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(54) **Rack for diswasher basket**

Gestell für Geschirrspülerkorb

Égouttoir pour panier de lave-vaisselle

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Description

[0001] The present invention relates to a rack for dishwasher basket.

[0002] Racks used in lower and upper dishwasher baskets are known in the prior art; they are adapted to support plates or other tableware for allowing more effective washing and inserting a greater number of plates and tableware items into the basket.

[0003] However, the current racks do not allow to arrange thicker plates or large-size tableware items.

[0004] JP 04314415 discloses a basket for a dishwashing machine wherein set pins 11 are passed on the rods 3. The set pins each one comprises a sliding pipe 11a and pin 11b that can be fixed on the pipe 11a and extends up and can slide along the support rod 3.

[0005] In light of the described state of the art, it is the object of the present invention to provide a rack for dishwasher basket which allows large-size tableware items to be arranged and which is thus more suited to the user's needs.

[0006] In accordance with the present invention, such an object is achieved by a rack for dishwasher basket as defined in claim 1.

[0007] 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 view of the rack for dishwasher basket in accordance with an embodiment of the present invention;

figure 2 is a view of the rack in figure 1 with teeth moved to allow to support large-size tableware;

figure 3 is a diagrammatic side section taken according to a vertical plane of the rack in figure 1 in a working position;

figure 4 is a diagrammatic side section according to a vertical plane of the rack in figure 1 in a rest position.

[0008] Figures 1-4 show a rack 1 for dishwasher basket 2 in accordance with the present invention. Said basket comprises a rod structure adapted to define a bottom 3 and side walls, a front wall and a rear wall 6 of basket 2. Rack 1 is connected to the basket by means of fastening means 4 to the opposite walls of the basket, e.g. to the side walls 7 of the basket. Rack 1 comprises a rod 5 which preferably extends parallel to the rear wall 6 or to the front wall of the basket.

[0009] Rack 1 comprises at least one extensible and compressible elastic or spring-type portion 10; rack 1 comprises a tableware-supporting portion 20, extensible in length parallel to the rear 6 or frontal wall of basket 2. Portion 20 is slidably coupled to the rod 5; therefore, rod 5 acts as a guide for sliding the portion 20.

[0010] Portion 10 comprises teeth 11 equipped with appendixes 13; the teeth are fixed to triangular parts 14,

symmetric to the rod 5 and equipped with elastic sides 15 to allow the portion 10 to be extended or compressed, as shown in figures 1 and 2. Portion 10 comprises two parts 10' and 10'' arranged by the sides of portion 20. Part 10' is coupled to a rack part 20', 20'' with teeth 16 equipped with longer appendixes 17 than appendixes 13; in particular, the rack part 20' coupled to portion 10' comprises teeth 16 arranged at a predetermined distance D1, while the rack part 20'' coupled to portion 10'' comprises only one tooth 16 with appendix 17.

[0011] The distance between teeth 11 may vary between a minimum distance, if portion 10' is fully compressed, and a maximum distance, if portion 10' is fully extended. Portion 10 preferably comprises semi-cylindrical seats or bushings adapted to engage said rod 5 for sliding the portion 10 on the rod 5. Parts 20' and 20'' also comprise semi-cylindrical seats or bushings 18 adapted to engage said rod 5 for sliding the portion 20', 20'' on the rod 5.

[0012] Rack 1 is pivotally fixed in points 19 and 400 of the side walls 7.

[0013] Portion 20 comprises teeth 21 equipped with appendixes 23 which are vertically higher than the teeth 11 and equal to teeth 16; each tooth comprises a single semi-cylindrical bushing or seat 24 adapted to engage the rod 5 for sliding the tooth 21 on the rod 5. Each tooth 21 is provided with a respective bushing so as to be able to arrange it at a given distance from the end of the rack 1 or from the tooth 21 which either precedes or follows it. Each tooth 21 may be arranged at a minimum distance D3, e.g. 20 mm, from the tooth 21 or 11 which follows it in a direction towards portion 10, if the elastic portion 10 is totally extended and compresses the portion 20, and if the tableware to be inserted between the teeth 21 is of standard type. If one or more large-size tableware items 50 need to be arranged between adjacent pairs of teeth, at least one pair of adjacent teeth 21 or adjacent teeth 21 and 16 are arranged at a distance D4, e.g. 35 mm, to allow the arrangement of the large-size tableware item 50 therebetween; in such a case, portion 10 is compressed. In case of many large-sized tableware items 50, the distance between the teeth 16 of portions 20', 20'' from the adjacent teeth 21 of portion 20 is D4 again, and the distance between the teeth 21 of portion 20 is D4 again.

