

(19)



(11)

EP 3 199 084 B1

(12)

EUROPEAN PATENT SPECIFICATION

(45) Date of publication and mention of the grant of the patent:

11.05.2022 Bulletin 2022/19

(51) International Patent Classification (IPC):

A47L 15/50^(2006.01)

(52) Cooperative Patent Classification (CPC):

A47L 15/505; A47L 15/507; A47L 15/508

(21) Application number: **16165430.6**

(22) Date of filing: **14.04.2016**

(54) **A BASKET SYSTEM**

KORBSYSTEM

SYSTÈME DE PANIER

(84) Designated Contracting States:

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

(30) Priority: **29.01.2016 TR 201601270**

(43) Date of publication of application:

02.08.2017 Bulletin 2017/31

(73) Proprietor: **Vestel Beyaz Eşya Sanayi ve Ticaret A.S.**

45030 Manisa (TR)

(72) Inventors:

- **OZTOP, Ozgur**
45030 Manisa (TR)

- **HULAGU, Orhan**
45030 Manisa (TR)

(74) Representative: **Cayli, Hülya**

Paragon Consultancy Incorporated

Koza Sokak No: 63/2

GOP 06540 Ankara (TR)

(56) References cited:

EP-A2- 2 478 820

DE-U1- 20 006 243

FR-A1- 2 128 282

JP-A- 2002 345 578

JP-A- 2004 000 745

US-A- 3 228 739

US-A1- 2005 241 686

US-A1- 2015 053 238

Note: Within nine months of the publication of the mention of the grant of the European patent in the European Patent Bulletin, any person may give notice to the European Patent Office of opposition to that patent, in accordance with the Implementing Regulations. Notice of opposition shall not be deemed to have been filed until the opposition fee has been paid. (Art. 99(1) European Patent Convention).

Description

Technical Field

[0001] The present invention relates to a basket system suitable for use in household appliances such as dishwashers.

Background Art

[0002] Currently, household appliances such as dishwashers have baskets into which the dishes are placed that are desired to be washed. The dishes that have been washed up are taken from the basket and placed into spaces such as kitchen cupboards where they are stored. However, it requires strength to place the dishes one-by-one into the kitchen cupboards that are typically located at higher positions than the dishwashers, and it also takes time.

[0003] US2005241686A1 discloses a rack assembly positioned in a dishwasher. This assembly includes a basket on which the tableware are placed and washed, and a supplementary rack detachably mounted on the said basket and shiftable thereon. Since the supplementary rack is detachable from the basket, it is prevented from occupying redundant space on the basket, if not required to be used. Furthermore, due to the fact that it is shiftable on the basket, a position thereof can be adjusted, according to the needs. However, since the said supplementary rack in US2005241686A1 is open at side-ways, the supplementary rack cannot be separated from the basket and moved close to the kitchen cupboard, with the tableware placed thereon. JP2004000745A and JP2002345578A disclose alternative arrangements of a rack assembly comprising a detachable basket according to the state of the art.

Brief Description of the Invention

[0004] With the present invention, there is provided a basket system suitable for use in household appliances such as dishwashers according to independent claim 1.

[0005] With the inventive basket system, the dishes that have been cleaned and desired to be conveyed to the space where they are stored, are separated from the household appliance together with the basket on which they are placed and are conveyed to the desired position at one time.

Object of the Invention

[0006] An object of the present invention is to provide a basket system suitable for use in household appliances such as dishwashers.

[0007] Another object of the present invention is to provide a basket system from which the basket contained therein can be separated.

[0008] A further object of the present invention is to

provide a basket system wherein the basket contained therein is prevented from moving independent from it, during the movement of the same.

[0009] Another object of the present invention is to provide a basket system wherein the basket contained therein may be easily placed thereon.

[0010] Still another object of the present invention is to provide a basket system which offers ease of use, and which is robust and reliable.

Description of the Drawings

[0011] The illustrative embodiments of the basket system according to the present invention are illustrated in the enclosed drawings, in which:

Figure 1 is a perspective view of the inner side of a household appliance comprising the basket system according to the present invention.

Figure 2 is a front view of the inner side of a household appliance comprising the basket system according to the present invention.

Figure 3 is a perspective view of the basket system according to the present invention.

Figure 4 is an exploded view of the basket system according to the present invention.

Figure 5 is a perspective view of a detail D shown in Figure 3.

