



(11) **EP 2 251 210 B1**

(12) **EUROPEAN PATENT SPECIFICATION**

(45) Date of publication and mention of the grant of the patent:
07.12.2011 Bulletin 2011/49

(51) Int Cl.:
B44D 3/12 (2006.01)

(21) Application number: **10162319.7**

(22) Date of filing: **07.05.2010**

(54) **Device for squeezing a paint tool**

Vorrichtung zum Ausdrücken eines Anstreichwerkzeuges

Dispositif pour presser un outil de peindre

(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 SE SI SK SM TR

(30) Priority: **11.05.2009 IT MI20090797**

(43) Date of publication of application:
17.11.2010 Bulletin 2010/46

(73) Proprietor: **Nespoli Engineering KKFT H-1031 Budapest (HU)**

(72) Inventor: **Nespoli, Alessandro 20038 SEREGNO (MB) (IT)**

(74) Representative: **Ripamonti, Enrico Giambrocono & C. S.p.A., Via Rosolino Pilo, 19/B 20129 Milano (IT)**

(56) References cited:
WO-A2-2007/088385 US-A- 2 763 880
US-A- 3 409 931 US-A1- 2003 000 041
US-A1- 2004 148 729

EP 2 251 210 B1

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

[0001] The present invention refers to a device for squeezing a paint tool.

[0002] As is known, when surfaces have to be painted, paint is usually taken and diluted, typically with water, inside a container.

[0003] Then painting is carried out by immersing a roller or paintbrush in the container containing the diluted paint so as to impregnate it with paint.

[0004] Before passing the roller or paintbrush on the surface to be painted it is usually necessary to squeeze it in order to remove the excess paint that has been soaked up and avoid an excessive amount of paint be released during painting, which could run, and also avoid drops of paint falling from the roller or paintbrush while it is taken from the container to the wall being painted.

[0005] In this regard, meshes are currently used that have a square shape and are placed on top of the container or in special trays; the roller or paintbrush is passed over and pressed against this mesh so that excess paint falls into the underlying container or tray.

[0006] However, traditional meshes present several drawbacks.

[0007] In particular, it is often necessary to pass the roller or paintbrush against the mesh a large number of times before the desired amount of paint is removed; this implies the risk of dirtying due to paint dripping from the roller or paintbrush.

[0008] In addition, traditional meshes cannot be connected in a stable manner to the bucket or tray and often these meshes move or shift from their position during use and must be held by hand (when the roller or paintbrush is passed against them); it is obvious that this limits the user's operativeness.

[0009] US 2003100041 A1 discloses a device for wringing a paint tool comprising a mesh. The mesh has a concave shape and defines sides from which supports extend for constraining said device to the lips of a container. A leg extends from an edge which is interposed between said walls.

[0010] The technical function that the present invention proposes is therefore providing a device for squeezing a paint tool that allows the technical drawbacks complained about in the known art to be eliminated.

[0011] Within the scope of this technical function, one object of the invention is to provide a device allowing the desired amount of paint to be removed from the roller or paintbrush by passing the same roller or paintbrush against the device a limited number of times.

[0012] Another object of the invention is to embody a device that can be constrained in a firm and steady manner to a bucket containing paint.

[0013] The technical function, as well as this and other objects, according to the present invention, are achieved through the embodiment of a device according to claim 1. Other features of the present invention are also defined in the subsequent claims. In a particular embodiment of

the device according to the invention, its supports are elastically deformable.

[0014] In a particular embodiment, the device according to the invention is made as a single element of a plastic material.

[0015] The device according to the invention usefully guarantees greater freedom for the user since it is provided with holders to which rollers or paintbrushes can be fixed when not being used.

[0016] In this regard, the device is equipped with a mesh and a continuous surface, with the holders positioned on the edge of the continuous surface so that when the roller or paintbrush is hung on the holders and another roller or paintbrush is squeezed (by pressing it against the device), the paint that falls does not daub the roller or paintbrush hung on the holders.

[0017] Further features and advantages of the invention shall become clearer from the description of a preferred but not exclusive embodiment of the invention, shown by non-limiting way of example in the enclosed drawings, where:

Figure 1 shows a front perspective view of a device according to the present invention fitted to a paint container,

Figure 2 shows a rear perspective view of a device according to the present invention fitted to a paint container,

Figure 3 shows a front perspective view of the invented device,

Figure 4 shows a rear perspective view of the invented device,

Figure 5 shows a paint roller that can be used with a device according to the invention, and

Figure 6 shows a side view, partially in section along the plane A-A, of the device in Figure 1.

[0018] With reference to the mentioned figures, a device is shown for squeezing a paint tool and indicated as whole by reference numeral 1.

[0019] The device 1 comprises a mesh 2 against which the paint tool (preferably a roller, although the device according to the invention can nevertheless be used along with paintbrushes) can be pressed to remove excess paint.

[0020] The mesh 2 has a concave shape and defines sides 4 equipped with one or more openings (a single, large-sized opening in the example); alternatively, the sides 4 can also be closed.

[0021] Supports 5, suitable for constraining the device to the lips of a container 7 containing the paint to be applied, extend from the sides 4.

