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(54) **SPONGE BOARD DEVICE**

SCHWAMMBRETTVORRICHTUNG

DISPOSITIF DE PLATOIR EPONGE

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EP 3 361 925 B1

Description

Field of the invention

[0001] The present invention relates to the field of sponge boards, and more particularly to a device for squeezing water out of a sponge board.

Background

[0002] Sponge boards are commonly used in a number of tiling and plastering operations, such as washing of tiles to remove grout residues and providing an even finish to joints and plaster. In these operations excess water including sand, grout residues etc. must frequently be removed from the sponge board (or sponge float) to avoid washing away too much of the joint or plaster, and avoid diluting the grout in the joints. The main difference between sponge boards used for different types of operations, are the structure, size and thickness of the sponge.

[0003] Presently the most common method of removing water from a sponge board is using a bucket provided with a number of rollers upon which the sponge board is repeatedly guided, about 5-8 times, to squeeze the water out of the sponge and into the bucket. Such bucket is commonly termed a washboy. The frequent repetition of squeezing out the water is demanding on the persons performing this type of work, especially on the wrists, arms and shoulders.

[0004] An alternative method and device for squeezing water out of a sponge board is described in DE 20117581 U1. The device comprises a hinged pressure element arranged to squeeze a sponge board towards a perforated plate, such that the water is drained into a bucket. The pressure element is parallel to the perforated plate at a fixed distance from the perforated plate. The device is thus able to evenly squeeze a sponge board having a set thickness. Sponge boards of larger or smaller thickness will not be squeezed evenly since the pressure element will not be parallel to the perforated plate at the required distance, and the water remaining in the sponge board will be distributed unevenly.

[0005] Thus, there is a need for a device for squeezing water out of a sponge board which avoids at least some of the disadvantages of the prior art.

Summary of the invention

[0006] The present invention provides a device for squeezing water out of a sponge board. The device is defined in the appended claims and in the following:

In a first embodiment, the invention provides a device for squeezing water out of a sponge board having a bow handle arranged on a backing plate, the device comprising a perforated base plate and a pressure element, wherein

- the perforated base plate comprises multiple drainage openings for allowing water to drain from an upper surface of the perforated base plate; and
- the pressure element comprises a first end, a second end, at least one pressure surface and a recess, the recess is able to accommodate the bow handle when the sponge board is arranged on the upper surface of the perforated base plate, the first end is pivotably connected to the perforated base plate by at least one hinge and the second end is distal from the first end and comprises a push handle, and the pressure element may pivot between a first position, wherein the sponge board may be arranged on the upper surface of the perforated base plate, and a second position, wherein the at least one pressure surface is parallel to, and at a predetermined distance from, the upper surface of the perforated plate,

wherein the device comprises means for changing the predetermined distance of the at least one pressure surface in the second position.

[0007] Preferably, the multiple drainage openings are sized to drain sand and grout residue in addition to the water.

[0008] In a further embodiment of the device according to the invention, the means for changing the predetermined distance of the at least one pressure surface in the second position comprises at least one interchangeable adapter on the pressure element, said interchangeable adapter comprising the at least one pressure surface.

[0009] In a further embodiment of the device according to the invention, the interchangeable adapter comprises a first plate element comprising the at least one pressure surface, wherein the thickness of the first plate element decides the size of the predetermined distance.

[0010] In a further embodiment of the device according to the invention, the at least one interchangeable adapter comprises a first and a second interconnected plate element, each plate element comprising a pressure surface, the first and the second plate element being parallel and of different thickness, such that the interchangeable adapter may be arranged with the pressure surface of the first or the second plate element facing the upper surface of the perforated base plate to provide a first or a second predetermined distance, respectively, between the at least one pressure surface and the upper surface of the perforated base plate when the pressure element is in the second position.

[0011] In a further embodiment of the device according to the invention, the first and the second plate element are interconnected by a connecting element, such that the interchangeable adapter may be releasably fastened to the pressure element, preferably by being clipped onto the pressure element.

[0012] In a further embodiment of the device according to the invention, the interchangeable adapter provides increased stiffness to the pressure element.

[0013] In a further embodiment of the device according

to the invention, the pressure element is pretensioned towards the first position. The pressure element may be pretensioned by a spring, and preferably by an internal spring in the at least one hinge.

[0014] In a further embodiment of the device according to the invention, the perforated base plate comprises guide rails for centering the sponge board upon the perforated base plate.

[0015] In a further embodiment of the device according to the invention, the pressure element may be locked in the second position, preferably by at least one locking arm pivotably connected to the perforated base plate or a guide rail.

[0016] In a further embodiment of the device according to the invention, the pressure element comprises two parallel arms interconnected by the push handle, and the recess is provided by a longitudinal opening formed between the two parallel arms.

[0017] In a further embodiment of the device according to the invention, the at least one interchangeable adapter is arranged on the parallel arms.

[0018] In a further embodiment of the device according to the invention, the push handle is bow shaped and comprises an upper rounded surface extending away from the perforated base plate.

[0019] In a further embodiment of the device according to the invention, the device comprises stopping means for preventing the pressure element from pivoting beyond the second position. The stopping means may for instance comprise at least one stopping block arranged on the perforated base plate, and at least one cooperating stopping block or stopping surface arranged on the pressure element.

[0020] In a further embodiment of the device according to the invention, the means for changing the predetermined distance of the at least one pressure surface in the second position comprises means for raising or lowering the level of the at least one hinge in relation to the perforated base plate. Such means may comprise any type of connection between the at least one hinge and the perforated base plate which may be extended or shortened in order to change the predetermined distance.

[0021] The term "pivoting beyond the second position" is intended to mean that the at least one pressure surface may not be closer to the perforated plate than it is in the second position.

Short description of the drawings

[0022] The invention is described in detail by reference to the following drawings:

Fig. 1 is a perspective view of an embodiment according to the invention.

Fig. 2 is a perspective view from a different angle of the embodiment in fig. 1.

Fig. 3 is a perspective view of the embodiment in fig. 1, featuring a sponge board.

Fig. 4 is a perspective view of the embodiment in fig. 1, featuring a sponge board.

Fig. 5 is a perspective view of two interchangeable adapters for use with the embodiment in fig. 1.

Fig. 6 and Fig. 7 are perspective views of an embodiment according to the invention.

Fig. 8 is a perspective view of the embodiment of figs. 6 and 7 arranged on a wash bucket.

Fig. 9 is a perspective view of an embodiment according to the invention featuring means for changing the level of the hinges.

Detailed description of the invention

[0023] A preferred embodiment of the device according to the invention is shown in fig. 1. The device is suitable for evenly squeezing water out of a sponge board. A sponge board 1 comprises a sponge 26, a backing plate 14 on which the sponge is fastened, and a handle 2. The handle is usually bow shaped and attached to the backing plate. Depending on the design of the device, the handle may in stead of being bow shaped comprise a shaft which is pivotably connected to the backing plate (not shown).