[0014] The compression of the portion 10 is decided by the user to modify the configuration of the rack according to the size of the tableware to be supported by rack 1 in basket 2. If the user needs to arrange some large-size, thick tableware items, e.g. large, thick plates, for example, portion 10 will be more compressed to allow all said plates to be arranged between the teeth 21 and 16 arranged up to the distance D4; if instead the plates have a minimum thickness, portion 10 will be slightly compressed to allow all said plates to be arranged between the teeth 21 and 16 arranged up to the distance D3. Varying the distance between the teeth 21 depends on the thickness of the tableware items.

[0015] Rack 1 may be arranged in a working position A and in a rest position B.

[0016] In the working position A, shown in figure 3, rack 1 is arranged in a substantially vertical position to support the tableware between the adjacent pairs of teeth; a hook 30 allows to arrange the rack in a vertical position. In said position, the teeth 21 and 16 which preferably vertically extend, allow to support the plates in the basket 2 in combination with the structure of the same basket. The teeth of the rack allow the plates to be arranged in the basket in an inclined position with respect to a vertical axis which is suitable for washing.

[0017] In the rest position B, shown in figure 4, the rack is arranged in a horizontal position. The rest position B may also be inclined with respect to a horizontal axis by a given angle.

[0018] The use of two racks 1 arranged parallel to each other may be provided for better supporting the tableware.

Claims

1. A rack (1) for a dishwasher basket (2) having a bottom (3), side walls (7), front and rear walls (6), the rack (1) comprising:

a tableware supporting portion (20, 20', 20'') comprising at least one pair of slidable elements (16, 21) parallel to each other, for supporting at least one tableware item between there, at least one extensible and compressible spring-type portion (10) associated with at least one element (16, 21) of said tableware-supporting elements, so as allow to vary the distance between the elements (16, 21) depending on the size of the tableware item to be supported between there and

means (5) to guide the sliding movement of the at least one pair of elements (16, 21),

characterized in that the rack is connectable to opposite walls of the dishwasher basket (2) by means of fastening means (4) and **in that** the at least one extensible and compressible spring-type portion (10) comprises two parts (10', 10'') arranged by the sides of the tableware supporting portion (20, 20', 20'').

2. A rack according to claim 1, **characterized in that** said guiding means (5) comprise at least one rod (5).
3. A rack according to claim 2, **characterized in that** said rod (5) is transversally arranged to said walls (7) of the basket.
4. A rack according to any one of the preceding claims, **characterized in that** said tableware supporting portion (20, 20', 20'') comprises a plurality of ele-

ments (21), said plurality of elements comprising a plurality of teeth (21) arranged parallel to one another and singularly coupled to said rod by its own sliding means, said extensible and compressible spring-type portion (10) being adapted to allow to vary the distance of the teeth of said plurality of teeth according to the size of the tableware to be supported.

5. A rack according to claim 3, **characterized in that** said extensible and compressible spring-type portion (10) comprises triangular parts (14) adapted to allow extension or compression.
6. A rack according to claim 1, **characterized in that** said rack is pivotally fixed at prefixed points (400, 19) of said walls (7), said rack may be arranged in a working position (A) in which said rack is adapted to support the tableware and in a rest position (B), said rack comprising positioning means (30) for arranging it in the working position (A).