[0022] In addition, the device 1 also has a continuous surface 9 that extends from an edge 10 of the mesh 2 inserted between the sides 4. Furthermore, as shall become clearer further on, the continuous surface 9 usefully extends for a width LP equal or greater than the length LR of the roller to be squeezed with the device 1 (Figures

3, 5).

[0023] The mesh 2 is substantially U-shaped and the continuous surface 9 extends from one end of the U.

[0024] As shown in the Figures, the U-shaped mesh 2 has flared or stretched ends and the end of the U from which the continuous surface 9 extends is aligned with the portion of continuous surface 9 that is connected to it.

[0025] Preferably, the U-shaped mesh 2 is shaped like an arc of a circle and the continuous surface 9 has a curved profile.

[0026] The concave mesh 2 internally defines a seat 12 prepared to accept the roller RU or other paint device to be pressed (Figures 5, 6).

[0027] Preferably, the concave seat 12 has a radius of curvature RS equal or greater than the radius of the roller RU to be pressed, where this radius is measured when the roller RU is substantially dry, not impregnated with paint and substantially undeformed.

[0028] Preferably, the concave seat 12 has a depth H equal or greater than at least one third of the diameter D of the roller RU to be pressed and, more preferably, the depth H is equal or greater than at least half the diameter D: this allows the sides of the roller RU to be adequately encircled and to squeeze it better and more quickly. To this end, the radius of curvature RS of the seat 12 is preferably not greater than 1.2 times the radius of the roller RU to be pressed.

[0029] The continuous surface 9 has a plurality of protuberances 13 that project from its surface and that have an elongated shape oriented with one end 14 facing towards the mesh 2 and closer to a central transversal axis 18 with respect to the other end 17.

[0030] In this way, the paint released on the continuous surface 9 is directed towards the middle of the same continuous surface 9.

[0031] Furthermore, the protuberances 13 prevent the roller from sliding and, in practice, ensure that when the roller is passed against the wall 13, it rotates in a manner such that all of its surface is squeezed and the excess paint is removed in a uniform manner.

[0032] Holders 20 able to hold a roller or paintbrush project from a free edge 19 of the continuous surface 9, close to a part opposite to that where the mesh 2 is positioned.

[0033] An edge 21 of the mesh 2, opposite to the edge 10 from which the continuous surface 9 extends, is thicker.

[0034] The supports 5 are defined by profiles having an inverted L shape.

[0035] In addition, locking elements 26, for example, shaped like hooks or projections able to engage on the lips of the container 7, are provided on the side of the supports 5 facing the respective side 4 and close to the free end of each support 5. Wings 25 that have free ends set apart from the corresponding side 4 project from the ends of the supports 5; they provide grip points for opening the supports 5 and disengaging them from the lips of the container 7 (when the device 1 is constrained to the

container 7 and must be removed from it).

[0036] Advantageously, the supports 5 are elastically flexible and the device is made entirely in a single element in a plastic material.

[0037] The particular shape of the supports 5, together with the locking elements 26, allows the device 1 to be firmly kept on the container 7 during use.

[0038] To facilitate the draining of paint squeezed onto the continuous surface 9, the device 1 is usefully arranged such that during use, when it is rested on the open lips 70 of the container 7 containing the paint to be applied, the continuous surface 9 has an inclination α equal or greater than 45° and, more preferably, equal or greater than 70° , where the inclination α is measured with reference to the plane on which the open lips 70 of the container 7 lie (Figure 6). The supports 5 and/or the wings 25 and/or the edge 21 are suitable shaped for this purpose.

[0039] The operation of the device according to the invention appears evident from that described and illustrated and, in particular, is substantially the following.

[0040] Paint is poured into the container 7 beforehand and is mixed with a solvent (normally water).

[0041] Then the device 1 is applied to the lips of the container 7, which has a square or rectangular shape, with open edges bent to define wide channels 30.

[0042] Thanks to the supports and the locking elements, the device according to the invention can usefully be applied to a generic container having a square or rectangular shape.

[0043] The device 1 is applied with the supports 5 that engage the channels 30 and fasten on them thanks to their elastic properties, their shape and the presence of the locking elements 26.

[0044] Removal of the device 1 is straightforward, as it is facilitated by the wings 25. During use, the roller or paintbrush can be rolled or made to slide in contact with the continuous surface 9 up to the mesh 2; the roller can be pressed in correspondence to the mesh 2 to optimize the amount of paint that remains on the roller.

[0045] The paint removed from the roller runs along the continuous surface 9 and (guided by the protuberances 13) runs to the centre of the same continuous surface 9; this prevents the paint from falling at the sides of the continuous surface 9 with the risk of dirtying the supports 5, the container 7 or the floor.

[0046] The paint passes from the continuous surface 9 into the mesh 2 (preferentially close to the central zone) and, from here, the paint falls through the openings in the mesh 2 and into the container 2.

[0047] Naturally, when the roller is squeezed against the mesh 2, the paint falls directly into the container 7.

[0048] The device according to the invention is extremely efficient because it is equipped with a part (the continuous surface 9) on which the roller or paintbrush can be made to roll or be brushed (while being pressed against the same continuous surface 9), and a part (the mesh 2) in which the roller can be pressed, obtaining a

very efficient squeezing action.

[0049] The squeezing action of the roller in the mesh 2 is very efficient because the mesh 2, thanks to its particular profile, is able to embrace and therefore squeeze a large portion of the roller.

