(19) Europäisches Patentamt
European Patent Office
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(11) EP 2 372 015 A1

(12) EUROPEAN PATENT APPLICATION

(43) Date of publication:
05.10.2011 Bulletin 2011/40

(51) Int Cl.:
D06F 81/12 *(2006.01)*

(21) Application number: **11155143.8**

(22) Date of filing: **21.02.2011**

(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
Designated Extension States:
BA ME

(30) Priority: **24.02.2010 IT BO20100104**

(71) Applicant: **Lopez, Angela Teresa**
44122 Ferrara (IT)

(72) Inventor: **Lopez, Angela Teresa**
44122 Ferrara (IT)

(74) Representative: **Modiano, Micaela Nadia et al**
Modiano & Partners
Via Meravigli, 16
20123 Milano (IT)

(54) Multipurpose ironing tool, particularly for facilitating the ironing of tubular items of clothing

(57) A multipurpose ironing tool comprising a first ironing surface (2) and a second ironing surface (3) which have an elongated shape and have different widths, the surfaces (2, 3) being mutually connected at one end and so as to be substantially mutually opposite and parallel and at such a mutual distance as to allow clothes to be ironed to be inserted between the surfaces (2, 3), one of the surfaces being arrangeable on a supporting surface so as to allow to iron clothes on the other ironing surface.

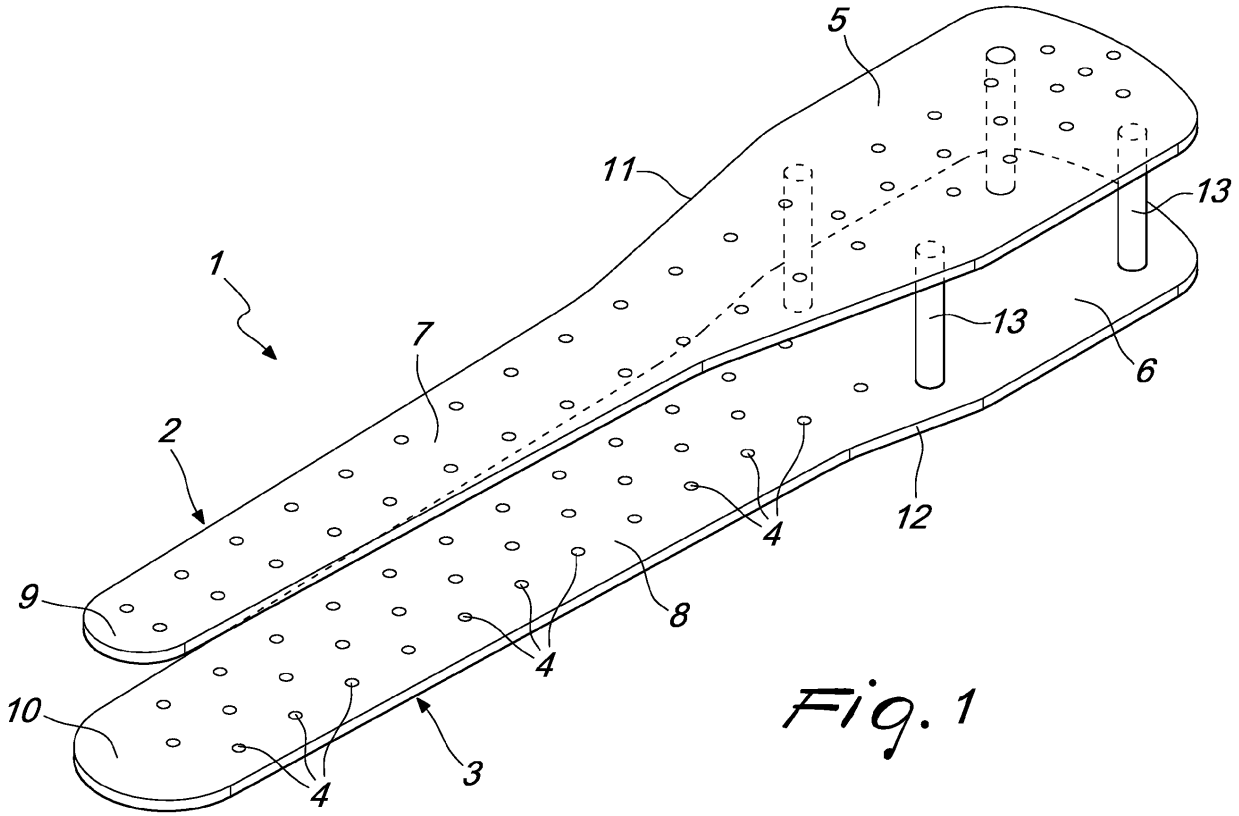

Fig. 1

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Description

[0001] The present invention relates to a multipurpose ironing tool, particularly but not exclusively capable of facilitating the ironing of tubular items of clothing such as trousers, shirt sleeves, et cetera. It should be noted that hereinafter, for the sake of clarity of the description, the expression "multipurpose ironing tool" is understood to reference a tool that has a self-supporting structure or a structure that is adapted to be arranged on a horizontal supporting surface.

[0002] As is known, commonly used ironing boards are provided with an auxiliary accessory, which consists of a detachable tool that is used generally to iron the tubular parts of items of clothing, such as sleeves, pockets and other details that the user would otherwise find difficult to access and awkward for the passage of the iron. These tools, which are also known as arms, are usually U-shaped and are constituted by an upper surface, which is covered by a light padding and is provided with a lower base that is extended below the upper surface and rests on the ironing board, so as to be freely maneuverable by the user to assume the most appropriate orientation and thus facilitate the arrangement of the item of clothing and comfort in ironing and at the same time avoid the formation of unsightly creases of the fabric.

[0003] Known tools, however, have the drawback that they have small dimensions and have shapes that can be used only for the ironing of sleeves, cuffs and collars of shirts, and are instead scarcely suitable for the ironing of other items of clothing, such as for example trousers.

[0004] The aim of the present invention is to propose a multipurpose ironing tool that makes it possible to iron items of clothing of various sizes and in particular even those having a tubular shape, whose ironing would not be possible, or at least would be laborious to provide, by resorting to the auxiliary tools currently in use.

[0005] Within this aim, an object of the present invention is to provide a multipurpose ironing tool conceived to work like an auxiliary tool, in relation to the possibility to be placed temporarily on traditional ironing boards in order to work on tubular items of clothing and then be removed once ironing has ended.

[0006] Another object of the invention is to propose a multipurpose ironing tool that has the prerogatives of a traditional ironing board, comprising an ironing surface that can be extracted from a receptacle of the board in which it is incorporated, so as to provide a unit that has a limited space occupation but has a multipurpose use when needed.

[0007] This aim and these and other objects which will become better apparent hereinafter are achieved by a multipurpose ironing tool, characterized in that it comprises a first ironing surface and a second ironing surface which have an elongated shape and have different widths, said surfaces being mutually connected at one end and so as to be substantially mutually opposite and parallel and at such a mutual distance as to allow clothes to be ironed to be inserted between said surfaces, one of said surfaces being arrangeable on a supporting surface so as to allow to iron clothes on the other ironing surface.