[0012] All the parts illustrated in the drawings are individually assigned a reference numeral and the corresponding terms of these numbers are listed as follows:

Household appliance	(G)
Basket system	(S)
Body	(1)
Washing apparatus	(1a)
Connecting arm	(1b)
Basket	(2)
Wire	(2a)
Basket bottom	(2b)
Movement member	(2c)
Bend	(2d)
Detail	(D)

Description of the Invention

[0013] In order to be washed up, the dirty dishes are placed onto the baskets provided in household appliances such as dishwashers. After they have been washed, the dishes on the basket are collected and placed onto the spaces such as kitchen cupboards where they are stored. Since the kitchen cupboards are usually located at higher positions than the dishwashers, it is risky for the health of the user to collect the heavy dishes one-by-one from the basket and place them into the kitchen cup-

boards, and it also takes time to convey the dishes from the basket to the kitchen cupboards. Therefore, with the present invention, there is provided a basket assembly comprising a basket that may be conveyed to a location, with the dishes being positioned thereon, close to the space where the cleaned dishes are desired to be put.

[0014] The basket system (S) according to the present invention, as illustrated in figures 1-5, is suitable for use in household appliances (G) such as dishwashers, and comprising at least one body (1) wherein the dishes are cleaned; at least one washing apparatus (1a) positioned on the body (1) and transferring the washing liquid onto the dishes; at least one basket (2) positioned on the body (1), preferably on an upper part of the washing apparatus (1a) that is distant from the floor, and consisted of at least two wires (2a), and on which the dishes are placed that are desired to be cleaned; at least one movement member (2c) that moves the basket (2) inside the body (1); the system also comprises at least one basket bottom (2b) on which the basket (2) is detachably placed, and at least one bend (2d), preferably made from wires (2a), which is provided on the basket bottom (2b), which prevents the basket (2) from moving in the movement direction of the basket bottom (2b), independent from the basket bottom (2b), when the basket (2) is placed on the said basket bottom (2b), and which is interposed between the wires (2a) of the basket (2), the ends of which that are distant from the floor are preferably open (i.e. they are not coupled to each other). In a preferred embodiment of the invention, the movement member (2c) may be arranged on the said basket bottom (2b), or it may be arranged on the basket (2) in other embodiment.

[0015] In an illustrative embodiment of the invention, the basket (2) is disposed on the basket bottom (2b) such that the bend (2d) of the basket bottom (2b) is interposed between the wires (2a) of the basket (2), as shown in figure 5 in detail. Thus, the basket (2) is prevented from moving in the movement direction of the basket bottom (2b), independent from the basket bottom (2b), during the sliding movement of the basket bottom (2b) especially outside of the body (1) or inside of the body (1). Moreover, since the ends of the wires (2a) that are distant from the floor are open - said bend (2d) being interposed between the wires (2a) - the basket (2) may be lifted upwards from the floor and separated from the basket bottom (2b).

[0016] According to the invention, said bend (2d) is U-shaped. One of the two arms forming U-shape of the said bend (2d) contacts one of the wires (2a), between which it is interposed, and restricts the movement of the basket (2), during the movement of the basket (2) on the basket bottom (2b) in a direction (i.e. outside the body (1)). Similarly, the other one of the two arms forming U-shape of the bend (2d) contacts the other one of the wires (2a), between which it is interposed, and restricts the movement of the basket (2) in the opposite direction, during the movement of the basket (2) on the basket bottom (2b) in the opposite direction (i.e. inside the body (1)). Thereby, the basket (2) is prevented from slidably move

on the basket bottom (2b), independent from the basket bottom (2b).

[0017] In another preferred embodiment of the invention, at least one connecting arm (1b) that allows connection of the washing apparatus (1a) of the household appliance (G) to the body (1) is positioned at an upper part of the basket bottom (2b) that is distant from the floor, and the washing apparatus (1a) positioned at an end of the said connecting arm (1b) that is distant from the body (1) is positioned at a lower part of the basket bottom (2b) that is close to the floor.

[0018] In another embodiment of the invention, the basket bottom (2b) is also consisted of wires (2a) so as to enable the washing liquid to reach the dishes placed on the basket (2).

[0019] In an embodiment of the invention, the basket system (S) comprises even numbered bends (2d) positioned on the basket bottom (2b), at opposite two side edges of the basket bottom (2b) that are perpendicular to the opening thereof that allows access to the inside of the household appliance (G), such that they are preferably aligned with each other. In an embodiment of the invention, the basket system (S) comprises two bends (2d) on one of the edges, and two bends (2d) at the edge opposite to the said edge. Thus, the basket (2) is connected to the basket bottom (2b), at two sides thereof, during the movement of the basket bottom (2b), so that it is connected to the basket bottom (2b) in a robust manner.

[0020] In another preferred embodiment of the invention, the basket bottom (2b) comprises even numbered movement members (2c) positioned at opposite edges, in order to enable its balanced movement in the household appliance (G).