[0024] The device comprises a perforated base plate 3 pivotably connected by hinges 12 to a pressure element 4 having two pressure surfaces 11. The perforated base plate comprises multiple drainage openings 5 to allow water, sand and grout residues from a sponge board 1 to drain from the upper surface 6 of the base plate. In use the device is arranged on a suitable wash bucket (see fig. 8) into which the water is collected. In this particular embodiment, the perforated base plate has flanges 21 for arranging the device on or in the suitable bucket. The flanges also ensure that the perforated base plate 3 is sufficiently rigid, i.e. does not bend during use.

[0025] The pressure element 4 comprises two parallel arms 20 interconnected by a push handle 10. The two parallel arms are arranged at a distance from each other, such that an opening or recess 9 is formed between them. At one end 7 (i.e. the first end), opposite the push handle, the parallel arms are connected to the perforated base plate by the hinges 12. Each of the parallel arms 20 comprises an interchangeable adapter 13 featuring a pressure surface 11 (i.e. means for changing the predetermined distance), see also fig. 5. In this embodiment, the interchangeable adapters 13 are designed as longitudinal elements which may be clipped onto the parallel arms. The longitudinal element comprises a first 15 and a second 16 plate element interconnected by a third plate element 17 (i.e. a connecting element). When clipped onto

the parallel arms 20, one side of the first 15 or the second 16 plate elements constitutes the pressure surface 11 of the pressure element 4. The thickness of the first plate element 15 is smaller than the thickness of the second plate element 16. By being clipped onto the parallel arms, the adapters also improve the bending stiffness of the pressure element. It should be noted that other solutions for adapters suitable to provide a pressure surface having a required predetermined distance, i.e. able to vary the predetermined distance, would be apparent to the skilled person based on the present disclosure. Further, in other embodiments the predetermined distance may also be varied without the use of interchangeable adapters, for instance by having means for raising and/or lowering the level of the hinges 12 in relation to the perforated base plate (i.e. means for changing the predetermined distance), see fig. 9 and description below.

[0026] The pressure element may pivot between a first and a second position. In the first position, the pressure element 4 extends away from the perforated base plate 3, allowing a sponge board 1 to be arranged on the upper surface of said plate, see fig. 1 to 3. In the second position, as in fig. 4, but without the locking arms 19 being engaged, the pressure element is arranged such that the pressure surfaces 11 are parallel to the upper surface 6 of the perforated plate. In the second position the pressure surfaces are at a predetermined distance from the perforated base plate. The size of the desired predetermined distance will depend on the type of sponge board 1 to be used. For instance, in a typical sponge board for washing of tiles the sponge 26 have a thickness of 30 mm or 35 mm, while the thickness of the backing board remains the same. If the predetermined distance in the second position is not adapted to the correct sponge board thickness, an uneven pressure is applied to the sponge causing too much water to remain in parts of the sponge. By selecting the appropriate first 15 or second 16 plate element for providing the pressure surface 11 for a specific sponge board, a correct predetermined distance and an even pressure on the sponge is achieved. As an example only, a sponge board for washing of tiles will commonly feature a sponge 26 with a thickness of 30 mm and require a predetermined distance of about 9 mm plus the thickness of the backing plate, while a similar sponge board having a sponge with a thickness of 35 mm will require a larger predetermined distance of about 12 mm plus the thickness of the backing plate. In addition, sponge boards for other types of operation, such as plaster finishing, may require sponges changing in thickness from about 10 mm to 40 mm and the required predetermined distance will vary accordingly. Further, the required predetermined distance will also depend on the type of sponge material, i.e. the compressibility of the sponge, and the thickness of the backing plate.

[0027] The guide rails 18 arranged on the perforated base plate ensures that the sponge board 1 is centered on the perforated base plate. In many sponge boards 1, the connection between the handle 2 and the backing plate 14 comprises a raised section on the backing plate to ensure sufficient strength of the connection. If the sponge board is arranged too far off center on the perforated base plate, parts of the pressure surface 11 may push against the raised section in the second position, thus causing an uneven pressure on the sponge.

[0028] At least one of the hinges 12 comprises an internal spring pretensioned towards moving the pressure element into the first position. In this way, the person using the device avoids having to raise the pressure element manually after each use. The spring is arranged inside the hinge to protect it from wear due to the presence of sand and grout residues in the water squeezed out of the sponge board. As described above, the device is intended to be arranged on a wash bucket, see fig. 8. Such a wash bucket 22 comprises a handle 23 for carrying the bucket. When the device is in the first position, the handle 23 of the bucket would have to extend far above said bucket to pass above the pressure element 4 extending away from the perforated base plate 3. To avoid such an extended handle, the pressure element 4 may be locked in the second position by use of the locking arms 19, see fig. 4 and fig. 8. The locking arms are pivotably connected to the guide rails or the perforated base plate. A further advantage of being able to lock the pressure element in the second position is that the bow handle of a sponge board may function as a carrying handle for the device itself.

[0029] The push handle 10 at the second end 8 of the pressure element is bow shaped and comprises an upper rounded surface extending away from the perforated base plate. By ensuring a sufficient gap between the push handle and the perforated base plate in the second position, the device may also be used for sponge boards comprising a pole handle, as long as the pole handle is pivotably connected to the backing plate of the sponge board.

[0030] The device may further comprise stopping means 24, 25 for preventing the pressure element 4 to pivot beyond the second position, see figs. 6 and 7. In this embodiment, the stopping means comprises stopping blocks 24 arranged on the perforated base plate 3, in this case the stopping blocks 24 are integrated in the guide rails 18, and a cooperative stopping block 25 arranged on each of the parallel arms 20. By preventing the pressure element from pivoting beyond the second position, an even pressure is achieved on a sponge board even if the interchangeable adapters 13 do not provide the exact required predetermined distance, i.e. if the sponge is thinner than a sponge suitable for the specific predetermined distance provided by the adapters. This is advantageous if a non-standard sponge board is used, however, the main advantage is that the stopping means help secure the pressure element 4 when locked in the second position by use of the locking arms. An embodiment wherein the level of the hinges may be varied/changed (i.e. a means for changing the predetermined distance) is shown in fig. 9. Fig. 9 displays an

expanded cutout to better show the means for raising or lowering the level of the hinges 12. In this embodiment the hinges are connected to a flange 27 on the perforated base plate 3 by use of screws/bolts 28. The screws/bolts are fastened via vertically extending longitudinal openings 29 in the flange, such that the level of the hinges, and consequently the predetermined distance at which the pressure surfaces 11 of the pressure element 4 and the perforated base plate 3 are parallel, may be varied in a vertical direction (vertical in relation to the horizontally arranged base plate 3). Further embodiments, wherein the level of the hinges 12 may be varied, would be apparent to the skilled person based on the present disclosure. Such embodiments may feature any type of vertically extendable connection between the hinges and the perforated base plate, such as telescopic arms that may be locked at a required level (e.g. the arm sections 30 connecting the hinges are extendable to various required levels), a flange on the perforated base plate wherein each of the vertically extending longitudinal openings 29, shown in fig. 9, is replaced by multiple openings arranged at levels corresponding to different predetermined distances, and similar.

[0031] All of the described embodiments provide a device wherein the action of squeezing water out of a sponge board only requires a single movement, and which action provides an even pressure over the length of the sponge board ensuring that a correct amount of water is squeezed out of the sponge, each and every time the action is repeated, without any excess water being present in parts of the sponge.