Patentansprüche

1. Ein Gestell (1) für einen Geschirrspülerkorb (2) mit einem Boden (3), Seitenwänden (7), Front- und Rückwänden (6), wobei das Gestell (1) beinhaltet:

einen Geschirrrhalteabschnitt (20, 20', 20''), der wenigstens ein Paar zueinander parallel verschiebbarer Elemente (16, 21) enthält, um dazwischen wenigstens ein Geschirrartikel abzustützen,

wenigstens ein ausziehbares und zusammen-drückbares Federteil (10), welches mit wenigstens einem Element (16, 21) der Geschirrrhalteelemente in der Art verbunden ist, dass der Abstand zwischen den Elementen (16, 21) ver-änderlich ist, abhängig von der Größe der dazwischen abzustützensen Geschirrartikel, und Mittel (5) um die Gleitbewegung des wenigstens einen Paares von Elementen (16, 21) zu führen, **dadurch gekennzeichnet, dass** das Gestell mit gegenüberliegenden Wänden des Geschirrspülerkorbs (2) mittels Befestigungsmitteln (4) verbindbar ist und dadurch, dass das wenigstens eine ausziehbare und zusammendrückbare Federteil (10) zwei Teilstücke (10', 10'') enthält, die an den Seiten des Geschirrrhalteabschnitts (20, 20', 20'') angeordnet sind.

2. Ein Gestell nach Anspruch 1, **dadurch gekennzeichnet, dass** die Führungsmittel (5) wenigstens eine Stange (5) enthalten.
3. Ein Gestell nach Anspruch 2, **dadurch gekennzeichnet,**

dass die Stange (5) transversal zu den Wänden (7) des Korbs angeordnet ist.

4. Ein Gestell nach einem der vorrangegangenen Ansprüche, **dadurch gekennzeichnet**,
dass der Geschirrrhalteabschnitt (20, 20', 20'') mehrere Elemente (21) beinhaltet, wobei die mehreren Elemente mehrere Zähne (21) beinhalten, die zueinander parallel angeordnet sind und einzeln mittels eigener Gleitmittel mit der Stange verbunden sind, wobei das ausziehbare und zusammendrückbare Federteil (10) eingerichtet ist, ein Variieren der Abstände der Zähne der mehreren Zähne entsprechend der Größe der abzustützenden Geschirrartikel zu ermöglichen.
5. Ein Gestell nach Anspruch 3, **dadurch gekennzeichnet**,
dass das ausziehbare und zusammendrückbare Federteil (10) dreieckige Abschnitte (14) enthält, die dazu eingerichtet sind, Ausdehnung oder Stauchung zu ermöglichen.
6. Ein Gestell nach Anspruch 1, **dadurch gekennzeichnet**,
dass das Gestell an vorbefestigten Punkten (400, 19) der Wände (7) schwenkbar befestigt ist, wobei das Gestell in einer Arbeitsposition (A), in der das Gestell eingerichtet ist, das Geschirr zu stützen, und in einer Ruheposition (B) anordbar ist, wobei das Gestell Positioniermittel (30) für dessen Anordnung in der Arbeitsposition (A) aufweist.

Revendications

1. Egouttoir (1) d'un panier de lave-vaisselle (2) comportant un fond (3), des parois latérales (7), des parois avant et arrière (6), l'égouttoir (1) comprenant :

une partie de support de vaisselle (20, 20', 20'') comprenant au moins une paire d'éléments coulissants (16, 21) parallèles les uns aux autres, pour supporter au moins un article de vaisselle entre eux,

au moins une partie de type ressort extensible et compressible (10) associée à au moins un élément (16, 21) desdits éléments de support de vaisselle, afin de permettre de varier la distance entre les éléments (16, 21) en fonction de la dimension de l'article de vaisselle devant être supporté entre eux, et

un moyen (5) pour guider le coulissement de l'au moins une paire d'éléments (16, 21), l'égouttoir étant **caractérisé en ce qu'il** peut être relié à des parois opposées du panier de lave-vaisselle (2) à l'aide de moyens de fixation (4) et **en ce que** l'au moins une partie de type

ressort extensible et compressible (10) comprend deux pièces (10', 10'') situées au niveau des côtés de la partie de support de vaisselle (20, 20', 20'').

