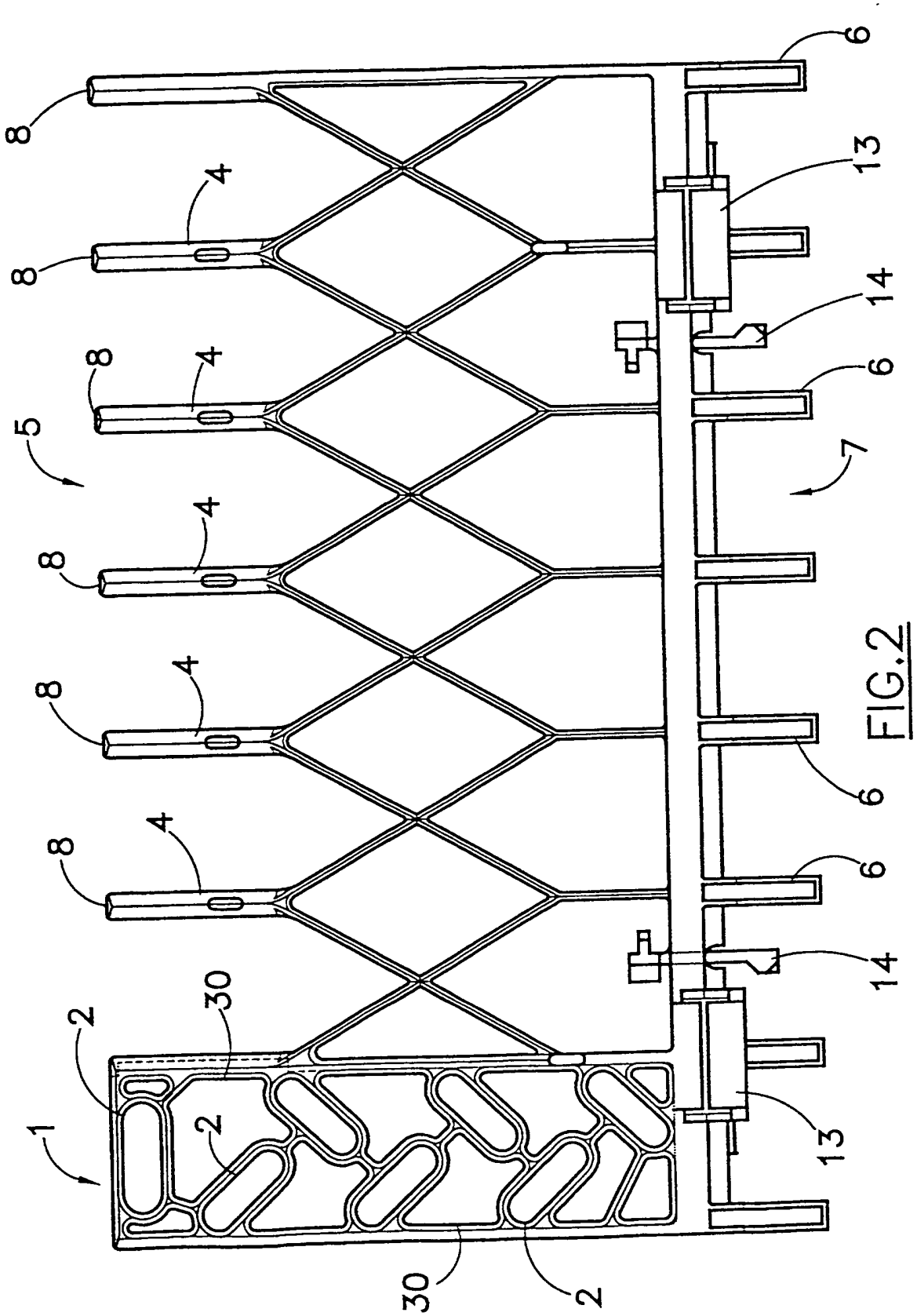


FIG.2

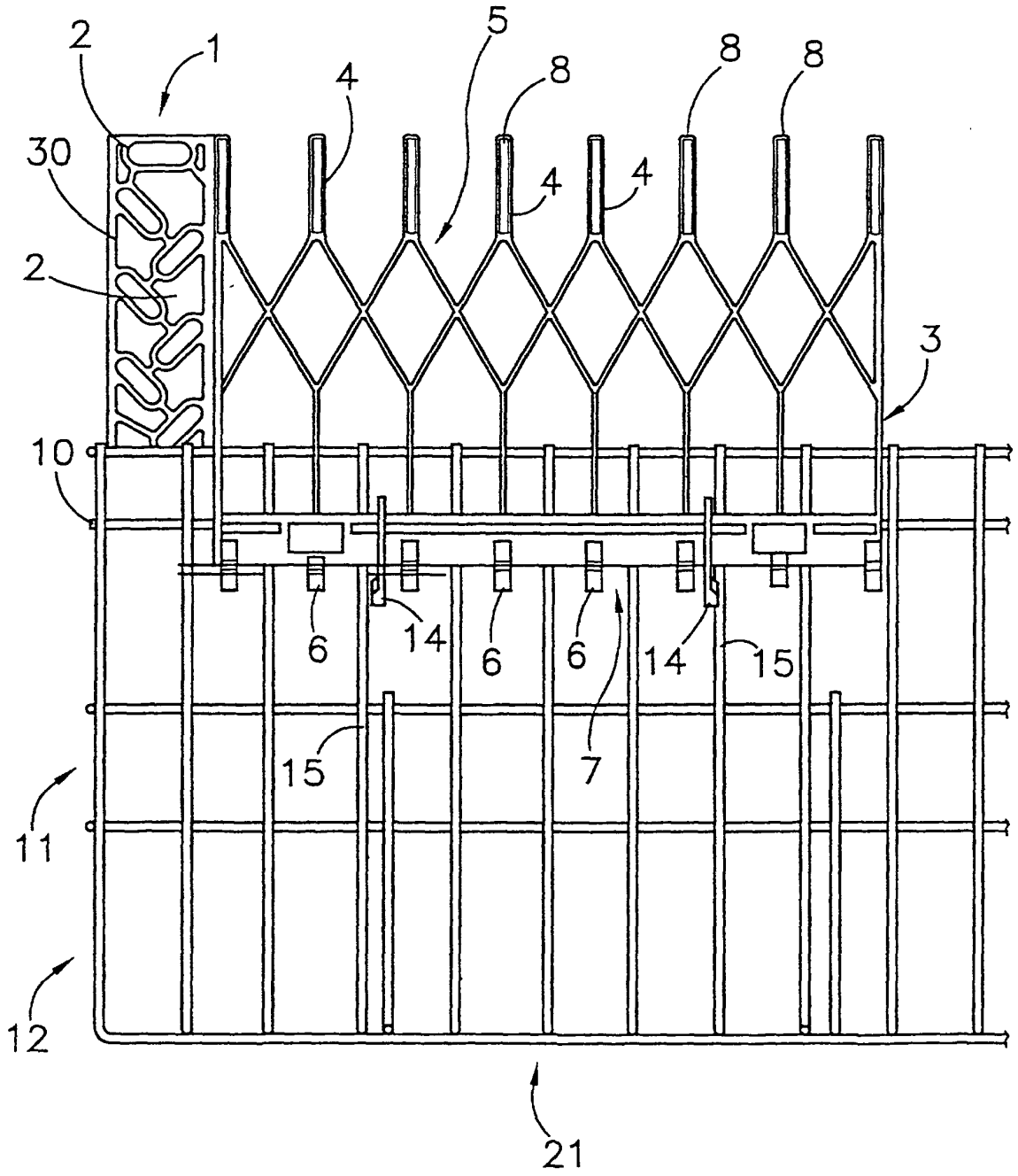


FIG.3