Claims

1. A basket system (S) suitable for use in household appliances (G) such as dishwashers, and comprising at least one body (1) wherein the dishes are cleaned; at least one washing apparatus (1a) positioned on the body (1) and transferring the washing liquid onto the dishes; at least one basket (2) positioned on the body (1) and consisted of at least two wires (2a), and on which the dishes are placed that are desired to be cleaned; at least one movement member (2c) that moves the basket (2) inside the body (1), wherein the basket system further comprises

- at least one basket bottom (2b) on which the basket (2) is detachably placed, **characterized in that** the basket system further comprises
- at least one bend (2d), having U-shape, which is provided on a side edge of the basket bottom (2b), wherein when the basket (2) is disposed on the basket bottom (2b), said bend (2d) is in-

terposed between the wires (2a) of the basket (2) in order to prevent the basket (2) from moving in the movement direction of the basket bottom (2b), independent from the basket bottom (2b),

- wherein, one ends of said two wires (2a) that are distant from a lower part of the basket bottom (2b) are open, i.e. are not coupled to each other, so that when said bend (2d) being interposed between the wires (2a), the basket (2) is able to be lifted upwards from the lower part of the basket bottom (2b) and separated from the basket bottom (2b).

2. A basket system (S) according to claim 1, **characterized in that** the basket (2) is positioned on an upper part of the washing apparatus (1a) that is distant from the floor.
3. A basket system (S) according to claim 1, **characterized in that** the bend (2d) is made from wire (2a).
4. A basket system (S) according to claim 1, **characterized in that** the movement member (2c) is located on the said basket bottom (2b).
5. A basket system (S) according to claim 1, **characterized in that** the other one of the two arms forming U-shape of the bend (2d) contacts the other one of the wires (2a), between which it is interposed, during the movement of the basket (2) on the basket bottom (2b) in the opposite direction.
6. A basket system (S) according to claim 1, **characterized in that** at least one connecting arm (1b) that allows connection of the washing apparatus (1a) to the body (1) is positioned at an upper part of the basket bottom (2b) that is distant from the floor, and the washing apparatus (1a) positioned at an end of the said connecting arm (1b) that is distant from the body (1) is positioned at a lower part of the basket bottom (2b) that is close to the floor.
7. A basket system (S) according to claim 1, **characterized in that** the basket bottom (2b) is formed from wires (2a).
8. A basket system (S) according to claim 1, **characterized by** comprising even numbered bends (2d) positioned on the basket bottom (2b), at opposite two side edges of the basket bottom (2b) that are perpendicular to the opening thereof that allows access to the inside of the household appliance (G).
9. A basket system (S) according to claim 8, **characterized in that** the bends (2d) are positioned to be aligned with each other.
10. A basket system (S) according to claim 8, **characterized**

ized by comprising two bends (2d) on one of the edges, and two bends (2d) at the edge opposite to the said edge.

11. A basket system (S) according to claim 1, **characterized in that** the basket bottom (2b) comprises even numbered movement members (2c) positioned at opposite edges.

Patentansprüche

1. Korbsystem (S), das zur Verwendung in Haushaltsgeräten (G), wie etwa Geschirrspülmaschinen, verwendbar ist und das wenigstens ein Gehäuse (1), in dem das Geschirr gereinigt wird, wenigstens eine Wascheinrichtung (1a), die an dem Gehäuse (1) positioniert ist und die Waschflüssigkeit auf das Geschirr ausgibt, wenigstens einen Korb (2), der an dem Gehäuse (1) positioniert ist und der aus wenigstens zwei Drähten (2a) besteht und in dem das Geschirr platziert wird, das gereinigt werden soll, wenigstens eine Bewegungselement (2c) aufweist, das den Korb (2) innerhalb des Gehäuses bewegt, wobei das Korbsystem weiter aufweist

- wenigstens einen Korbboden (2b), auf dem der Korb (2) lösbar platziert ist, **dadurch gekennzeichnet, dass** das Korbsystem weiter aufweist
- wenigstens eine Biegung (2d), die U-Form hat und die an einer Seitenkante des Korbbodens (2b) vorhanden ist, wobei, wenn der Korb (2) auf dem Korbboden (2b) platziert ist, die Biegung (2d) zwischen die Drähte (2a) des Korbs (2) eingeführt ist, um den Korb (2) daran zu hindern, sich unabhängig von dem Korbboden in die Bewegungsrichtung des Korbbodens (2b) zu bewegen,
- wobei jeweils ein Ende der zwei Drähte (2a), das entfernt von einem unteren Teil des Korbbodens (2b) ist, offen ist, d.h. unverbunden ist, so dass, wenn die Biegung (2d) zwischen die Drähte (2a) eingeführt ist, der Korb (2) nach oben von dem unteren Teil des Korbbodens (2b) hochgehoben und von dem Korbboden (2b) getrennt werden kann.

2. Korbsystem (S) nach Anspruch 1, **dadurch gekennzeichnet, dass** der Korb (2) an einem oberen Teil der Wascheinrichtung (1a), der auf Abstand zum Boden liegt, positioniert ist.
3. Korbsystem (S) nach Anspruch 1, **dadurch gekennzeichnet, dass** die Biegung (2d) aus Draht (2a) hergestellt ist.
4. Korbsystem (S) nach Anspruch 1, **dadurch gekennzeichnet, dass** das Bewegungselement (2c) sich

am Korbboden (2b) befindet.