[0008] Further characteristics and advantages of the invention will become better apparent from the following detailed description of some preferred but not exclusive embodiments, illustrated by way of non-limiting example in the accompanying drawings, wherein:

Figure 1 is a perspective view of a multipurpose ironing tool comprising a pair of surfaces of equal length but different width;

Figure 2 is a plan view of the tool of Figure 1, with the surfaces superimposed and split lines of the upper surface;

Figure 3 is a sectional view of the tool, taken along a longitudinal central line III-III of Figure 2 which is perpendicular to the surfaces;

Figure 4 is a profile view of a surface according to a further embodiment;

Figure 5 is a perspective view of an ironing tool according to a further embodiment which comprises two surfaces of different length and width;

Figure 6 is a view of the ironing tool of Figure 5 in inverted position;

Figure 7 is a sectional view of the ironing tool, taken along a central plane which is perpendicular to the surfaces;

Figure 8 is a perspective view of the ironing tool according to a third embodiment, comprising two surfaces of different length and width, one of which is combined with an additional element in order to modify its dimensions;

Figure 9 is a perspective view of the ironing tool of Figure 8;

Figure 10 is a plan view of the ironing tool of Figure 9, with the additional element in exploded view;

Figure 11 is a sectional view, taken along the central line X-X of Figure 10;

Figure 12 is an enlarged-scale sectional view of the region connecting the additional element to a surface as shown in Figure 10;

Figure 13 is a schematic perspective view of a fourth embodiment of the ironing surface;

Figure 14 is a view of the ironing tool of Figure 13 with the surfaces in the active position;

Figures 15 and 16 are schematic sectional views of the ironing tool of Figures 13 and 14 in the closed and active positions.

[0009] With reference to Figures 1 to 4, the reference numeral 1 generally designates a multipurpose ironing tool according to the invention, having a structure that is shaped so as to be rested on a horizontal supporting surface, not shown in the drawings, such as for example a supporting table. The tool 1 is composed of a pair of ironing surfaces 2 and 3 which are mutually parallel and

have the same length.

[0010] The surfaces 2 and 3 can be made of any material, such as for example metal plates, wood panels or composite plastic material, and each surface is conveniently covered with a layer of textile material (not shown in the drawings) which is also known as flannel. In the continuation of the description it is assumed that the surfaces are constituted by aluminum plates that have a plurality of ventilation slots 4 which are distributed uniformly on the entire surface. The slots 4 are designed to allow the passage of steam during the ironing of the items of clothing with a steam iron.

[0011] The surfaces 2 and 3 comprise respective portions 5 and 6 which are substantially rectangular and have substantially mutually identical dimensions, from one side of which respective portions 7 and 8 of equal length protrude so as to be mutually superimposed and end with rounded ends 9 and 10. The portions 7 and 8 have different widths and are connected to the respective portions 5 and 6 by oblique parts 11 and 12. In particular, in the illustrated example, the portion 8 has, along its entire length, a greater width than the portion 7 (see Figure 2).

[0012] The surfaces 2 and 3 are mutually jointly connected by a plurality of spacers, which are constituted by cylindrical posts 13, which are interposed between the portions 5 and 6 and are fixed by means of through screws 14 that pass through the portions 5 and 6 to engage in the opposite ends of the posts.

[0013] The longitudinal edges of the portions 7 and 8 slightly converge toward the respective ends 9 and 10, so that the edges of the portion 8 (the lower one in Figure 1) are parallel and protrude laterally with respect to those of the upper portion 7. The length of the portions 7 and 8 is related conveniently to the length of the items of clothing that are ironed. The tapered shape of the portions 7 and 8 facilitates the arrangement thereon of the items of clothing, in particular of trousers of different sizes. Thus, for example, if the trousers are of a small (tight) size, the wider ironing surface 3 is rested on the supporting table (not shown in the drawings) so that the portion 7 of the narrower surface 2 can assume a position that cantilevers out horizontally from the posts 13 and facilitates its insertion in the leg of the trousers to be ironed. It should be noted that the insertion of the portion 7 in the leg is facilitated not only by the tapering of the portion 7 but also by the rounded guiding shape of the end 9.

[0014] If instead the size of the trousers is larger than the width of the portion 8 of the surface 3, the tool 1 is turned over, so that the narrower surface 2 rests on the supporting table, thus allowing the leg of the trousers to be fitted over and stretched on the wider portion 8 of the surface 3.

[0015] As can be seen, the multipurpose ironing tool of the described example achieves perfectly the intended aim and objects. The size difference of the surfaces allows to use the tool not only to iron long or short trousers but also items of clothing of the most disparate type, such as shirts, skirts and underwear in general. Moreover, the considerable width of the portions 5 and 6 allows to offer greater stability of the tool 1 on the supporting table on which it is placed, so as to facilitate the ironing operations and a convenient and safe resting placement of the iron during the pauses that the user inserts to spread the item of clothing on the upper surface. The particularity of the surfaces allows to accommodate fully the leg of the trousers which, since it can be turned around the respective surface, can be ironed without problems. In particular it is possible to flatten without effort the fabric of the seams, thus solving the problem of ironing the crotch region, which is not possible on normal ironing boards.

[0016] In the practical embodiment of the invention, the materials used, as well as the shapes and dimensions of the tool, may be any according to requirements. Figure 4 is a view of an embodiment that shows, by way of example, a surface constituted by an iron sheet 15, which has a lower thickness than the plate of the example described above and is provided with a perimetric fold at right angles, which forms a rib 16 for stiffening the surface and a transverse stiffening ridge 17. The reduced thickness of the plates or sheets used to manufacture the surfaces makes the placement of the tool on the supporting surface light and therefore more maneuverable.

[0017] The described multipurpose ironing tool is susceptible of numerous modifications and variations, all of which are within the scope of the appended claims. Figures 5 to 7 are views of an embodiment in which the two surfaces that compose the tool have markedly mutually different dimensions and shapes, in order to allow to iron items of clothing having great dimensional or type differences. Figure 7 also shows that identical cylindrical posts 13 are interposed in order to complete the assembly of the two surfaces 2 and 3 (designated by the same reference numerals 2 and 3 of the previously described example).

[0018] Figures 8-12 illustrate an embodiment which uses auxiliary means capable of making the ironing tool 1 adaptable to the characteristics of the items of clothing more than the simple pair of surfaces 2 and 3 allows. This embodiment consists in applying an additional element 19, which is applied to a surface, for example the narrower surface 2, in order to be able to widen or narrow its surface according to requirements. For this purpose, in the longitudinal edges of the portion 7 of the surface 2 there is a slot 18 (see Figure 12), which is open outward and is shaped so as to allow, if needed, mating with the detachable element 19. The element 19 is constituted by a sort of fork whose prongs 20, 21 (see Figures 11 and 12) have the same thickness as the portion 7. The prongs 20, 21 are shaped so as to copy the perimeter of the portion 7, i.e., diverge slightly toward their ends, and have, along their internal edge, a rib 22 (see Figure 12) whose thickness is complementary to the slot 18. The rib 22 has diverging opposite ends, so as to facilitate the insertion, between the prongs 20 and 21, of the end of the portion 7 and, with the insertion of such portion, the

sliding of the rib 22 in the slot 18 up to the abutment of the rounded end of the portion 7 against the complementarily rounded hollow of the fork 19. Advantageously, the prongs 20 and 21 are divaricated so as to be retained elastically, once they have been inserted in the slot 18, against the edges of the portion 7.