2. Egouttoir selon la revendication 1, **caractérisé en ce que** ledit moyen de guidage (5) comprend au moins une tige (5).
3. Egouttoir selon la revendication 2, **caractérisé en ce que** ladite tige (5) est agencée transversalement auxdites parois (7) du panier.
4. Egouttoir selon l'une quelconque des revendications précédentes, **caractérisé en ce que** ladite partie de support de vaisselle (20, 20', 20'') comprend une pluralité d'éléments (21), ladite pluralité d'éléments comprenant une pluralité de dents (21) agencées parallèlement et accouplées une à une à ladite tige par leur propre moyen coulissant, ladite partie de type ressort extensible et compressible (10) étant apte à permettre de varier la distance des dents de ladite pluralité de dents en fonction de la dimension de la vaisselle devant être supportée.
5. Egouttoir selon la revendication 3, **caractérisé en ce que** ladite partie de type ressort extensible et compressible (10) comprend des parties triangulaires (14) aptes à permettre une extension ou une compression.
6. Egouttoir selon la revendication 1, ledit égouttoir étant **caractérisé en ce qu'il** est fixé pivotant en des points préétablis (400, 19) desdites parois (7), ledit égouttoir pouvant être agencé dans une position opérante (A) dans laquelle ledit égouttoir est apte à supporter la vaisselle, et dans une position de repos (B), ledit égouttoir comprenant un moyen de positionnement (30) pour l'agencer dans la position opérante (A).