5. Korbsystem (S) nach Anspruch 1, **dadurch gekennzeichnet, dass** der andere der beiden Arme, die die U-Form der Biegung (2d) bilden, den anderen der Drähte (2a), zwischen denen es eingeführt ist, während der Bewegung des Korbs (2) auf dem Korbboden (2b) in die entgegengesetzte Richtung berührt. 5
6. Korbsystem (S) nach Anspruch 1, **dadurch gekennzeichnet, dass** wenigstens ein Verbindungsarm (1b), der die Anbringung der Wascheinrichtung (1a) an dem Gehäuse (1) ermöglicht, an einem oberen Teil des Korbbodens (2b), der auf Abstand zum Boden liegt, positioniert ist und dass die Wascheinrichtung (1a), die an einem Ende des Verbindungsarms (1b), das auf Abstand zum Gehäuse (1) ist, positioniert ist, an einem unteren Teil des Korbbodens (2b), das nahe am Boden ist, positioniert ist. 10
15
20
7. Korbsystem (S) nach Anspruch 1, **dadurch gekennzeichnet, dass** der Korbboden aus Drähten (2a) gebildet ist. 25
8. Korbsystem (S) nach Anspruch 1, **dadurch gekennzeichnet, dass** es eine gerade Anzahl von Biegungen aufweist, die am Korbboden (2b) an zwei gegenüberliegenden Seitenkanten des Korbbodens (2b) positioniert sind, die senkrecht zu der Öffnung davon stehen, das den Zugriff auf das Innere des Haushaltsgerätes (G) erlaubt. 30
9. Korbsystem (S) nach Anspruch 8, **dadurch gekennzeichnet, dass** die Biegungen (2d) ausgerichtet miteinander positioniert sind. 35
10. Korbsystem (S) nach Anspruch 8, **dadurch gekennzeichnet, dass** zwei Biegungen (2d) an einer der Kanten und zwei Biegungen (2d) an der gegenüberliegenden Kante vorhanden sind. 40
11. Korbsystem (S) nach Anspruch 8, **dadurch gekennzeichnet, dass** der Korbboden (2b) eine gerade Zahl von Bewegungselementen (2c) aufweist, die an gegenüberliegenden Kanten positioniert sind. 45

Revendications

1. Système de panier (S) adapté à une utilisation dans des appareils ménagers (G) tels que des lave-vaisselle, et comprenant au moins un corps (1) dans lequel la vaisselle est nettoyée ; au moins un appareil de lavage (1a) positionné sur le corps (1) et transférant le liquide de lavage sur la vaisselle ; au moins un panier (2) positionné sur le corps (1) et constitué d'au moins deux fils métalliques (2a), et sur lequel sont placés les vaisselles que l'on souhaite nettoyer ; 50
55

au moins un élément de mouvement (2c) qui déplace le panier (2) à l'intérieur du corps (1), dans lequel le système de panier comprend en outre

- au moins un fond de panier (2b) sur lequel le panier (2) est placé de manière amovible, **caractérisé en ce que** le système de panier comprend en outre
- au moins un coude (2d), ayant une forme de U, qui est prévu sur un bord latéral du fond de panier (2b), dans lequel lorsque le panier (2) est disposé sur le fond de panier (2b), ledit coude (2d) est interposé entre les fils métalliques (2a) du panier (2) afin d'empêcher le panier (2) de se déplacer dans la direction de mouvement du fond de panier (2b), indépendamment du fond de panier (2b),
- dans lequel, une extrémité desdits deux fils métalliques (2a) qui sont distants d'une partie inférieure du fond de panier (2b) sont ouverte, c'est-à-dire qu'elles ne sont pas couplées l'une à l'autre, de sorte que lorsque ledit coude (2d) est interposé entre les fils métalliques (2a), le panier (2) peut être soulevé vers le haut depuis la partie inférieure du fond de panier (2b) et séparé du fond de panier (2b).

2. Système de panier (S) selon la revendication 1, **caractérisé en ce que** le panier (2) est positionné sur une partie supérieure de l'appareil de lavage (1a) qui est distante du sol.
3. Système de panier (S) selon la revendication 1, **caractérisé en ce que** le coude (2d) est réalisé en fil métallique (2a).
4. Système de panier (S) selon la revendication 1, **caractérisé en ce que** l'élément de mouvement (2c) est situé sur ledit fond de panier (2b).
5. Système de panier (S) selon la revendication 1, **caractérisé en ce que** l'autre des deux bras formant une forme de U du coude (2d) est en contact avec l'autre des fils métalliques (2a), entre lesquels il est interposé, pendant le mouvement du panier (2) sur le fond de panier (2b) dans la direction opposée.
6. Système de panier (S) selon la revendication 1, **caractérisé en ce qu'**au moins un bras de connexion (1b) qui permet la connexion de l'appareil de lavage (1a) au corps (1) est positionné à une partie supérieure du fond de panier (2b) qui est distante du sol, et l'appareil de lavage (1a) positionné à une extrémité dudit bras de connexion (1b) qui est distante du corps (1) est positionné à une partie inférieure du fond de panier (2b) qui est proche du sol.
7. Système de panier (S) selon la revendication 1, **ca-**

ractérisé en ce que le fond de panier (2b) est formé de fils métalliques (2a).