[0019] In a further embodiment of the invention, shown in Figures 13-16, the two surfaces 2 and 3 of the tool have a mutual distance that can be adjusted between a position of coplanarity and a position in which the narrower surface 2 can be lifted with respect to the wider surface 3. For this purpose, an elongated opening 23 is provided in the wider surface 3, and arms 24 of an articulated parallelogram system are pivoted inside such opening, such system supporting the narrower surface 2 and being provided with adjustment means in order to lock the latter at the desired height with respect to the surface 3. The opening 23 has a shape that is complementary to the shape of the narrower surface 2, so that the articulation of the arms 24 allows to arrange the surface 2 between a position in which it is recessed in the opening 23 and coplanar to the ironing surface 3, which allows to use fully the surface 3 for normal ironing, and a raised position, in which the ironing surface 2 can perform its auxiliary function of ironing items of clothing such as trousers and the like.

[0020] Conveniently, the articulation system of the ironing surface 2 is arranged at an end of the opening 23, so as to keep free the space below the surface 2 and allow to stretch fully above and below such surface the item of clothing to be ironed. As an alternative to the parallelogram system, provision is made for the use of a vertical lifter, consisting for example of a vertically-acting fluid-operated actuator, for example of the type of a pneumatic spring, having an arrangement in the opening 23 that is equivalent to the arrangement of the arms 24.

[0021] The solution described above has the particularity that it can be rested directly on an ordinary worktable or can be provided with a scissor-like stand 25 which is coupled in a lower region to the surface 3, so that it can be used as a normal ironing board provided with an auxiliary surface, characterized by the possibility of flush retraction.

[0022] The disclosures in Italian Patent Application No. BO2010A000104 from which this application claims priority are incorporated herein by reference.

[0023] Where technical features mentioned in any claim are followed by reference signs, those reference signs have been included for the sole purpose of increasing the intelligibility of the claims and accordingly such reference signs do not have any limiting effect on the interpretation of each element identified by way of example by such reference signs.

Claims

1. A multipurpose ironing tool, **characterized in that** it comprises a first ironing surface (2) and a second ironing surface (3) which have an elongated shape and have different widths, said surfaces (2, 3) being mutually connected at one end and so as to be substantially mutually opposite and parallel and at such a mutual distance as to allow clothes to be ironed to be inserted between said surfaces (2, 3), one of said surfaces being arrangeable on a supporting surface so as to allow to iron clothes on the other ironing surface.

2. The multipurpose ironing tool according to claim 1, **characterized in that** said ironing surfaces (2, 3) have the same length and comprise respective portions (5, 6) which are jointly mated to each other at one end by spacers (13), from which respective portions (7, 8) of equal length extend so as to mutually overlap and end with rounded ends (9, 10) and have a different width along their entire length.

3. The multipurpose ironing tool according to claim 2, **characterized in that** the longitudinal edges of said portions (7, 8) converge toward the respective ends (9, 10), so that the edges of one ironing surface (8) are parallel and protrude laterally with respect to the edges of the other ironing surface (7).

4. The multipurpose ironing tool according to one of claims 2 and 3, **characterized in that** said spacers are constituted by posts (13) which are interposed between said ironing surfaces (2, 3) and are fixed by way of screw means (14).

5. The multipurpose ironing tool according to one of claims 1 to 4, **characterized in that** it comprises a detachable additional element (19), which is applied to the narrower ironing surface (2) in order to be able to widen or narrow its dimensions.

6. The multipurpose ironing tool according to claim 5, **characterized in that** a slot (18) is provided along the longitudinal edges of the portion (7) of the narrower ironing surface (2) and is open outward and shaped so as to allow the mating of a removable element constituted by a sort of fork (19) whose prongs (20, 21) have the same thickness as said portion (7), said prongs (20 21) being shaped so as to copy the perimeter of said portion (7) and having, along their internal edge, a rib (22) whose thickness is complementary to said slot (18) and is adapted to engage by sliding within said slot.

7. The multipurpose ironing tool according to claim 6, **characterized in that** said rib (22) has diverging ends, so as to facilitate insertion between the prongs (20, 21) of the portion (7) and insertion of the latter until abutment occurs against the hollow of said fork (19).

8. The multipurpose ironing tool according to one of claims 6, 7, **characterized in that** the prongs (20, 21) of said fork are divaricated so as to be retained elastically, once they have been inserted in the slot (18), against the edges of the portion (7) of said ironing surface.

9. The multipurpose ironing tool according to one of claims 1 to 4, **characterized in that** in the wider ironing surface (3) there is an elongated opening (23), inside which the arms (24) of an articulated parallelogram system are pivoted, said system supporting the narrower ironing surface (2) and being provided with adjustment means to block the latter at the desired height with respect to the wider ironing surface (3), said opening (23) being shaped complementarily to the narrower ironing surface (2) so as to be able to move between a first position, which is recessed in said opening (23) and is coplanar to said wider ironing surface (3), and a position which is raised with respect to the latter.

10. The multipurpose ironing tool according to one of claims 1 to 4, **characterized in that** in the wider ironing surface (3) there is an elongated opening (23), inside which there is an actuator which acts vertically and supports the narrower ironing surface (2) and is provided with adjustment means to block said ironing surface at the desired height with respect to the wider ironing surface (3), said opening (23) being shaped complementarily to the narrower ironing surface (2), so as to be able to be movable between a position that is recessed in said opening (23) and is coplanar to said wider ironing surface (3) and in a raised position with respect to the latter.

11. The multipurpose ironing tool according to one of the preceding claims, **characterized in that** said ironing surfaces (2, 3) are constituted by an aluminum plate provided with ventilation slots.

12. The multipurpose ironing tool according to one of claims 1 to 10, **characterized in that** said ironing surfaces (2, 3) are constituted by a plate (17) of ferrous metal provided with a perimetric rib (16) which is perpendicular thereto.

13. The multipurpose ironing tool according to one of the preceding claims, **characterized in that** said ironing surfaces (2, 3) are covered with layers of textile material.