[0050] A roller can be duly squeezed in a correct and efficient manner by passing it only two times over the continuous surface 9 and on the mesh 2 (so as to treat two roller sections of at least 180 degrees).

[0051] In addition, the rollers or paintbrushes that are not being used can be fixed to the holders 20 and can be left suspended inside the container 7 so that any drips do not dirty the floor, but fall inside the container 7; in this regard, the continuous surface 9 and the protuberances 13 that direct the paint prevent the paint removed from the roller or paintbrush from falling and dirtying the rollers or paintbrushes hung below the continuous surface 5.

[0052] In practice, it has been ascertained that the device according to the invention is particularly useful because it allows a roller or paintbrush to be squeezed in an efficient manner and, in addition, guarantees high freedom of action for the user, who does not need to hold the mesh with one hand while using it.

[0053] In addition, the user is freed from the chore of directly holding the rollers or paintbrushes not being used in one hand or of adequately positioning them.

[0054] The so-conceived device is open to numerous modifications and variants, all falling within the scope of the inventive concept; furthermore, all details can be substituted by technically equivalent elements.

[0055] In practice, the materials used, as well as the dimensions, can be of any type, according to the requirements and the state of the art.

Claims

1. Device (1) for squeezing a paint tool comprising a mesh (2) against which said paint tool can be pressed to remove excess paint, said mesh (2) having a concave shape and forming two respective sides (4) with an edge from each of which a support (5) extends for constraining said device to the lips of a container (7) containing the paint to be applied, said device (1) being **characterized by** having a continuous surface (9) that extends from the length of an edge (10) inserted between said sides (4).
2. Device (1) according to claim 1, **characterized in that** said sides (4) are provided with one or more openings.
3. Device (1) according to one or more of the previous claims, **characterized in that** said mesh (2) is substantially U-shaped in cross-section and the continuous surface (9) extends from one end of the U.
4. Device (1) according to one or more of the previous

claims, **characterized in that** said U has flared or diverging ends.

5. Device (1) according to one or more of the previous claims, **characterized in that** the end of said U is aligned with the portion of the continuous surface (9) that is connected to it.
6. Device (1) according to one or more of the previous claims, **characterized in that** a central portion of said U-shaped mesh is shaped like an arc of a circle.
7. Device (1) according to one or more of the previous claims, **characterized in that** said continuous surface has a curved profile.
8. Device (1) according to one or more of the previous claims, **characterized in that** said continuous surface has a plurality of protuberances (13) that project from its surface.
9. Device (1) according to claim 8 **characterized in that** said protuberances (13) have an elongated shape and are oriented with one end towards the mesh and closer to a central transversal axis with respect to the other end.
10. Device (1) according to one or more of the previous claims, **characterized in that** holders able to hold a roller or paintbrush project from a free edge of said continuous surface (9), in correspondence to a part opposite to that where the mesh is located.
11. Device (1) according to one or more of the previous claims, **characterized by** comprising a thickened edge in correspondence to an edge (21) of said mesh opposite to the edge (10) from which the continuous surface (9) extends.
12. Device (1) according to one or more of the previous claims, **characterized in that** said supports (5) are formed by profiles having an inverted L shape.
13. Device (1) according to claim 12, **characterized in that** a free end of the inverted L-shaped supports (5) is folded towards the corresponding side (4).
14. Device (1) according to one or more of the previous claims, **characterized in that** locking elements (26) able to engage on the lips of a container are provided in correspondence to the side of the supports (5) facing the respective side (4) and in correspondence to the free end of each support.
15. Device (1) according to claim 12, **characterized in that** wings (25) having free ends that are set apart from the corresponding side (4) extend from the end of said L-shaped supports (5).