Claims

1. A device for squeezing water out of a sponge board (1) having a bow handle (2) arranged on a backing plate (14), the device comprising a perforated base plate (3) and a pressure element (4), wherein

   - the perforated base plate (3) comprises multiple drainage openings (5) for allowing water to drain from an upper surface (6) of the perforated base plate; and
   - the pressure element (4) comprises a first end (7), a second end (8), at least one pressure surface (11) and a recess (9), the recess is arranged to accommodate the bow handle (2) when the sponge board (1) is arranged on the upper surface (6) of the perforated base plate (3), the first end (7) is pivotably connected to the perforated base plate by at least one hinge (12) and the second end (8) is distal from the first end and comprises a push handle (10), and the pressure element (4) may pivot between a first position, wherein the sponge board (1) may be arranged on the upper surface (6) of the perforated base plate (3), and a second position, wherein the at least one pressure surface (11) is parallel to, and at a predetermined distance from, the upper surface (6) of the perforated plate (3), **characterized in that** the device comprises means (13) for changing the predetermined distance of the at least one pressure surface (11) in the second position.

2. A device according to claim 1, wherein the means for changing the predetermined distance of the at least one pressure surface (11) in the second position comprises at least one interchangeable adapter (13) on the pressure element (4), said interchangeable adapter comprising the at least one pressure surface (11).

3. A device according to claim 2, wherein the interchangeable adapter (13) comprises a first plate element (15) comprising the at least one pressure surface (11), wherein the thickness of the first plate element decides the size of the predetermined distance.

4. A device according to claims 2 or 3, wherein the at least one interchangeable adapter (13) comprises a first (15) and a second (16) interconnected plate element, each plate element (15,16) comprising a pressure surface (11), the first and the second plate element being parallel and of different thickness, such that the interchangeable adapter (13) may be arranged with the pressure surface (11) of the first or the second plate element facing the upper surface (6) of the perforated base plate (3) to provide a first or a second predetermined distance, respectively, between the at least one pressure surface (11) and the upper surface (6) of the perforated base plate when the pressure element (4) is in the second position.

5. A device according to claim 4, wherein the first (15) and the second (16) plate element are interconnected by a connecting element (17) such that the interchangeable adapter (13) may be releasably fastened to the pressure element, preferably by being clipped onto the pressure element.

6. A device according to any of the claims 2 to 5, wherein the interchangeable adapter (13) provides increased stiffness to the pressure element (4).

7. A device according to any of the preceding claims, wherein the pressure element (4) is pretensioned towards the first position, preferably by an internal spring in the at least one hinge.

8. A device according to any of the preceding claims, wherein the perforated base plate (3) comprises guide rails (18) for centering the sponge board upon

the perforated base plate.

9. A device according to any of the preceding claims, wherein the pressure element (4) may be locked in the second position, preferably by at least one locking arm (19) pivotably connected to the perforated base plate (3).

10. A device according to any of the preceding claims, wherein the pressure element (4) comprises two parallel arms (20) interconnected by the push handle (10), and the recess (9) is provided by a longitudinal opening formed between the two parallel arms.

11. A device according to claim 9, wherein the at least one interchangeable adapter (13) is arranged on the parallel arms.

12. A device according to any of the preceding claims, wherein the push handle (10) is bow shaped and comprises an upper rounded surface extending away from the perforated base plate.

13. A device according to any of the preceding claims, comprising stopping means for preventing the pressure element (4) from pivoting beyond the second position.

14. A device according to any of the preceding claims, wherein the means for changing the predetermined distance of the at least one pressure surface (11) in the second position comprises means for raising or lowering the level of the at least one hinge 12 in relation to the perforated base plate 3.

Patentansprüche

1. Vorrichtung zum Auspressen von Wasser aus einem Schwammbrett (1), das einen Bügelgriff (2) aufweist, der auf einer Trägerplatte (14) angeordnet ist, wobei die Vorrichtung eine perforierte Grundplatte (3) und ein Druckelement (4) umfasst, wobei

- die perforierte Grundplatte (3) mehrere Ablauföffnungen (5) umfasst, um zu ermöglichen, dass Wasser von einer oberen Fläche (6) der perforierten Grundplatte abläuft; und
- das Druckelement (4) ein erstes Ende (7), ein zweites Ende (8), mindestens eine Druckfläche (11) und eine Aussparung (9) umfasst, wobei die Aussparung derart angeordnet ist, dass sie den Bügelgriff (2) aufnimmt, wenn das Schwammbrett (1) auf der oberen Fläche (6) der perforierten Grundplatte (3) angeordnet ist, das erste Ende (7) durch mindestens ein Gelenk (12) schwenkbar mit der perforierten Grundplatte verbunden ist und das zweite Ende (8) distal von dem ersten Ende gelegen ist und einen Druckgriff (10) umfasst, und das Druckelement (4) zwischen einer ersten Position, in der das Schwammbrett (1) auf der oberen Fläche (6) der perforierten Grundplatte (3) angeordnet sein kann, und einer zweiten Position, bei der die mindestens eine Druckfläche (11) sich parallel zu und in einem vorgegebenen Abstand von der oberen Fläche (6) der perforierten Platte (3) befindet, geschwenkt werden kann, **dadurch gekennzeichnet, dass** die Vorrichtung ein Mittel (13) zum Ändern des vorgegebenen Abstands der mindestens einen Druckfläche (11) in der zweiten Position umfasst.

2. Vorrichtung nach Anspruch 1, wobei das Mittel zum Ändern des vorgegebenen Abstands der mindestens einen Druckfläche (11) in der zweiten Position mindestens einen austauschbaren Adapter (13) an dem Druckelement (4) umfasst, wobei der austauschbare Adapter die mindestens eine Druckfläche (11) umfasst.

3. Vorrichtung nach Anspruch 2, wobei der austauschbare Adapter (13) ein erstes Plattenelement (15) umfasst, das die mindestens eine Druckfläche (11) umfasst, wobei die Dicke des ersten Plattenelements über die Größe des vorgegebenen Abstands entscheidet.

4. Vorrichtung nach Anspruch 2 oder 3, wobei der wenigstens eine austauschbare Adapter (13) ein erstes (15) und ein zweites (16) miteinander verbundenes Plattenelement umfasst, wobei jedes Plattenelement (15, 16) eine Druckfläche (11) umfasst, das erste und das zweite Plattenelement parallel sind und eine unterschiedliche Dicke aufweisen, derart dass der austauschbare Adapter (13) mit der Druckfläche (11) des ersten oder des zweiten Plattenelements der oberen Fläche (6) der perforierten Grundplatte (3) zugewandt angeordnet werden kann, um einen ersten beziehungsweise einen zweiten vorgegebenen Abstand zwischen der mindestens einen Druckfläche (11) und der oberen Fläche (6) der perforierten Grundplatte bereitzustellen, wenn sich das Druckelement (4) in der zweiten Position befindet.

5. Vorrichtung nach Anspruch 4, wobei das erste (15) und das zweite (16) Plattenelement durch ein Verbindungselement (17) derart miteinander verbunden sind, dass der austauschbare Adapter (13) lösbar an dem Druckelement befestigt sein kann, vorzugsweise indem es auf das Druckelement geklemmt wird.