8. Système de panier (S) selon la revendication 1, **ca-**
ractérisé en ce qu'il comprend des coudes en nom- 5
bre pair (2d) positionnés sur le fond de panier (2b),
sur deux bords latéraux opposés du fond de panier
(2b) qui sont perpendiculaires à l'ouverture de celui-
ci qui permet l'accès à l'intérieur de l'appareil ména- 10
ger (G).
9. Système de panier (S) selon la revendication 8, **ca-**
ractérisé en ce que les coudes (2d) sont position-
nés pour être alignés les uns avec les autres. 15
10. Système de panier (S) selon la revendication 8, **ca-**
ractérisé en ce qu'il comprend deux coudes (2d)
sur un des bords, et deux coudes (2d) au niveau du
bord opposé dudit bord. 20
11. Système de panier (S) selon la revendication 1, **ca-**
ractérisé en ce que le fond de panier (2b) comprend
des éléments de mouvement (2c) en nombre pair
positionnés sur les bords opposés. 25

30

35

40

45

50

55

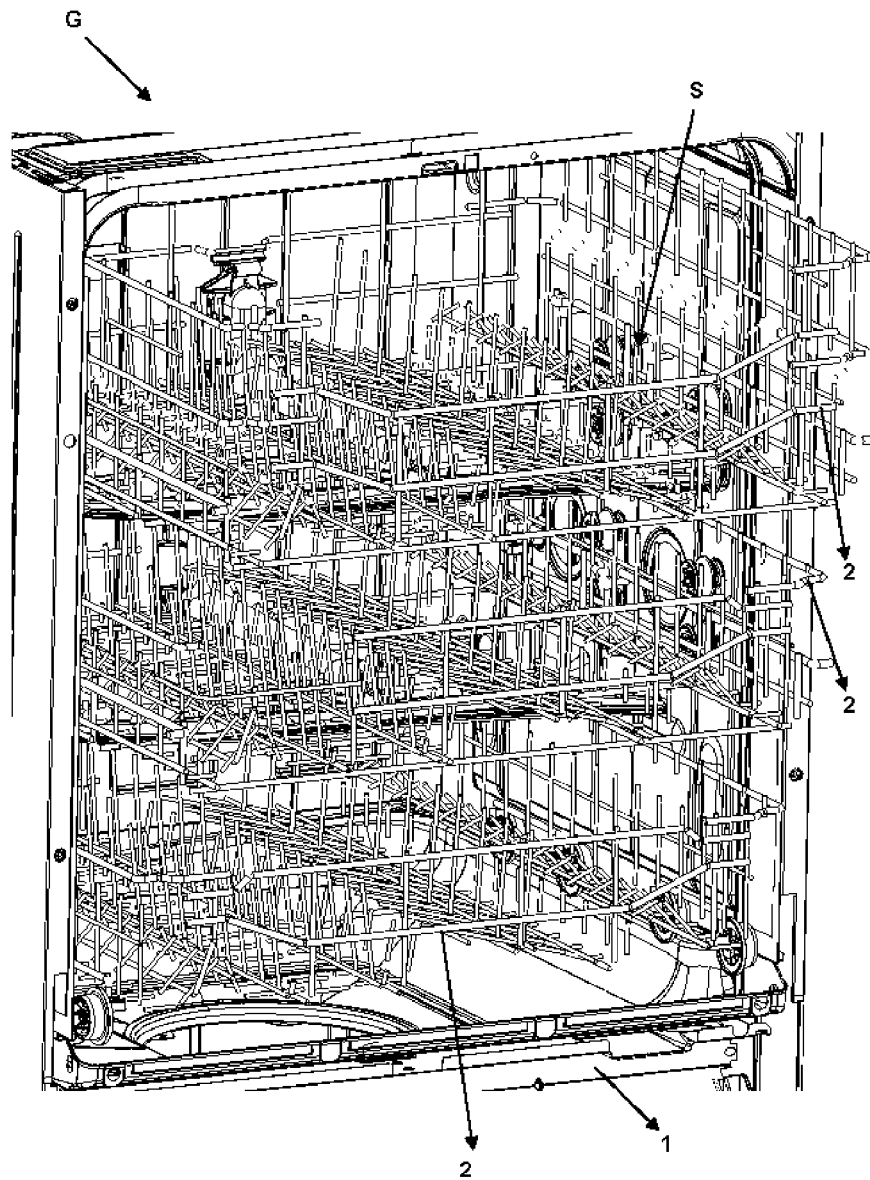


Figure 1

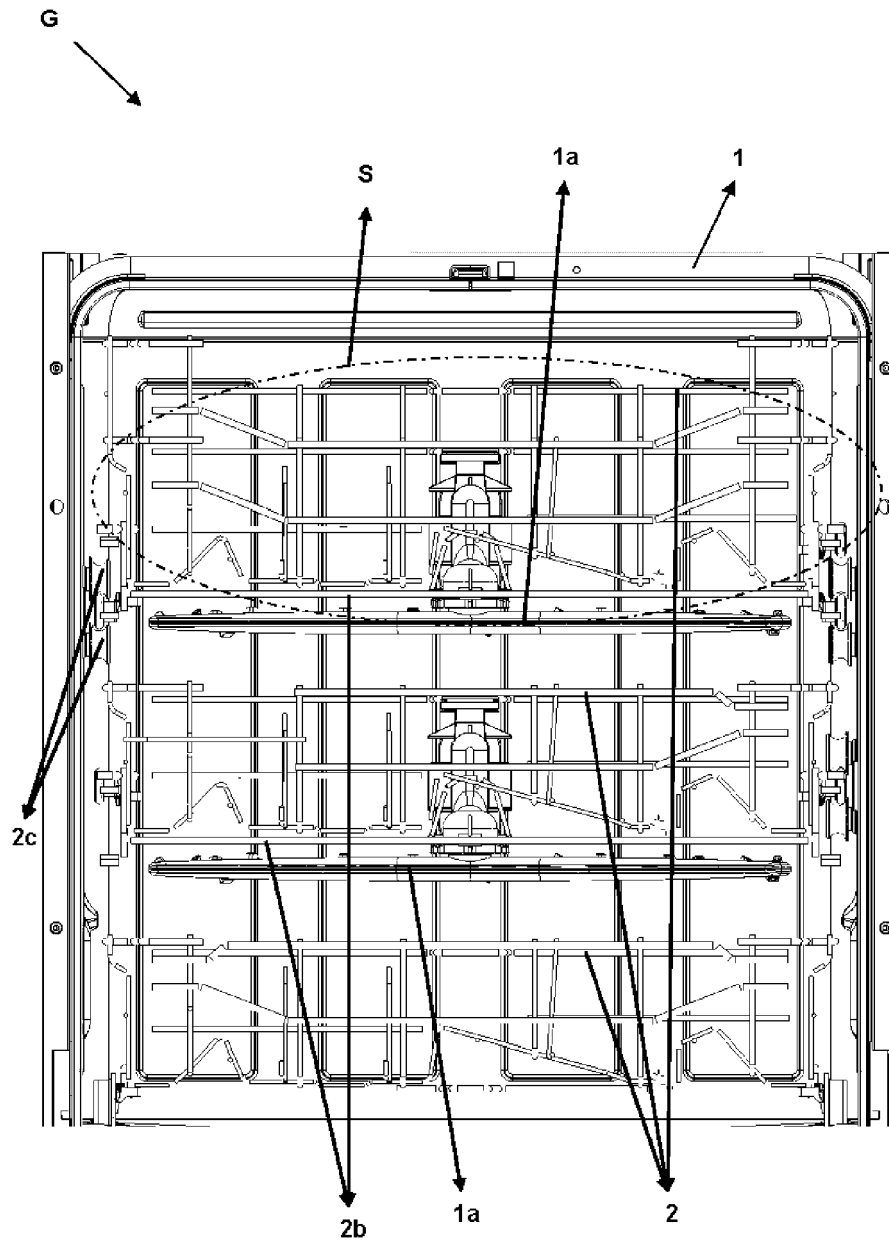


Figure 2

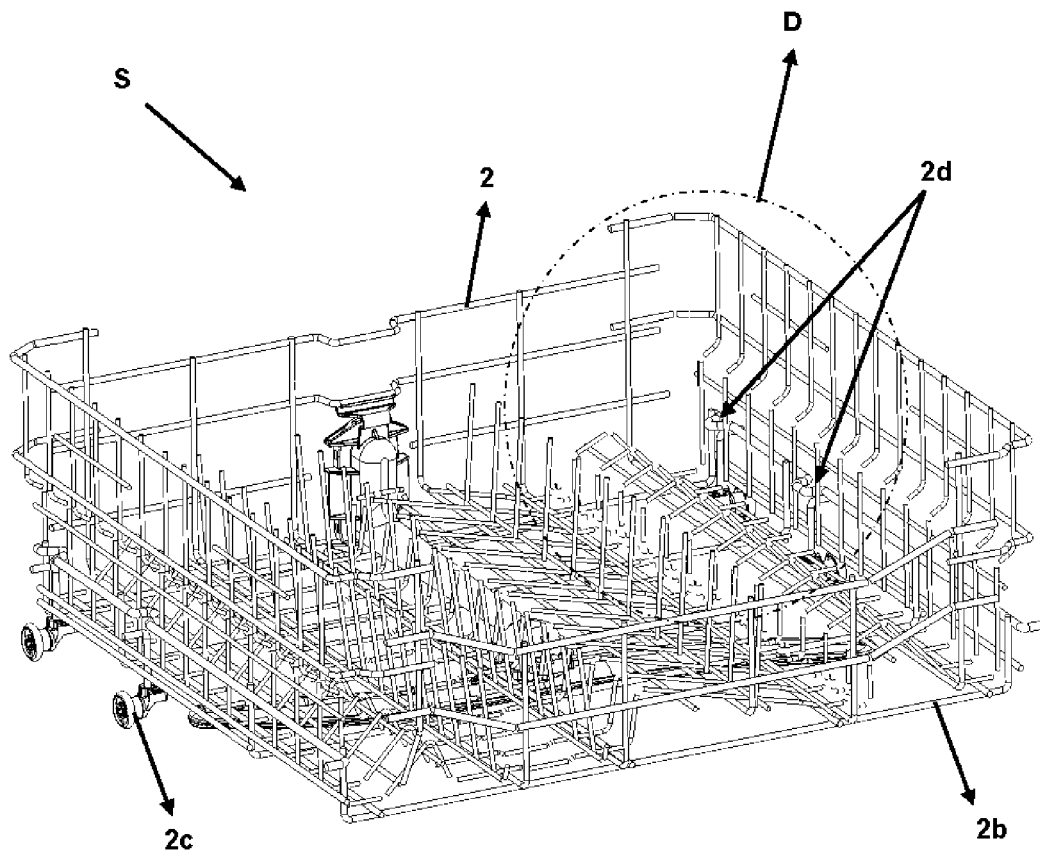


Figure 3

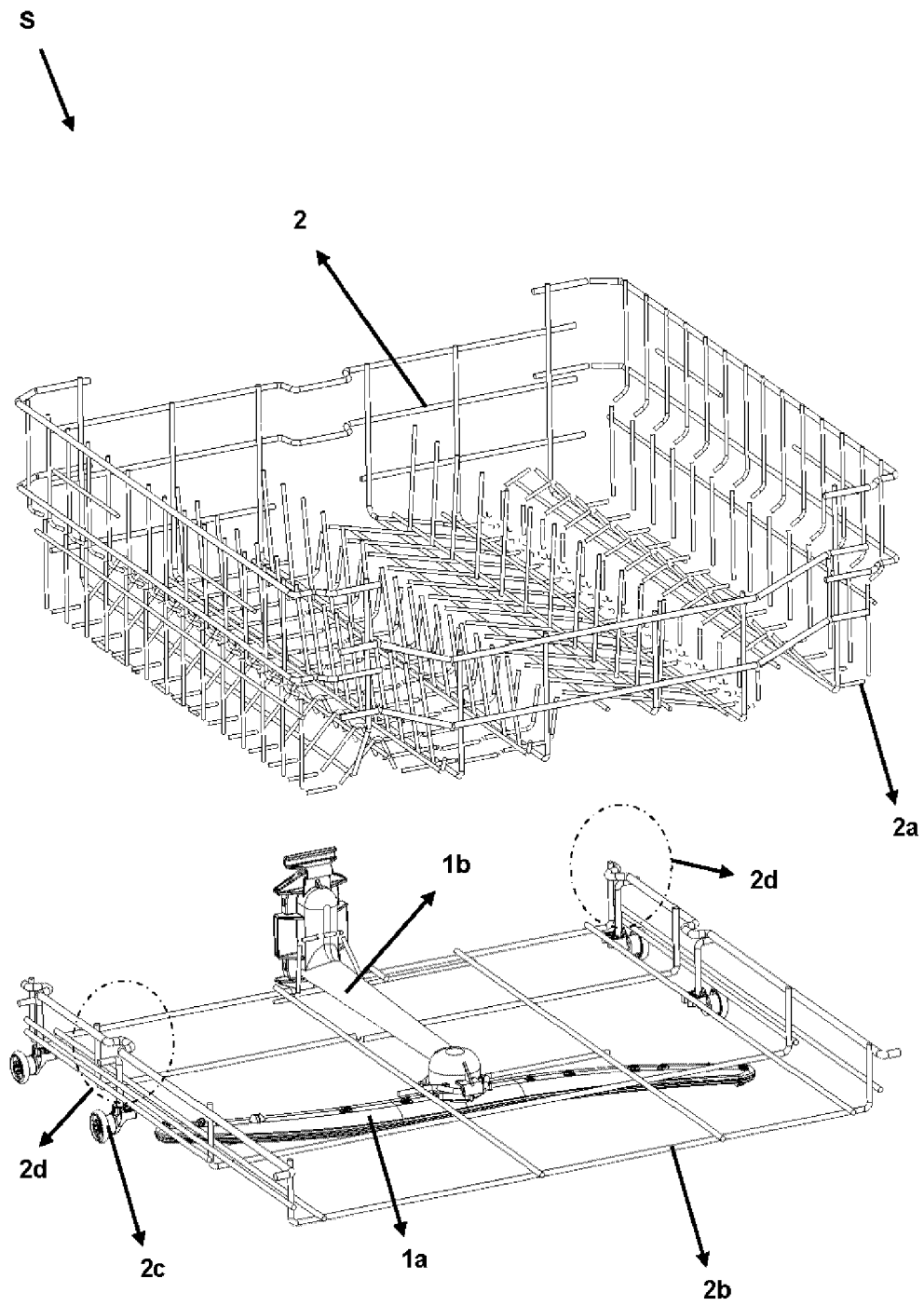


Figure 4

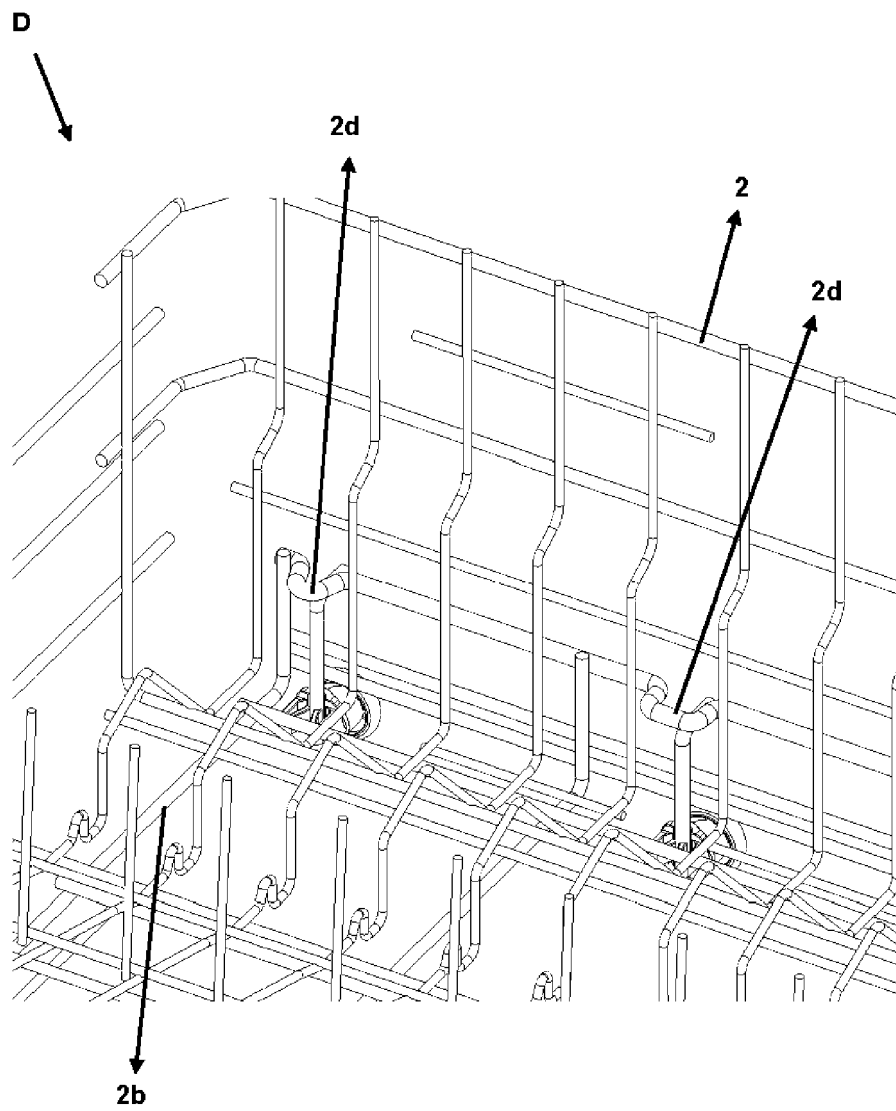


Figure 5

REFERENCES CITED IN THE DESCRIPTION

This list of references cited by the applicant is for the reader's convenience only. It does not form part of the European patent document. Even though great care has been taken in compiling the references, errors or omissions cannot be excluded and the EPO disclaims all liability in this regard.

Patent documents cited in the description

- US 2005241686 A1 [0003]
- JP 2004000745 A [0003]
- JP 2002345578 A [0003]