Patentansprüche

1. Vorrichtung (1) zum Ausdrücken eines Anstreichwerkzeugs, umfassend ein Gitter (2), gegen welches das Anstreichwerkzeug gedrückt werden kann, um überschüssige Farbe zu entfernen, wobei das Gitter (2) eine konkave Form aufweist und zwei zugehörige Seitenflächen (4) bildet, von deren Rand jeweils eine Halterung (5) ausgeht, um die Vorrichtung auf dem Rand eines die aufzutragende Farbe enthaltenden Behälters (7) zu halten, wobei die Vorrichtung (1) **dadurch gekennzeichnet ist, dass** sie eine ununterbrochene Fläche (9) aufweist, die sich von einem zwischen den Seitenflächen (4) verlaufenden Längsrand (10) aus erstreckt.
2. Vorrichtung (1) nach Anspruch 1, **dadurch gekennzeichnet, dass** die Seitenflächen (4) mit einer oder mehreren Öffnungen versehen sind.
3. Vorrichtung (1) nach einem oder mehreren der vorhergehenden Ansprüche, **dadurch gekennzeichnet, dass** das Gitter (2) einen im wesentlichen U-förmigen Querschnitt aufweist und die ununterbrochene Fläche (9) sich von einem Ende des U aus erstreckt.
4. Vorrichtung (1) nach einem oder mehreren der vorhergehenden Ansprüche, **dadurch gekennzeichnet, dass** das U aufgeweitete oder divergierende Enden aufweist.
5. Vorrichtung (1) nach einem oder mehreren der vorhergehenden Ansprüche, **dadurch gekennzeichnet, dass** das Ende des U sich in Flucht mit dem Teil der ununterbrochenen Fläche (9) befindet, der an ihm befestigt ist.
6. Vorrichtung (1) nach einem oder mehreren der vorhergehenden Ansprüche, **dadurch gekennzeichnet, dass** ein mittiger Bereich des U-förmigen Gitters wie ein Kreisbogen geformt ist.
7. Vorrichtung (1) nach einem oder mehreren der vorhergehenden Ansprüche, **dadurch gekennzeichnet, dass** die ununterbrochene Fläche ein gekrümmtes Profil aufweist.
8. Vorrichtung (1) nach einem oder mehreren der vorhergehenden Ansprüche, **dadurch gekennzeichnet, dass** die ununterbrochene Fläche eine Mehrzahl von Vorsprüngen (13) aufweist, die aus dessen Oberfläche vorstehen.
9. Vorrichtung (1) nach Anspruch 8, **dadurch gekennzeichnet, dass** die Vorsprünge (13) eine längliche Form aufweisen und so ausgerichtet sind, dass ein Ende zum Gitter hin zeigt und im Vergleich zum anderen Ende näher an einer mittigen transversalen Achse liegt.
10. Vorrichtung (1) nach einem oder mehreren der vorhergehenden Ansprüche, **dadurch gekennzeichnet, dass** Halterungen, die eine Rolle oder einen Pinsel halten können, von einem freien Rand der ununterbrochenen Fläche (9) hervorstehen, wobei der freie Rand in einem Bereich angeordnet ist, der demjenigen Bereich gegenüberliegt, an welchem das Gitter angeordnet ist.
11. Vorrichtung (1) nach einem oder mehreren der vorhergehenden Ansprüche, **dadurch gekennzeichnet, dass** sie einen verdickten Rand umfasst, der an einem Rand (21) des Gitters angeordnet ist, der dem Rand (10) gegenüberliegt, von dem aus sich die ununterbrochene Fläche (9) erstreckt.
12. Vorrichtung (1) nach einem oder mehreren der vorhergehenden Ansprüche, **dadurch gekennzeichnet, dass** die Halterungen (5) aus Profilen mit umgekehrter L-Form gebildet werden.
13. Vorrichtung (1) nach Anspruch 12, **dadurch gekennzeichnet, dass** ein freies Ende der umgekehrten L-förmigen Halterungen (5) zur entsprechenden Seitenfläche (4) hin abgekantet ist.
14. Vorrichtung (1) nach einem oder mehreren der vorhergehenden Ansprüche, **dadurch gekennzeichnet, dass** Sicherungselemente (26), die sich am Rand eines Behälters einrasten können, vorgesehen sind und an der zur entsprechenden Seitenfläche (4) hin orientierten Seite der Halterungen (5) am freien Ende jeder Halterung angeordnet sind.
15. Vorrichtung (1) nach Anspruch 12, **dadurch gekennzeichnet, dass** Flügel (25) mit freien Enden, die von der entsprechenden Seitenfläche (4) abgesetzt sind, sich vom Ende der L-förmigen Halterungen (5) aus erstrecken.

Revendications

1. Dispositif (1) pour comprimer un outil de peinture, comprenant une grille (2) contre laquelle ledit outil de peinture peut-être comprimé pour enlever de la peinture en excès, ladite grille (2) pour contraindre lesdits dispositifs sur les lèvres d'un conteneur (7) ayant une forme concave formant deux côtés respectifs (4) avec un bord à partir desquels s'étend un support (5), contenant la peinture devant être appliquée, ledit dispositif (1) étant **caractérisée en ce qu'il** comporte une surface continue (9) qui s'étend à partir de la longueur d'un bord (10) inséré entre lesdits cotés (4).
2. Dispositif (1) selon la revendication 1, **caractérisé en ce que** lesdits cotés (4) sont munis d'une ou de plusieurs ouvertures.
3. Dispositif (1) selon l'une quelconque des revendications précédentes, **caractérisé en ce que** ladite grille (2) est sensiblement en forme de U en coupe transversale, et la surface continue (9) s'étend à partir d'une extrémité du U.
4. Dispositif (1) selon l'une quelconque des revendications précédentes, **caractérisé en ce que** ledit U a des extrémités évasées ou divergentes.
5. Dispositif (1) selon l'une quelconque des revendications précédentes, **caractérisé en ce que** l'extrémité dudit U est alignée avec la partie de la surface continue (9) qui est reliée à celle-ci.
6. Dispositif (1) selon l'une quelconque des revendications précédentes, **caractérisé en ce qu'**une partie centrale de ladite grille en forme de U est formée en arc de cercle.
7. Dispositif (1) selon l'une quelconque des revendications précédentes, **caractérisé en ce que** ladite surface continue a un profil incurvé.
8. Dispositif (1) selon l'une quelconque des revendications précédentes, **caractérisé en ce que** ladite surface continue a plusieurs protubérances (13) qui font saillie à partir de sa surface.
9. Dispositif (1) selon la revendication 8, **caractérisé en ce que** lesdites protubérances (13) ont une forme allongée, et sont orientées avec une première extrémité vers la grille et plus proche d'un axe transversal central par rapport à l'autre extrémité.
10. Dispositif (1) selon l'une quelconque des revendications précédentes, **caractérisé en ce que** des supports sont capables de supporter un rouleau ou un pinceau faisant saillie à partir d'un bord libre de ladite surface continue (9), en correspondance avec une partie opposée à celle où est située la grille.
11. Dispositif (1) selon l'une quelconque des revendications précédentes, **caractérisé en ce qu'il** comporte un bord épaissi en correspondance avec un bord (21) de ladite grille opposé au bord (10) à partir duquel s'étend la surface continue (9).
12. Dispositif (1) selon l'une quelconque des revendications précédentes, **caractérisé en ce que** lesdits supports (5) sont formés par des profilés ayant une forme de L inversé.
13. Dispositif (1) selon la revendication 12, **caractérisé en ce qu'**une extrémité libre des supports en forme de L inversé (5) est pliée vers le côté correspondant (4).
14. Dispositif (1) selon l'une quelconque des revendications précédentes, **caractérisé en ce que** des éléments de verrouillage (26) capables de venir en prise sur les lèvres d'un conteneur sont fournis en correspondance avec le côté des supports (5) en vis-à-vis du côté respectif (4), et en correspondance avec l'extrémité libre de chaque support.
15. Dispositif (1) selon la revendication 12, **caractérisé en ce que** des ailes (25) ayant des extrémités libres qui sont éloignées du côté correspondant (4) s'étendent depuis l'extrémité desdits supports en forme de L (5).