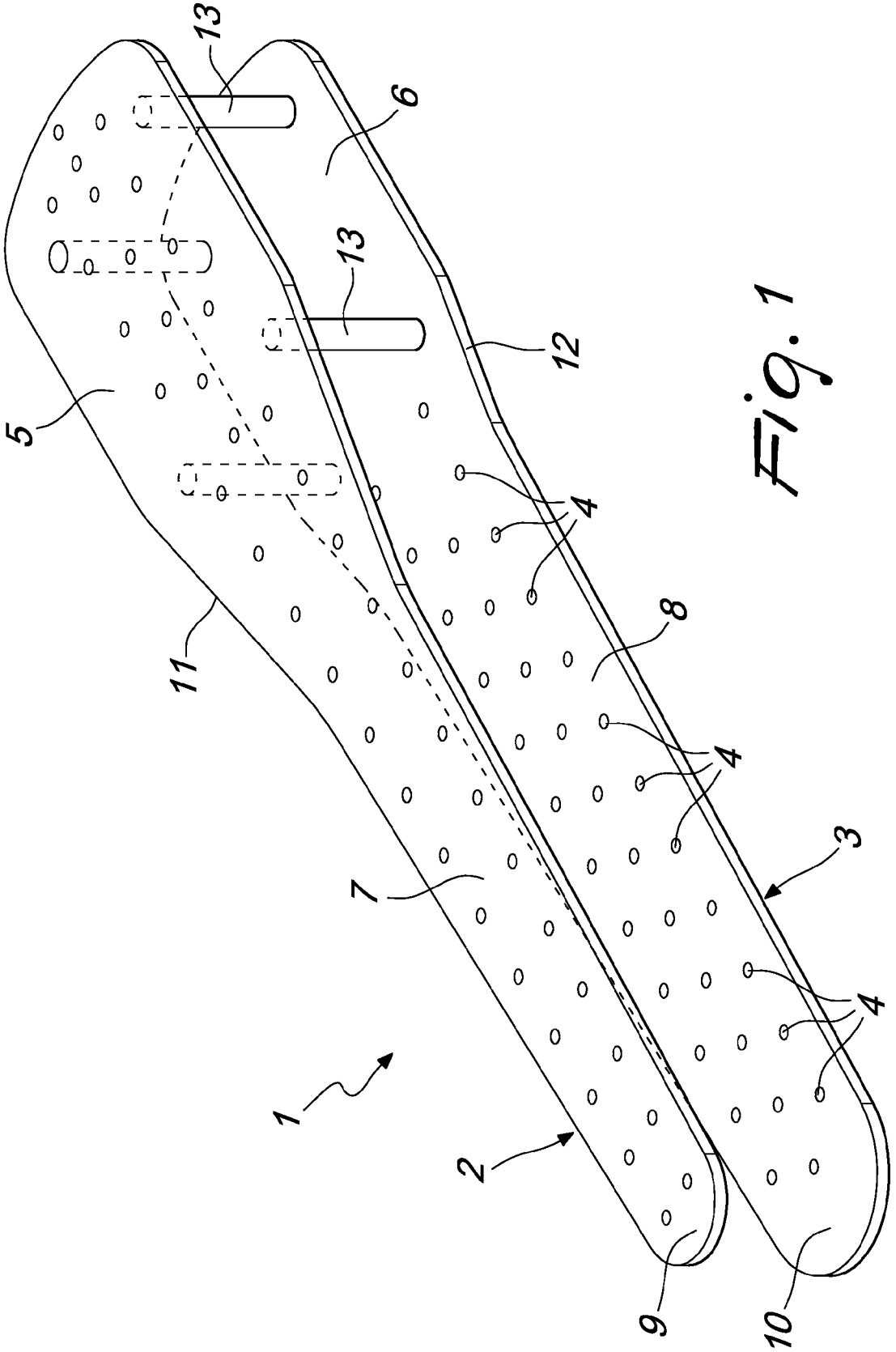

Fig. 1

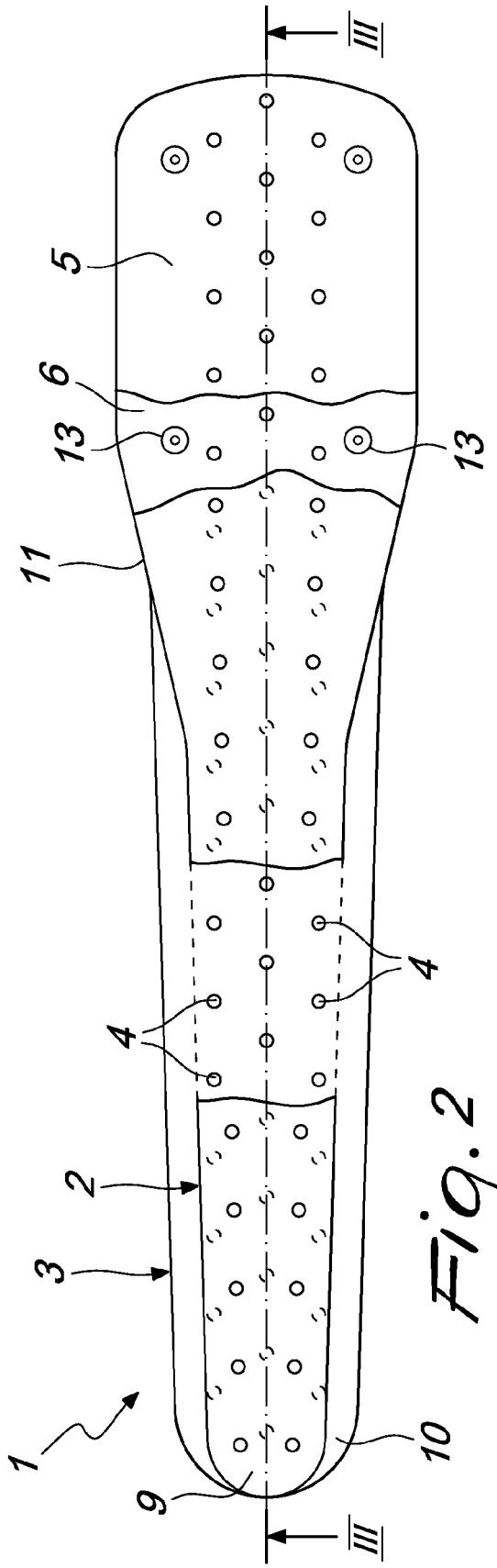

Fig. 2

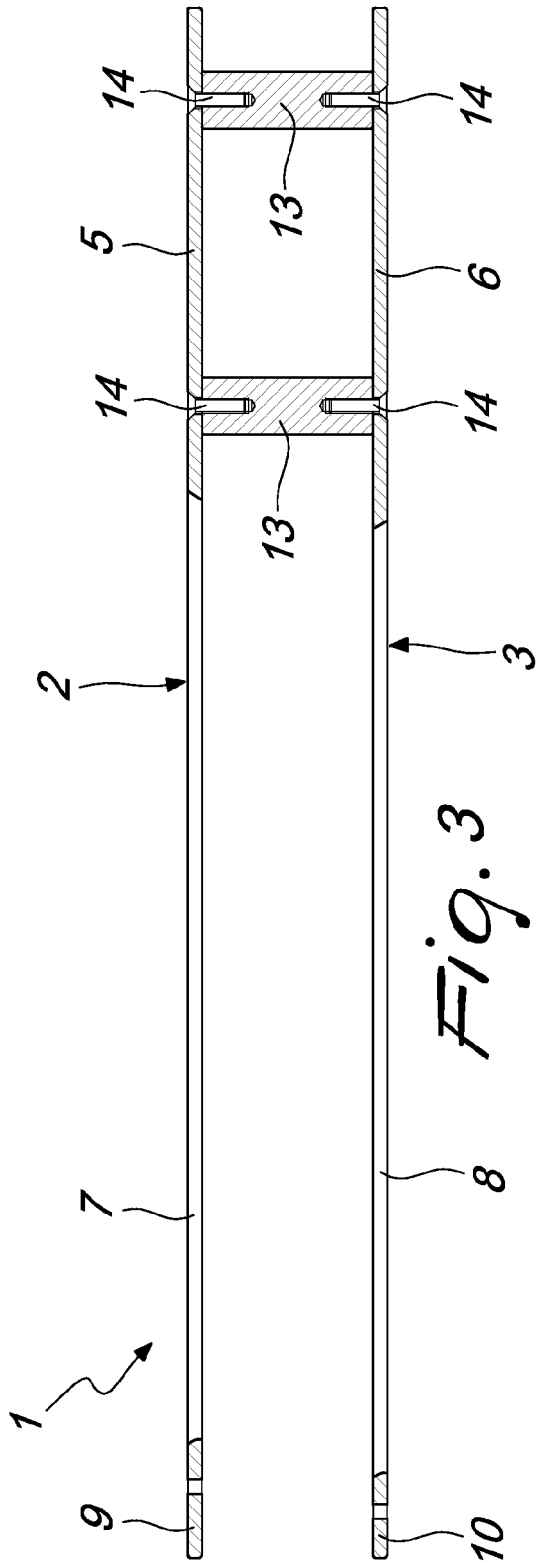