6. Vorrichtung nach einem der Ansprüche 2 bis 5, wobei der austauschbare Adapter (13) dem Druckelement (4) eine erhöhte Steifigkeit bereitstellt.

7. Vorrichtung nach einem der vorhergehenden Ansprüche, wobei das Druckelement (4) in Richtung der ersten Position vorgespannt ist, vorzugsweise durch eine innere Feder in dem mindestens einen Gelenk.

8. Vorrichtung nach einem der vorhergehenden Ansprüche, wobei die perforierte Grundplatte (3) Führungsschienen (18) zum Zentrieren des Schwammbretts auf der perforierten Grundplatte umfasst.

9. Vorrichtung nach einem der vorhergehenden Ansprüche, wobei das Druckelement (4) in der zweiten Position verriegelt sein kann, vorzugsweise durch mindestens einen Verriegelungsarm (19), der schwenkbar mit der perforierten Grundplatte (3) verbunden ist.

10. Vorrichtung nach einem der vorhergehenden Ansprüche, wobei das Druckelement (4) zwei parallele Arme (20) umfasst, die durch den Druckgriff (10) miteinander verbunden sind, und die Aussparung (9) durch eine längliche Öffnung bereitgestellt ist, die zwischen den zwei parallelen Armen gebildet ist.

11. Vorrichtung nach Anspruch 9, wobei der mindestens eine austauschbare Adapter (13) an den parallelen Armen angeordnet ist.

12. Vorrichtung nach einem der vorhergehenden Ansprüche, wobei der Druckgriff (10) bügelförmig ist und eine obere abgerundete Fläche umfasst, die sich von der perforierten Grundplatte weg erstreckt.

13. Vorrichtung nach einem der vorhergehenden Ansprüche, die ein Anschlagmittel zum Verhindern, dass das Druckelement (4) über die zweite Position hinaus schwenkt, umfasst.

14. Vorrichtung nach einem der vorhergehenden Ansprüche, wobei das Mittel zum Ändern des vorgegebenen Abstands der mindestens einen Druckfläche (11) in der zweiten Position ein Mittel zum Erhöhen oder Absenken der Höhe des mindestens einen Gelenks 12 in Bezug auf die perforierte Grundplatte 3 umfasst.

Revendications

1. Dispositif pour essorer un platoir éponge (1) ayant une poignée en forme d'arc (2) agencée sur une plaque de support (14), le dispositif comprenant une plaque de base perforée (3) et un élément de pression (4), dans lequel :

   la plaque de base perforée (3) comprend plusieurs ouvertures d'évacuation (5) pour permettre d'évacuer l'eau d'une surface supérieure (6) de la plaque de base perforée ; et
   l'élément de pression (4) comprend une première extrémité (7), une seconde extrémité (8), au moins une surface de pression (11) et un évidement (9), l'évidement est agencé pour loger la poignée en forme d'arc (2) lorsque le platoir éponge (1) est agencé sur la surface supérieure (6) de la plaque de base perforée (3), la première extrémité (7) est raccordée de manière pivotante à la plaque de base perforée par au moins une charnière (12) et la seconde extrémité (8) est distale par rapport à la première extrémité et comprend une poignée de poussée (10), et l'élément de pression (4) peut pivoter entre une première position, dans laquelle le platoir éponge (1) peut être agencé sur la surface supérieure (6) de la plaque de base perforée (3), et une seconde position, dans laquelle la au moins une surface de pression (11) est parallèle à et à une distance prédéterminée de la surface supérieure (6) de la plaque perforée (3), **caractérisé en ce que** le dispositif comprend un moyen (13) pour modifier la distance prédéterminée de la au moins une surface de pression (11) dans la seconde position.

2. Dispositif selon la revendication 1, dans lequel le moyen pour modifier la direction prédéterminée de la au moins une surface de pression (11) dans la seconde position comprend au moins un adaptateur interchangeable (13) sur l'élément de pression (4), ledit adaptateur interchangeable comprenant la au moins une surface de pression (11).

3. Dispositif selon la revendication 2, dans lequel l'adaptateur interchangeable (13) comprend un premier élément de plaque (15) comprenant la au moins une surface de pression (11), dans lequel l'épaisseur du premier élément de plaque décide de la taille de la distance prédéterminée.

4. Dispositif selon les revendications 2 ou 3, dans lequel le au moins un adaptateur interchangeable (13) comprend un premier (15) et un second (16) élément de plaque interconnecté, chaque élément de plaque (15, 16) comprenant une surface de pression (11), le premier et le second élément de plaque étant parallèles et d'épaisseur différente, de sorte que l'adaptateur interchangeable (13) peut être agencé avec la surface de pression (11) du premier ou du second élément de plaque orienté vers la surface supérieure (6) de la plaque de base perforée (3) pour fournir une première ou une seconde distance prédéterminée respectivement, entre la au moins une surface de pression (11) et la surface supérieure (6) de la plaque de base perforée lorsque l'élément de pression (4) est dans la seconde position.

5. Dispositif selon la revendication 4, dans lequel le premier (15) et le second élément de plaque (16) sont interconnectés par un élément de raccordement (17) de sorte que l'adaptateur interchangeable (13) peut être fixé de manière amovible sur l'élément de pression, de préférence en étant encliqueté sur l'élément de pression.

6. Dispositif selon l'une quelconque des revendications 2 à 5, dans lequel l'adaptateur interchangeable (13) fournit une rigidité accrue à l'élément de pression (4).

7. Dispositif selon l'une quelconque des revendications précédentes, dans lequel l'élément de pression (4) est pré-tendu vers la première position, de préférence par un ressort interne dans la au moins une charnière.

8. Dispositif selon l'une quelconque des revendications précédentes, dans lequel la plaque de base perforée (3) comprend des rails de guidage (18) pour centrer le platoir éponge sur la plaque de base perforée.

9. Dispositif selon l'une quelconque des revendications précédentes, dans lequel l'élément de pression (4) peut être verrouillé dans la seconde position, de préférence par au moins un bras de blocage (19) raccordé de manière pivotante à la plaque de base perforée (3).

10. Dispositif selon l'une quelconque des revendications précédentes, dans lequel l'élément de pression (4) comprend deux bras parallèles (20) interconnectés par la poignée de poussée (10), et l'évidement (9) est fourni par une ouverture longitudinale formée entre les deux bras parallèles.

11. Dispositif selon la revendication 9, dans lequel le au moins un adaptateur interchangeable (13) est agencé sur les bras parallèles.

12. Dispositif selon l'une quelconque des revendications précédentes, dans lequel la poignée de poussée (10) est en forme d'arc et comprend une surface arrondie supérieure s'étendant à distance de la plaque de base perforée.

13. Dispositif selon l'une quelconque des revendications précédentes, comprenant des moyens de butée pour empêcher l'élément de pression (4) de pivoter au-delà de la seconde position.

14. Dispositif selon l'une quelconque des revendications précédentes, dans lequel le moyen pour modifier la distance prédéterminée de la au moins une surface de pression (11) dans la seconde position comprend un moyen pour lever ou abaisser le niveau de la au moins une charnière (12) par rapport à la plaque de base perforée (3).