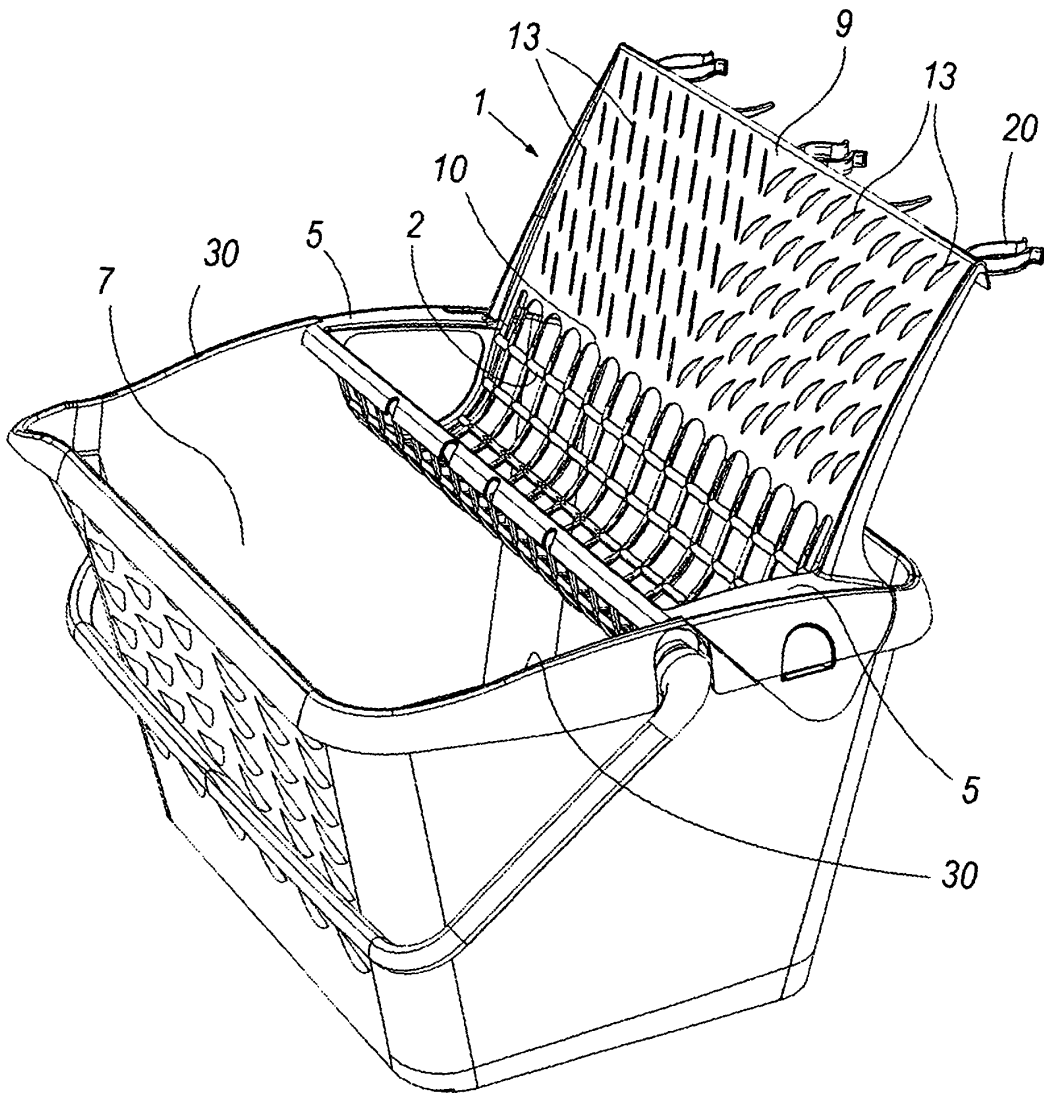


Fig. 1

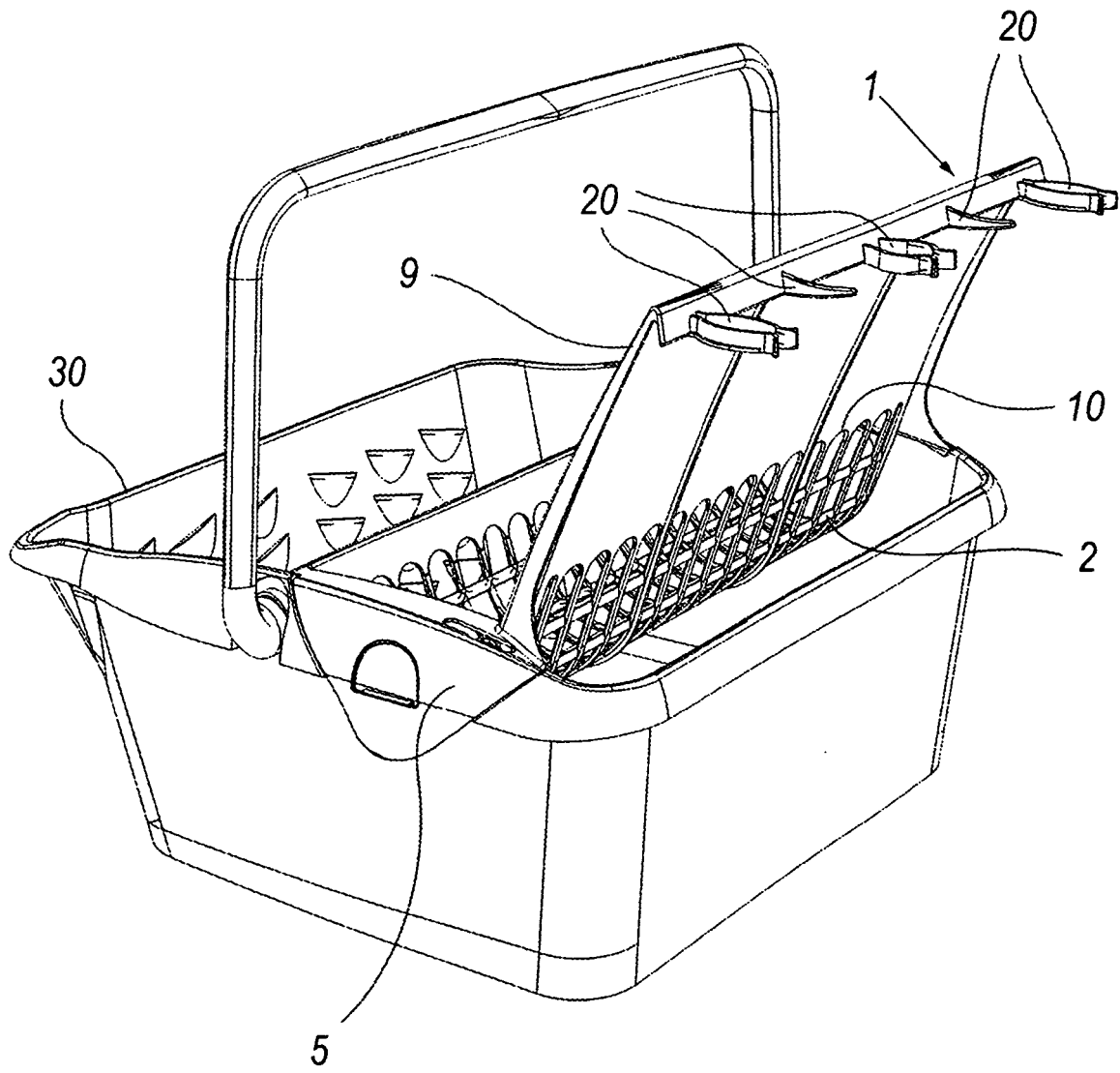