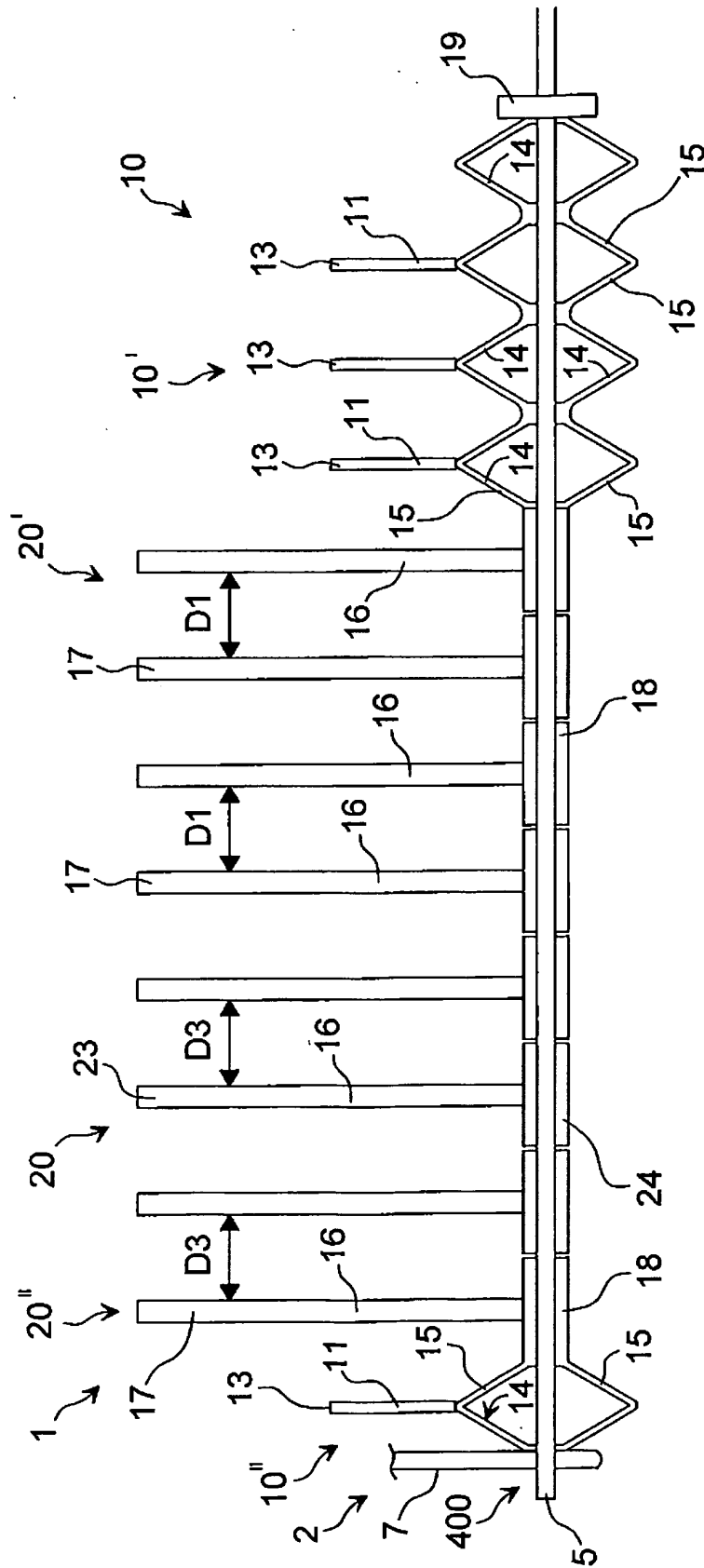


Fig.1

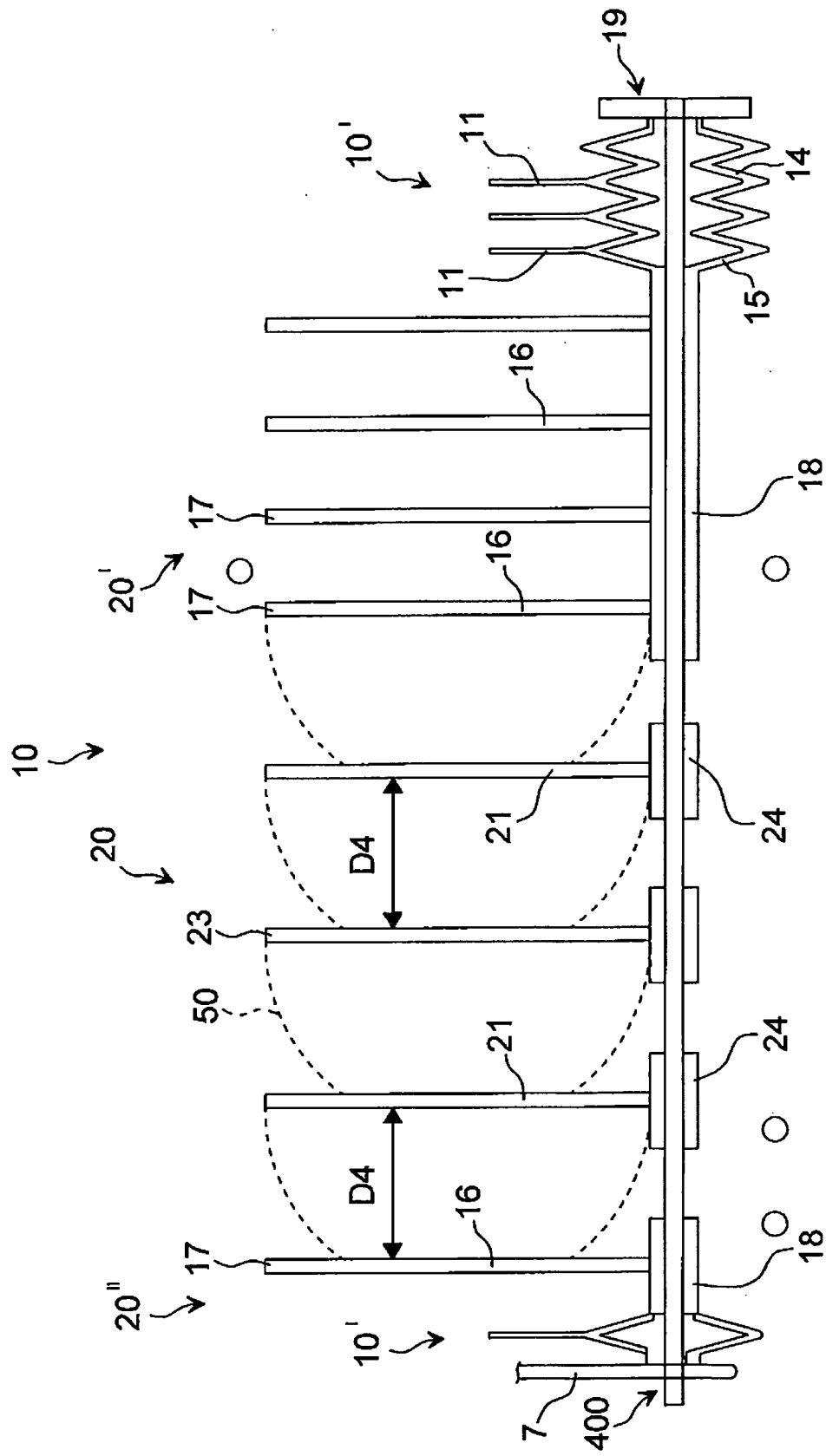


Fig. 2

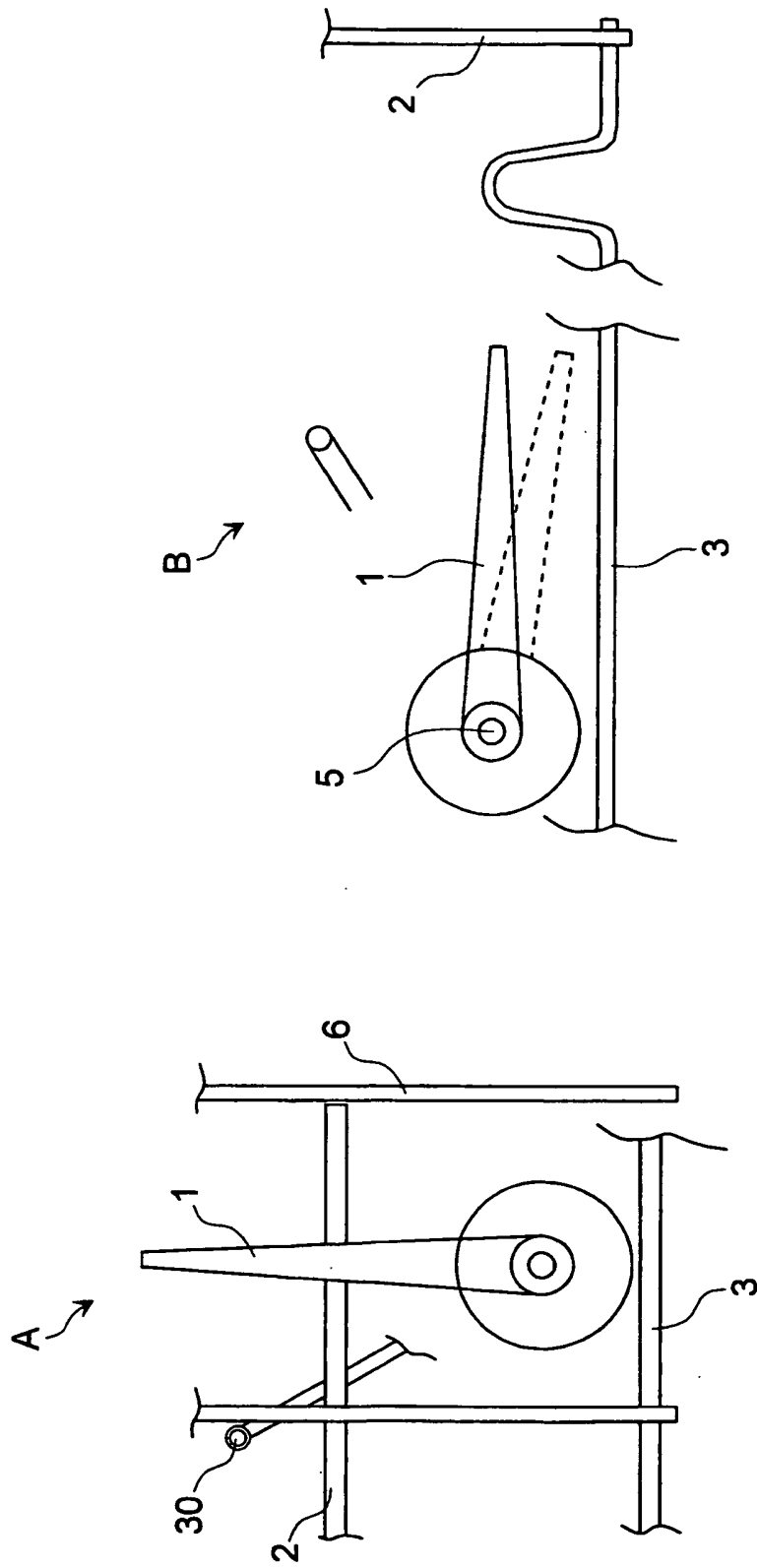


Fig.3

Fig.4

REFERENCES CITED IN THE DESCRIPTION

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