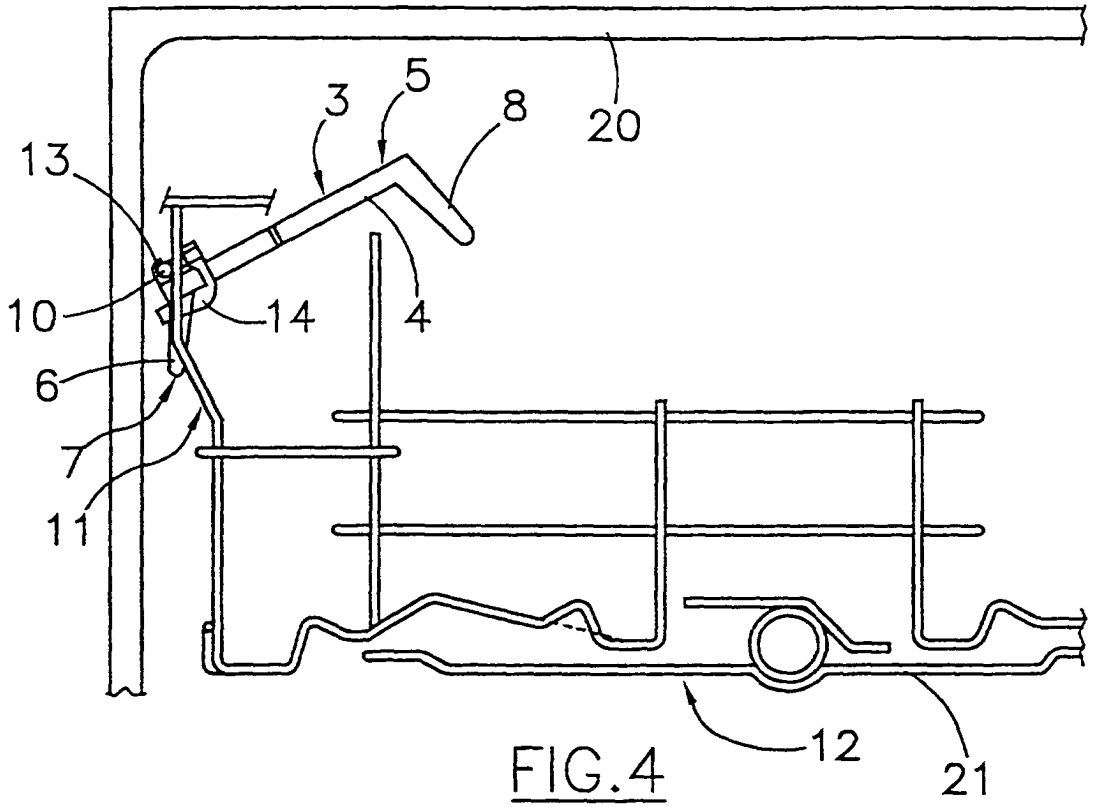


FIG.4

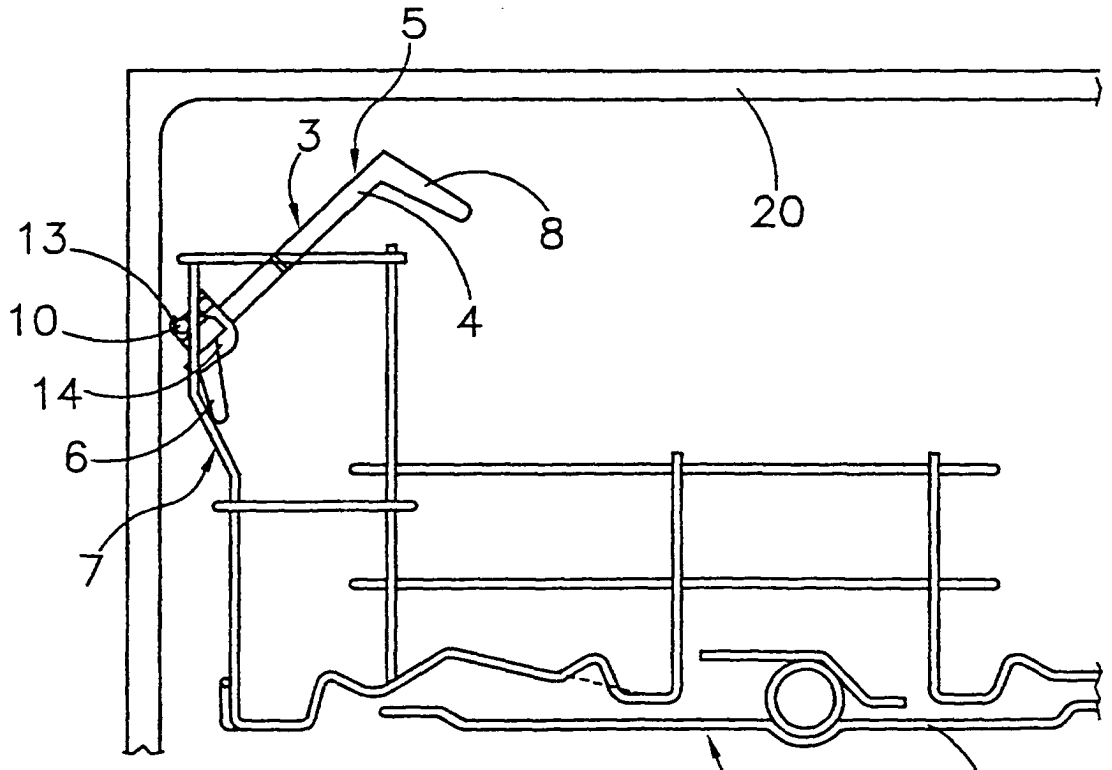


FIG.5

REFERENCES CITED IN THE DESCRIPTION

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