Fig. 2

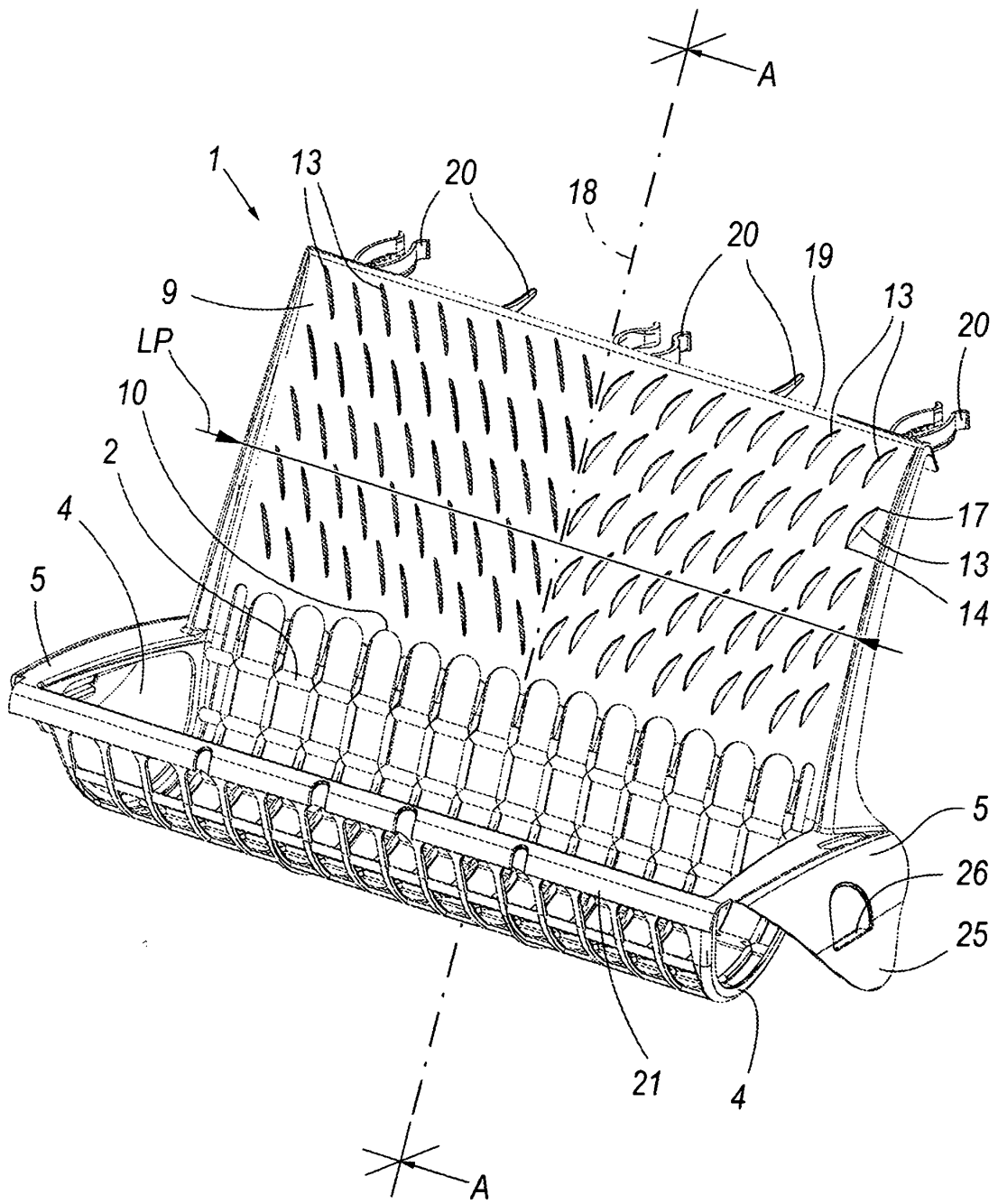


Fig. 3

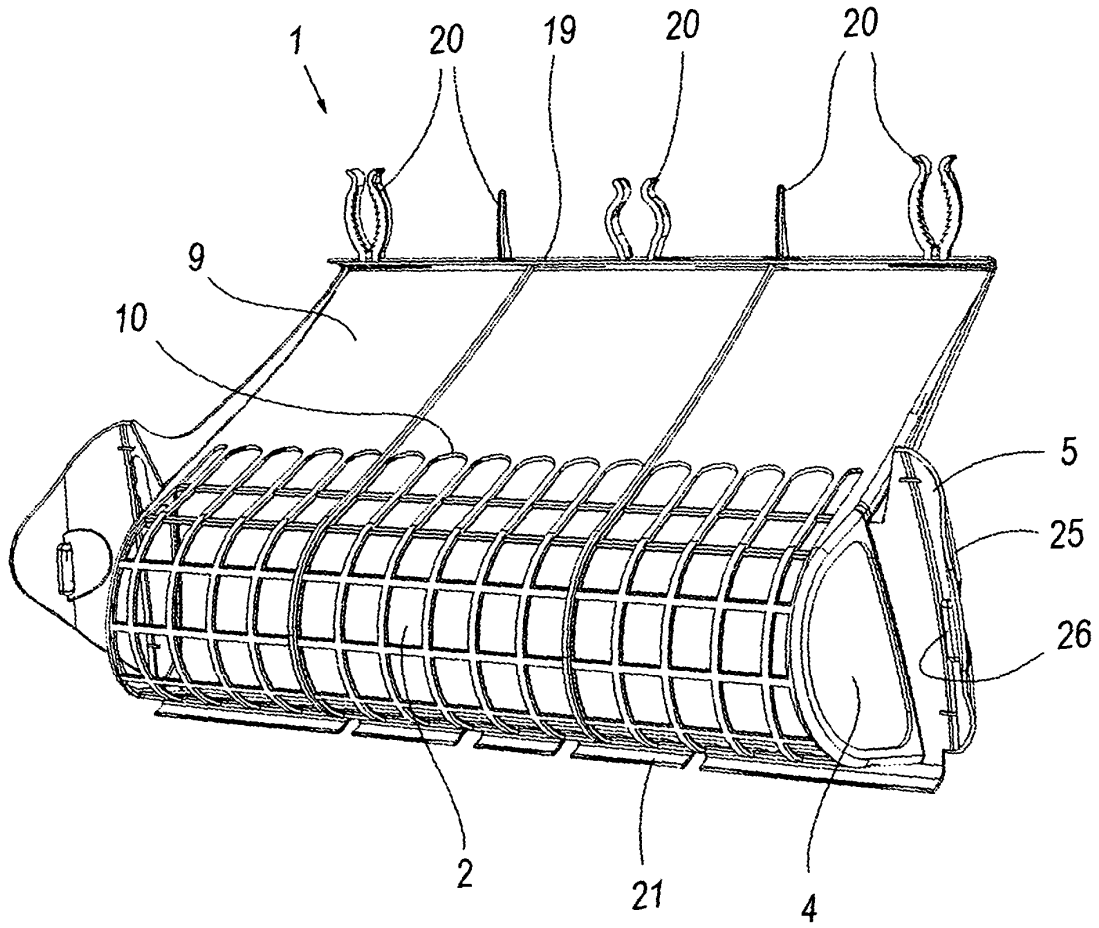