Fig. 3

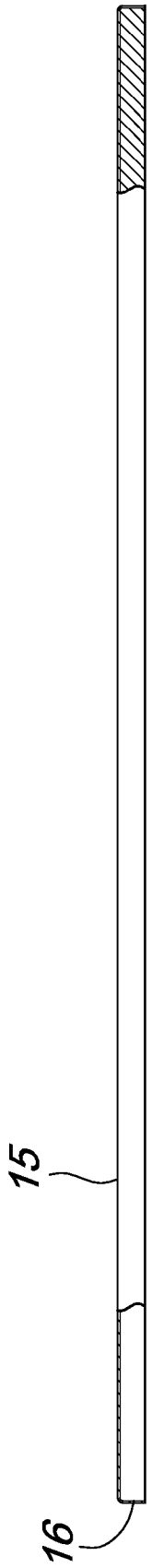

Fig. 4

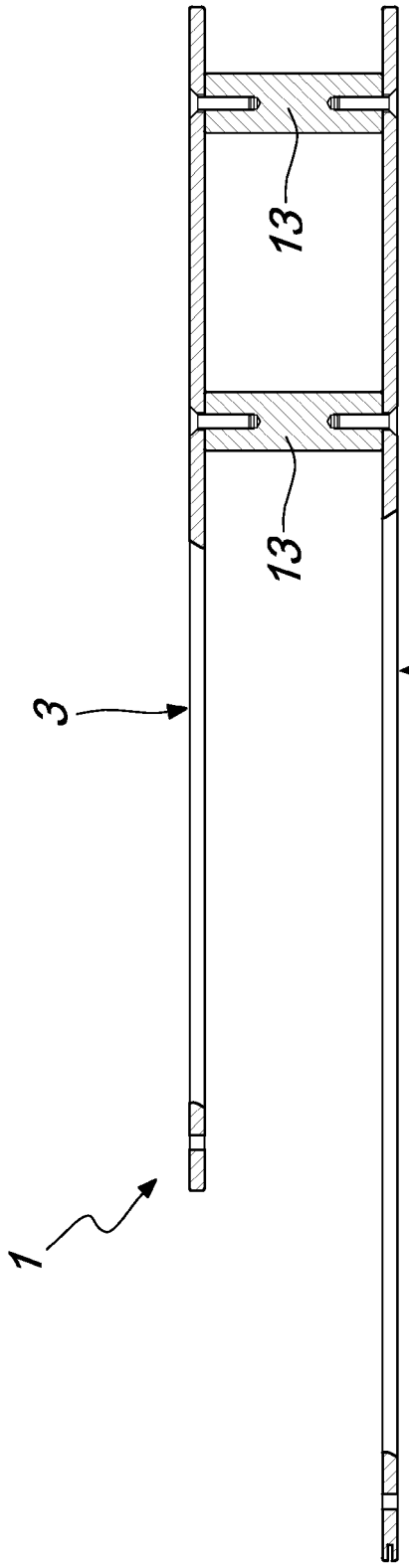

Fig. 7

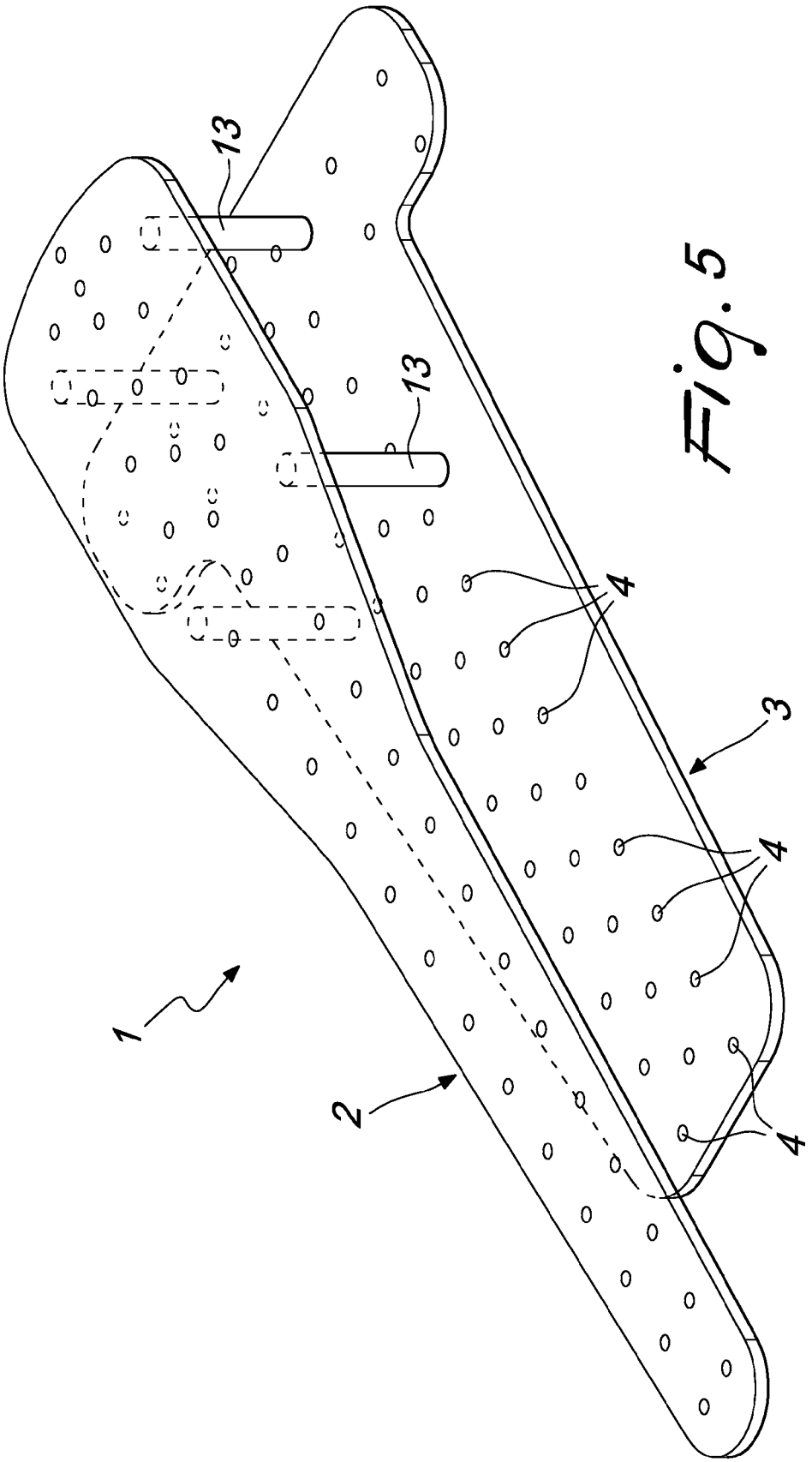