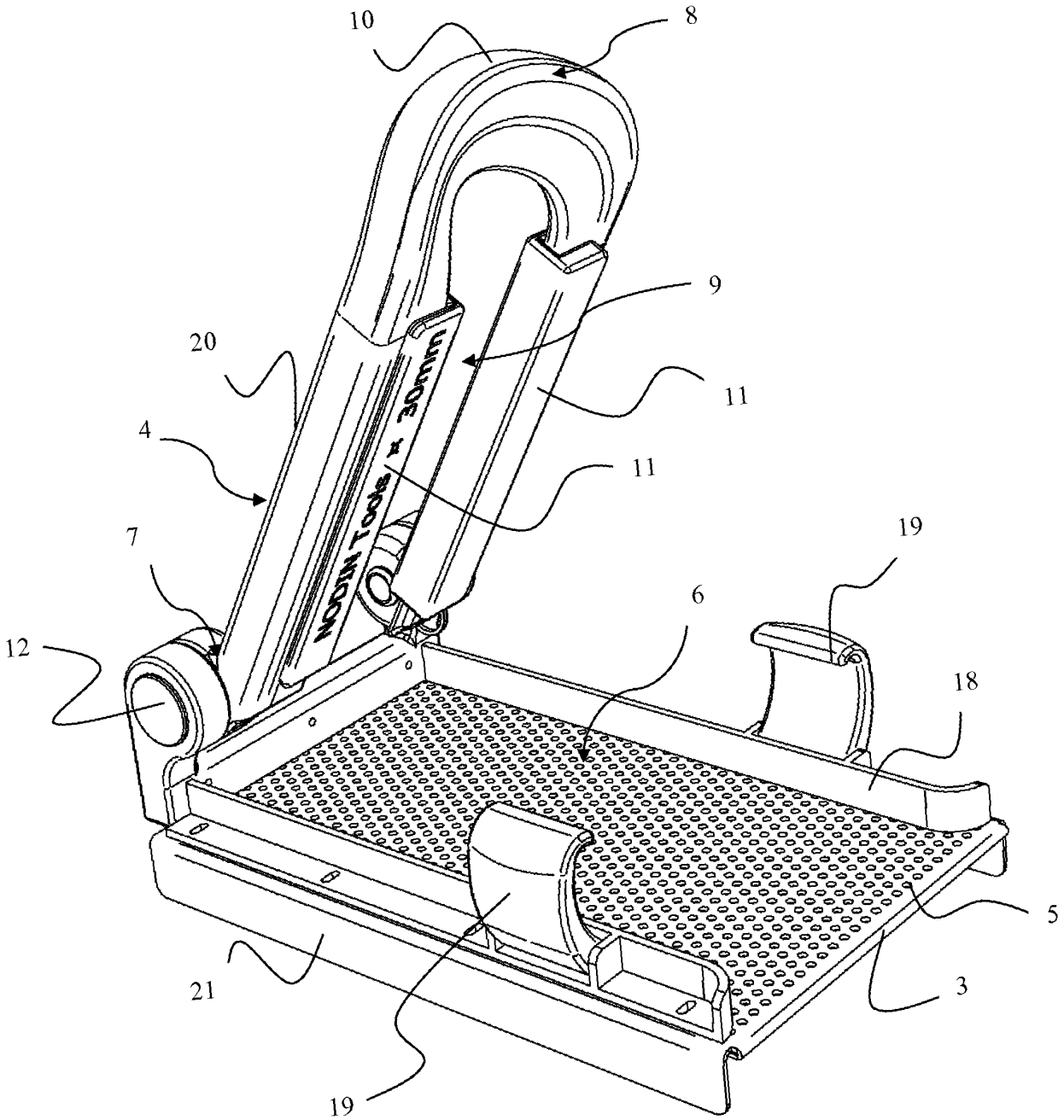


Fig. 1

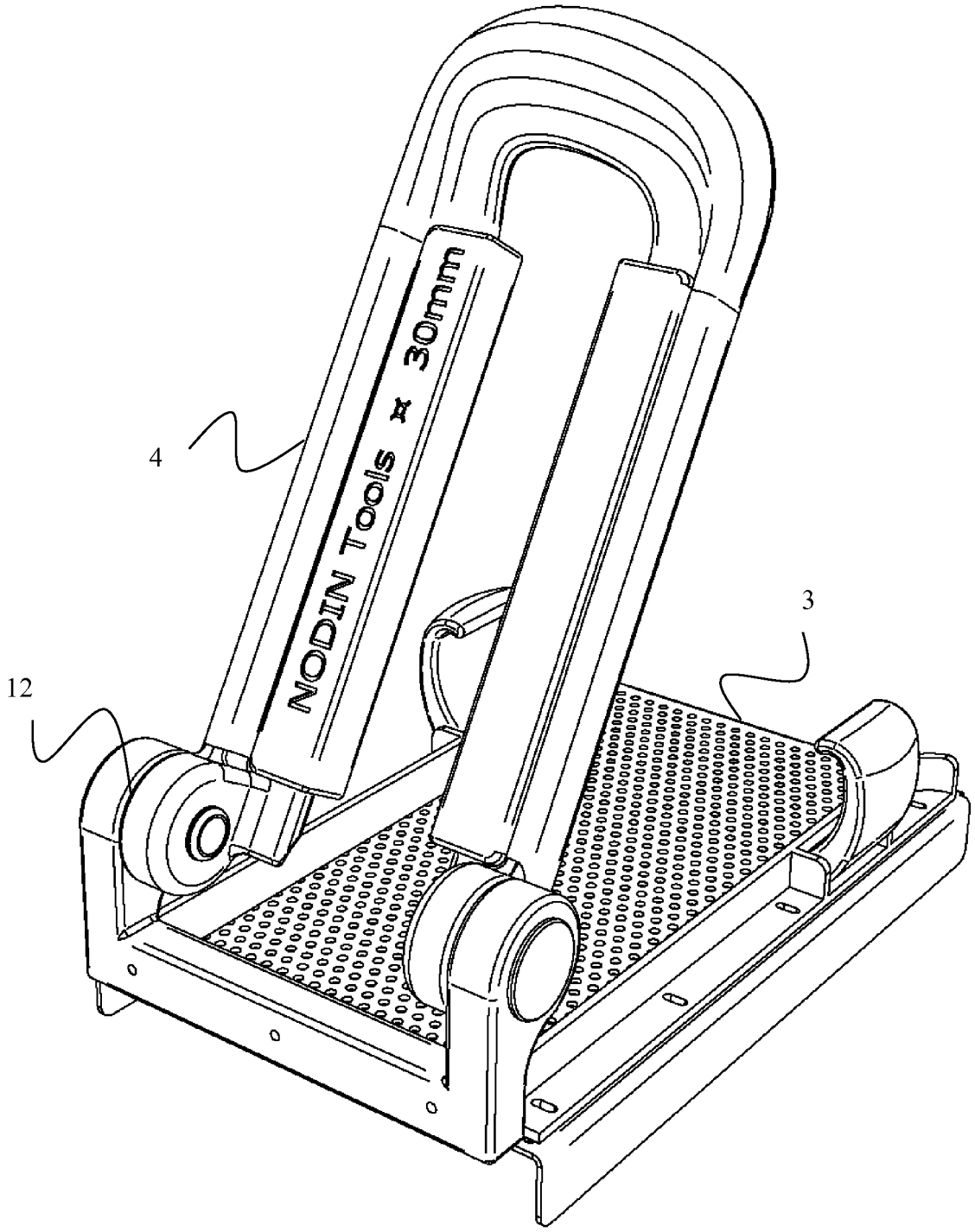


Fig. 2

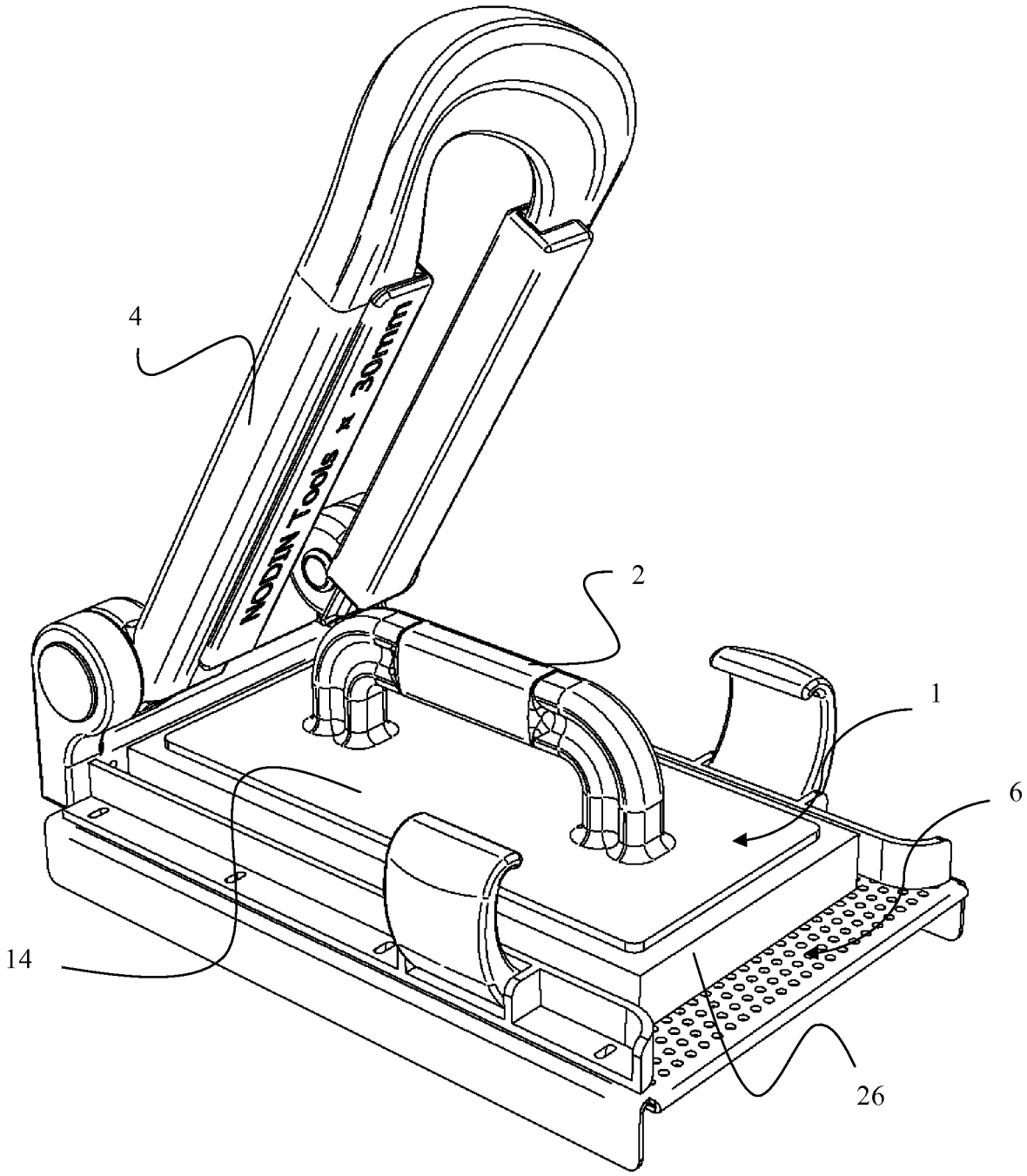


Fig. 3

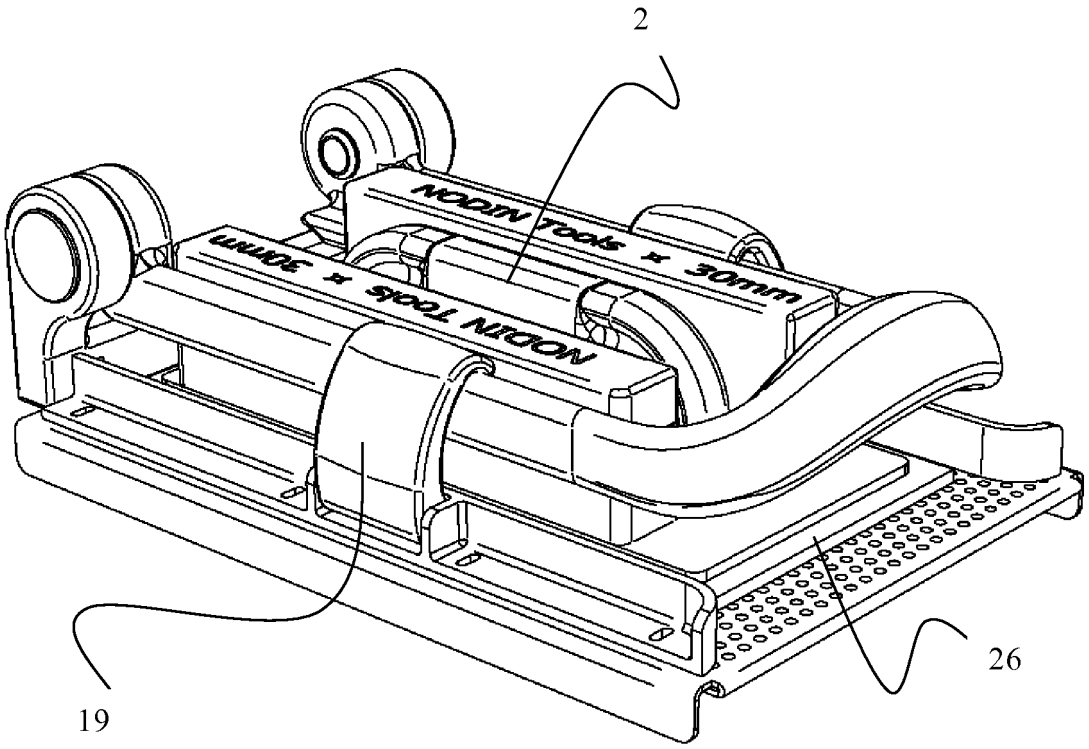

2
NODIN Tools x 30mm