Fig. 4

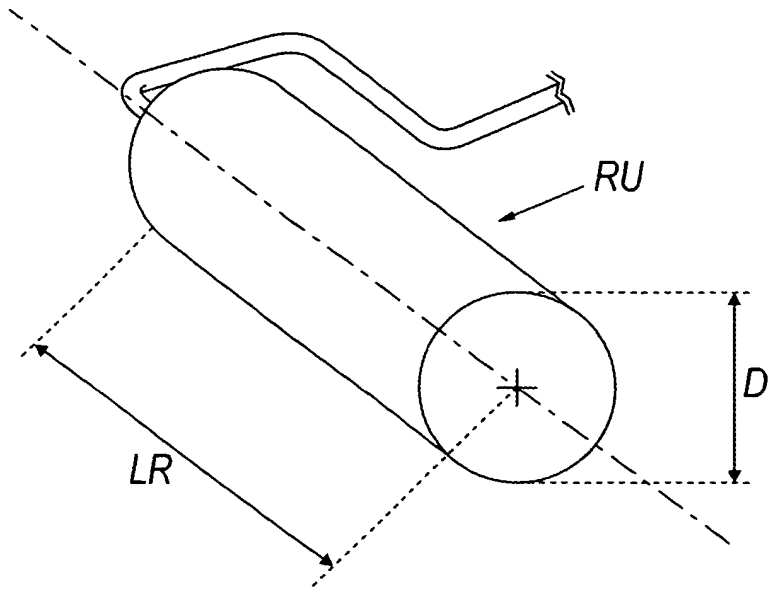


Fig. 5

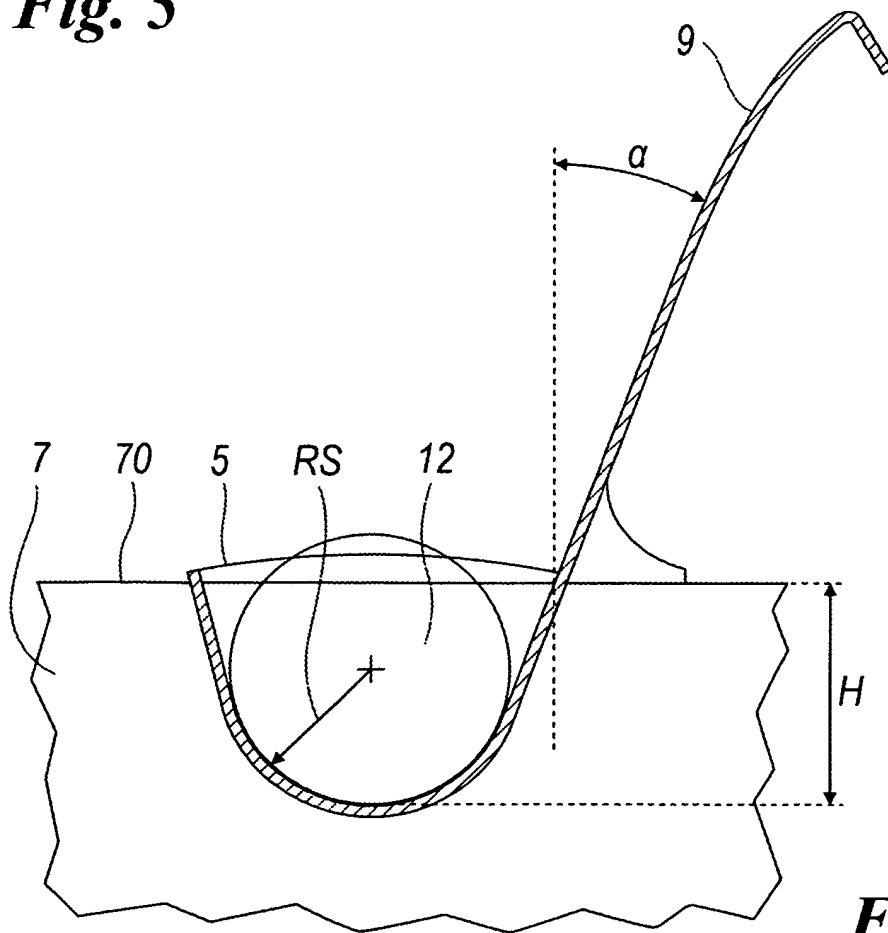


Fig. 6

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 20031000041 A1 [0009]