Fig. 5

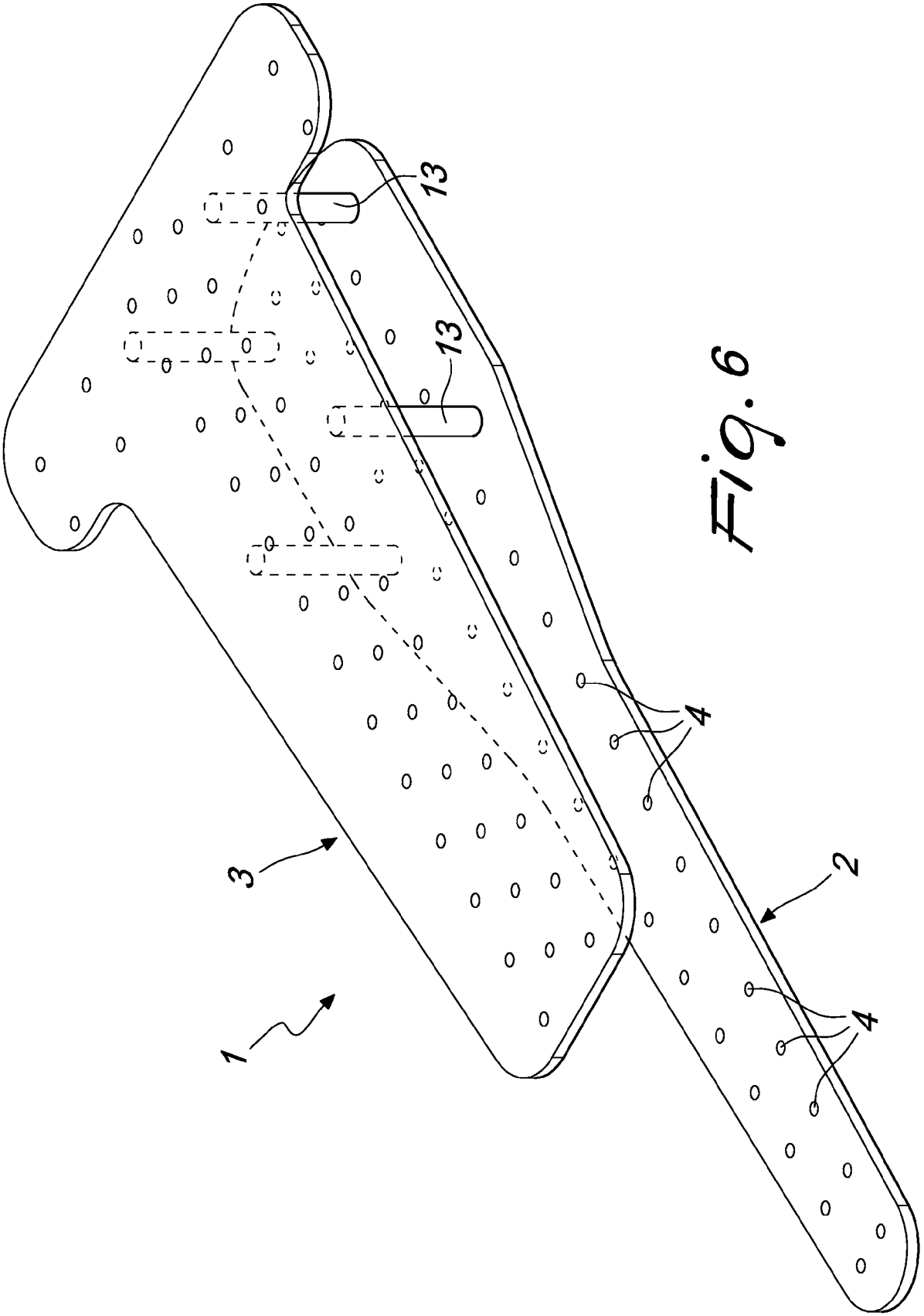

Fig. 6

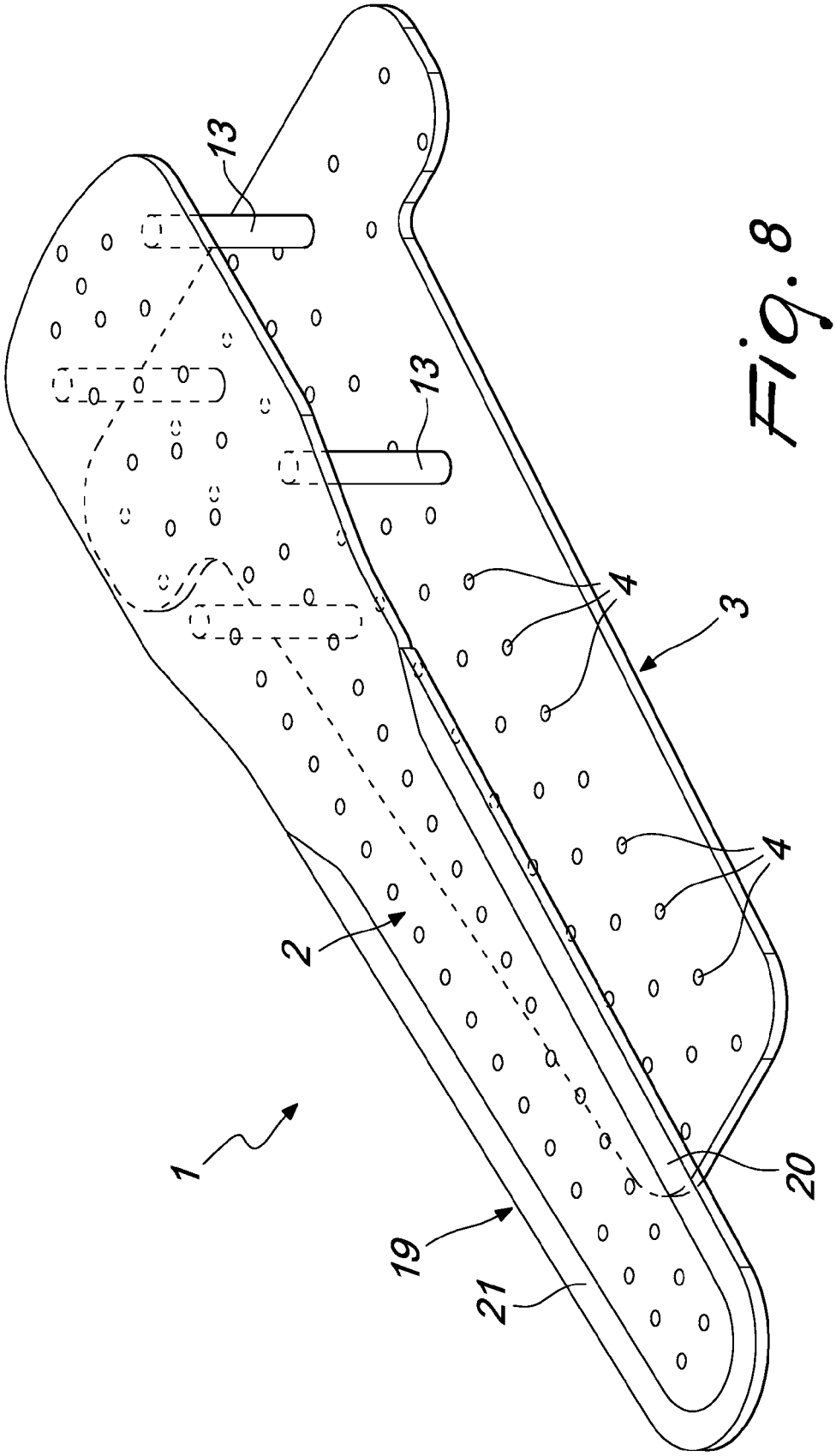

Fig. 8

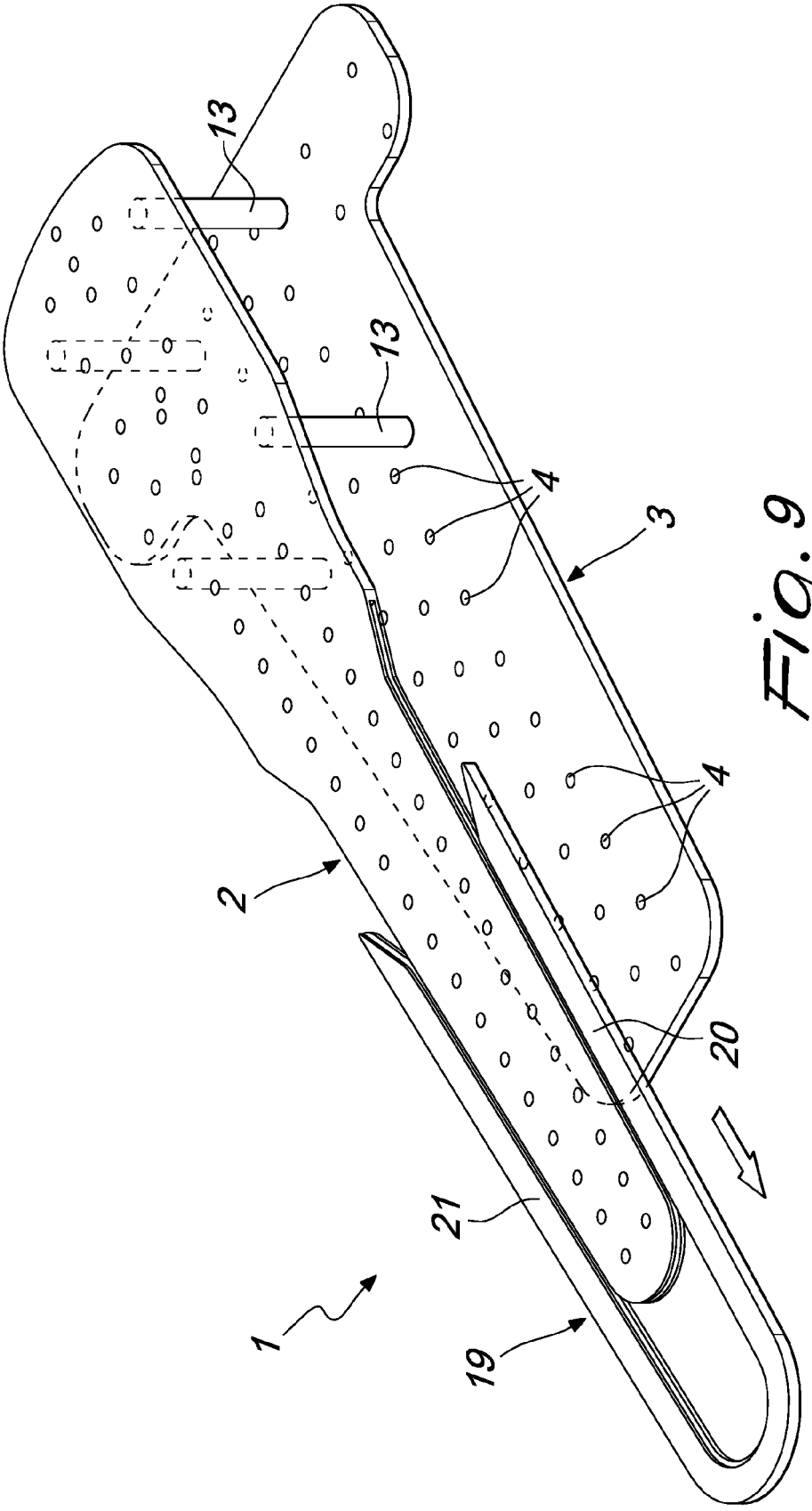