NODIN Tools x 35mm
19
26

Fig. 4

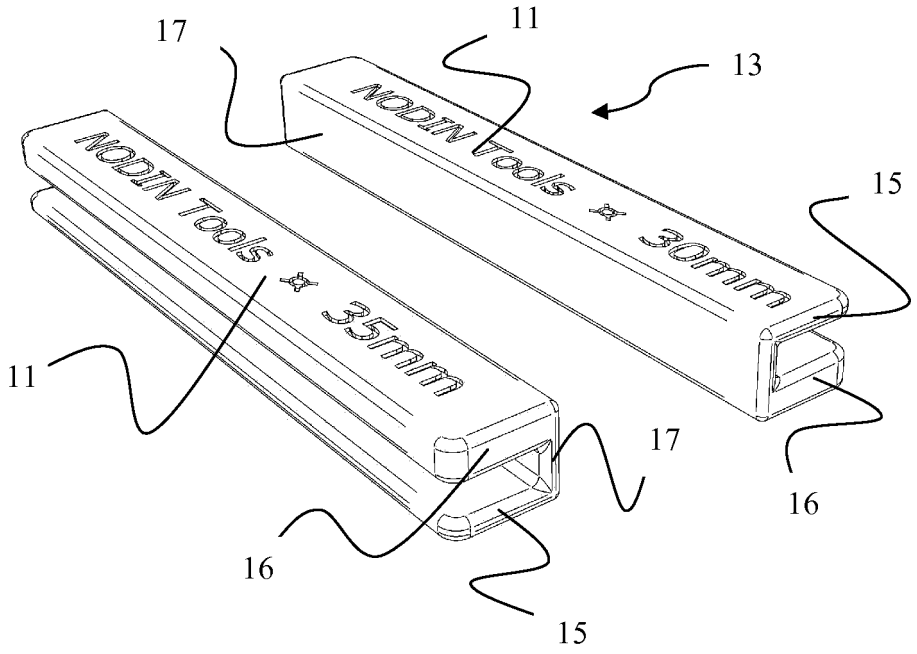

17
11
13
NODIN Tools x 30mm
15
NODIN Tools x 35mm
11
17
16
16
15

Fig. 5

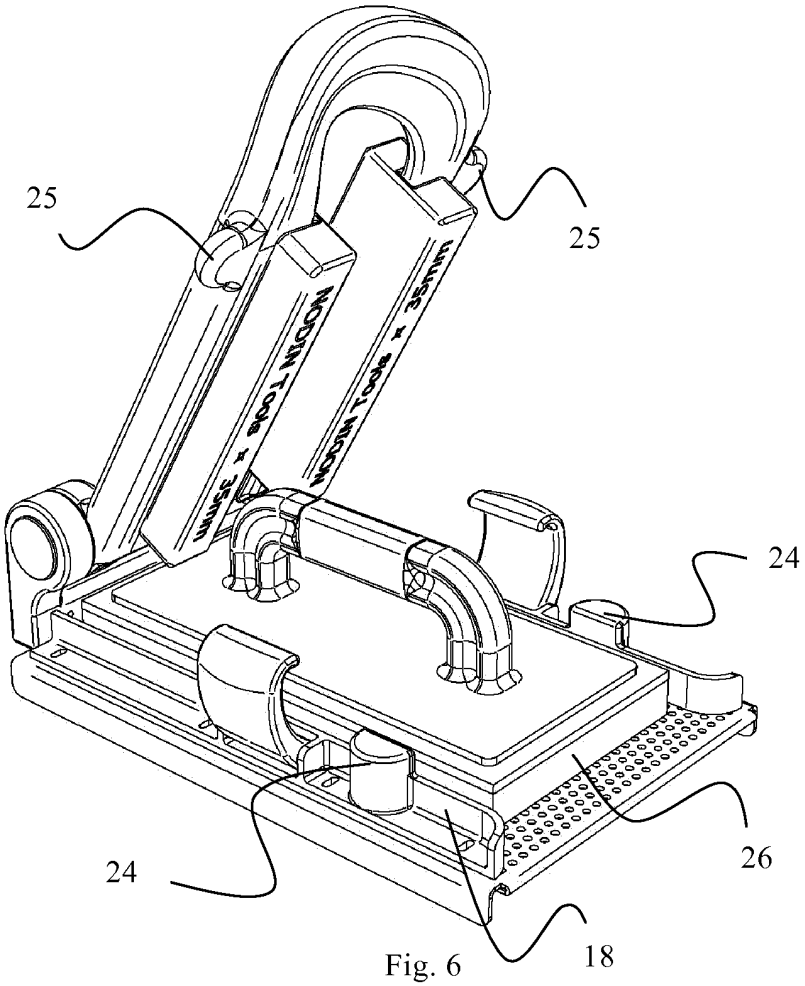

25
25
MODIN TOOLS x 30MM
MODIN TOOLS x 35MM
24
24
26
18

Fig. 6

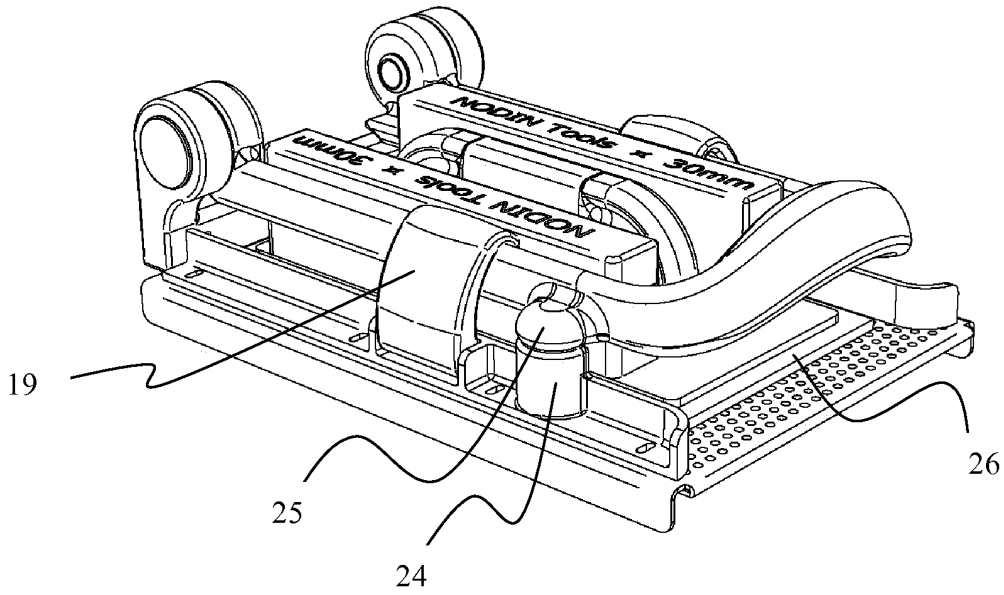

MODIN TOOLS x 30MM
MODIN TOOLS x 35MM
19
25
24
26

Fig. 7

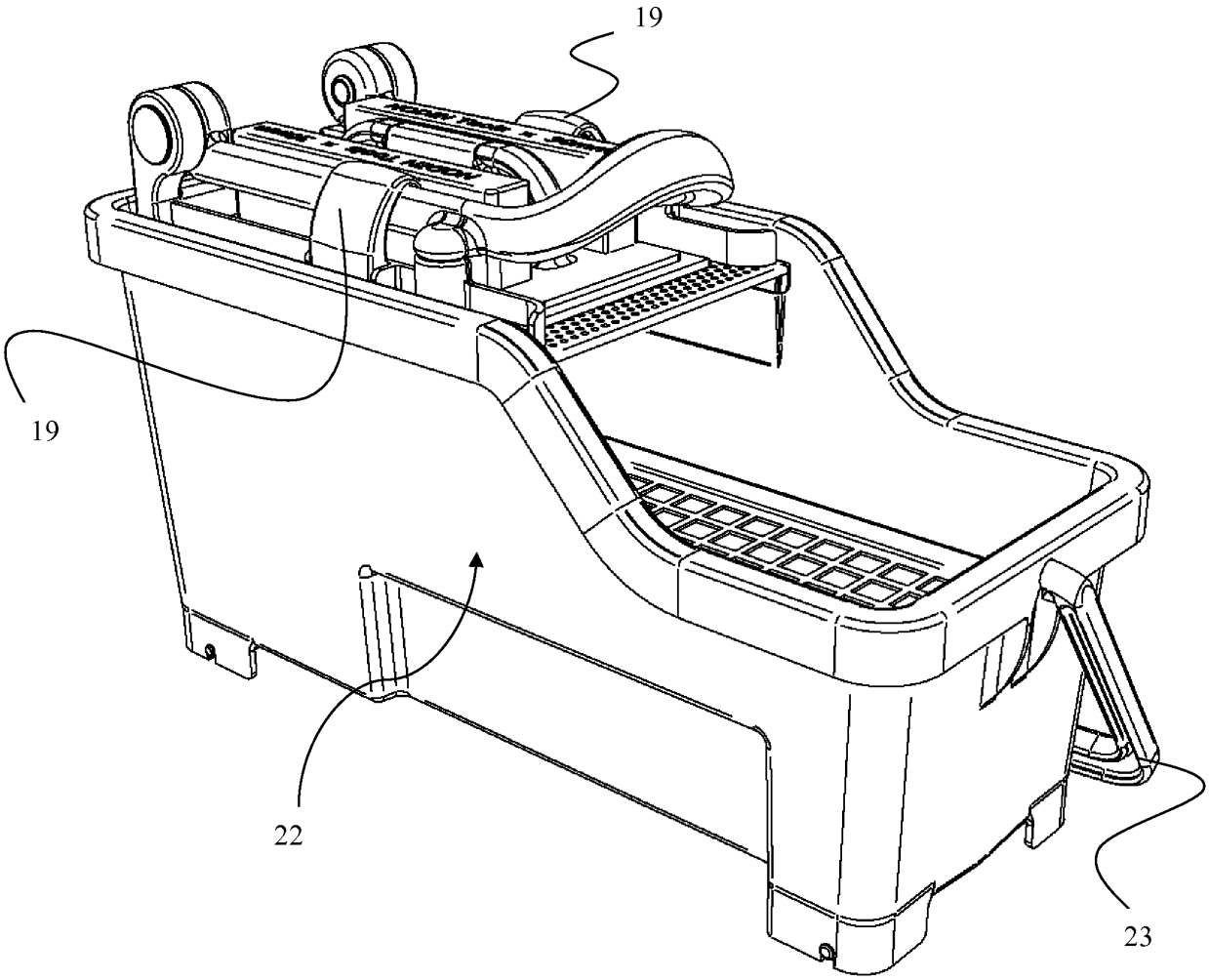


Fig. 8