Fig. 9

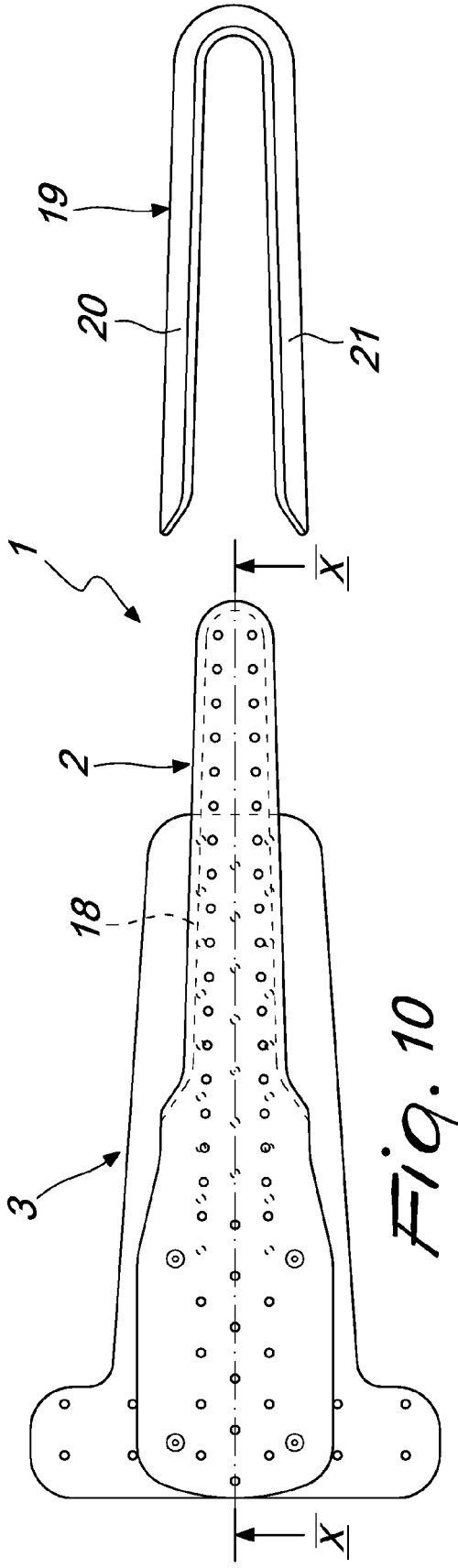

Fig. 10

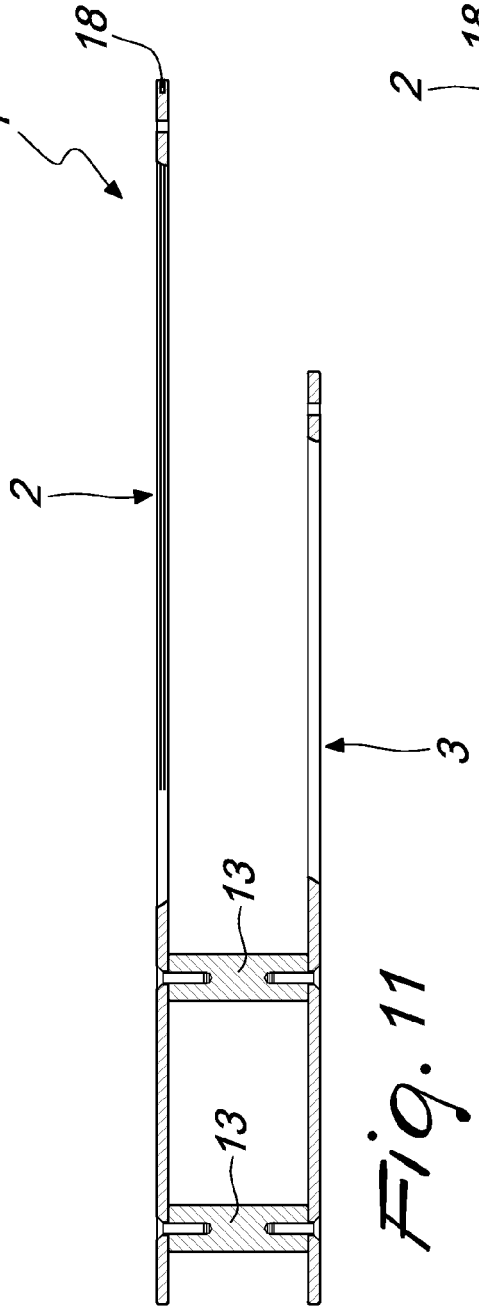

Fig. 11