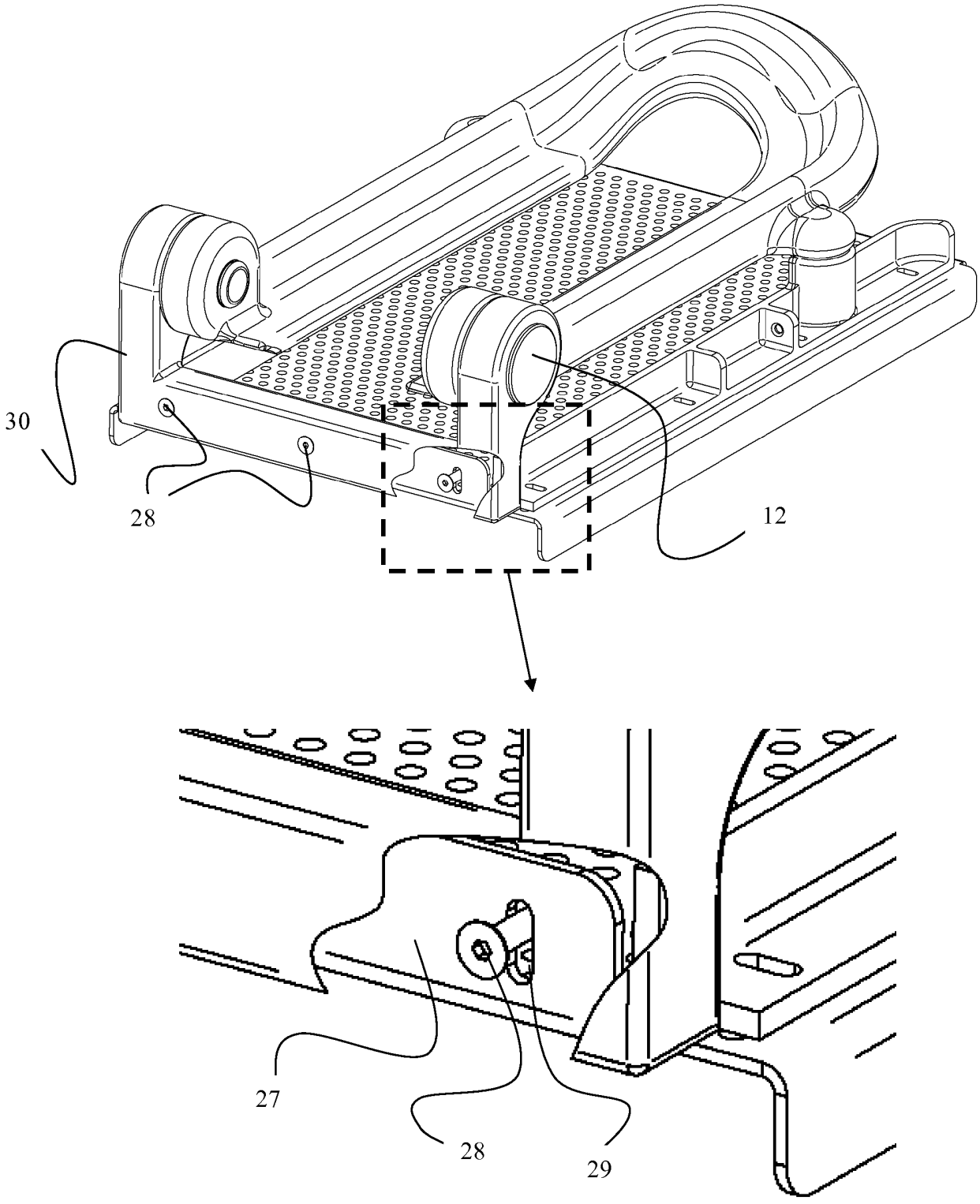


Fig. 9

REFERENCES CITED IN THE DESCRIPTION

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Patent documents cited in the description

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