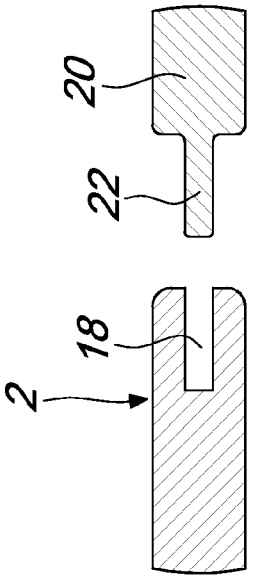

Fig. 12

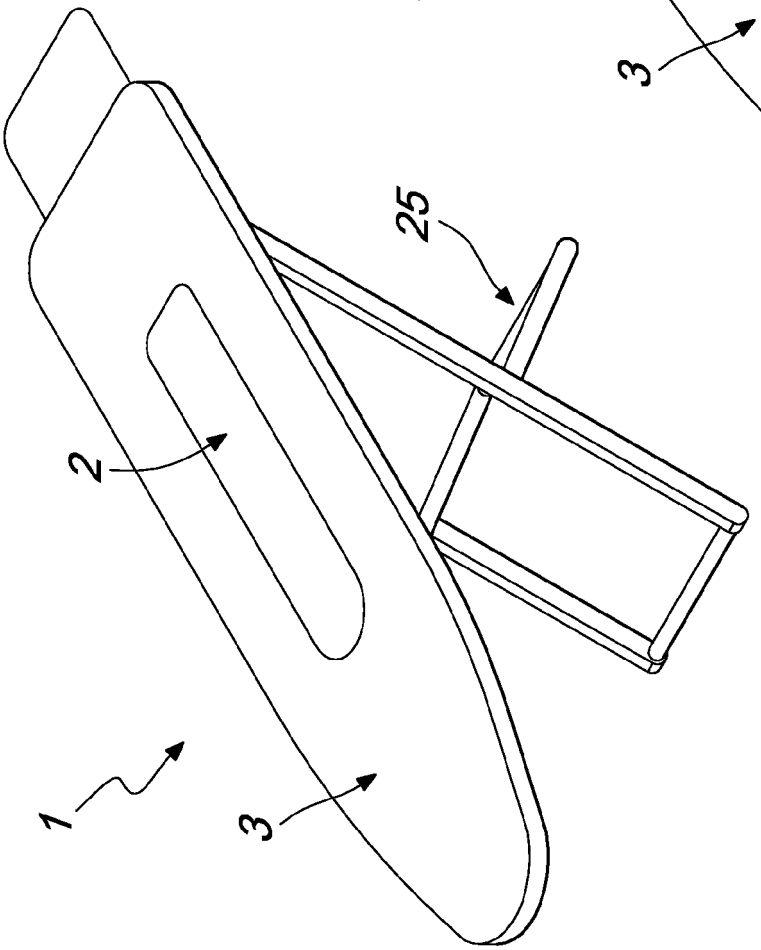

Fig. 13

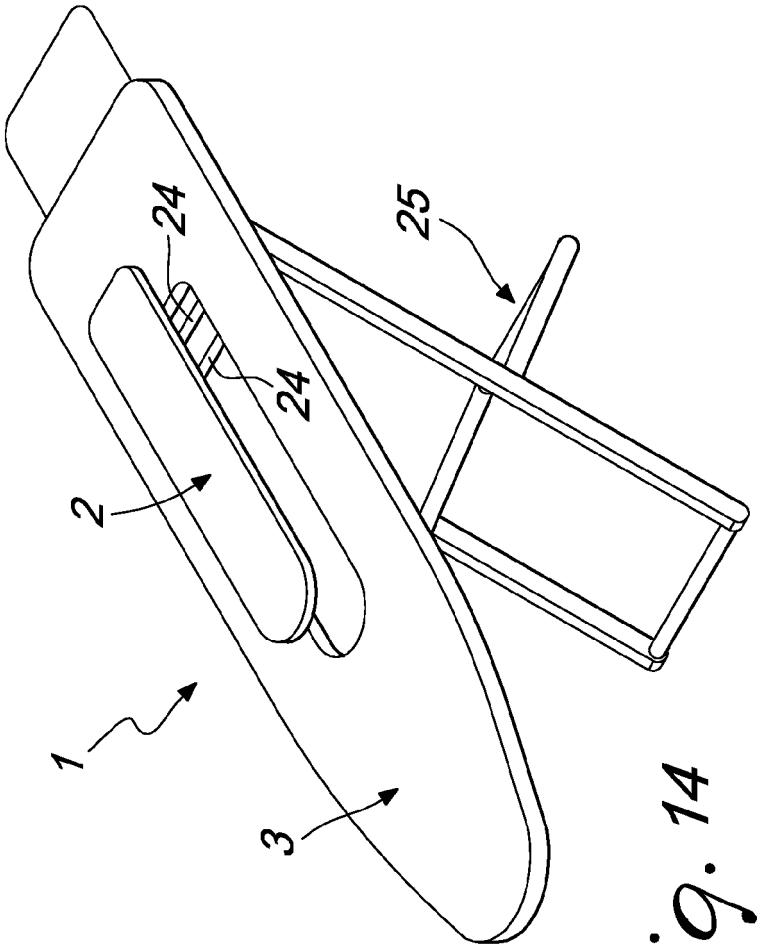

Fig. 14

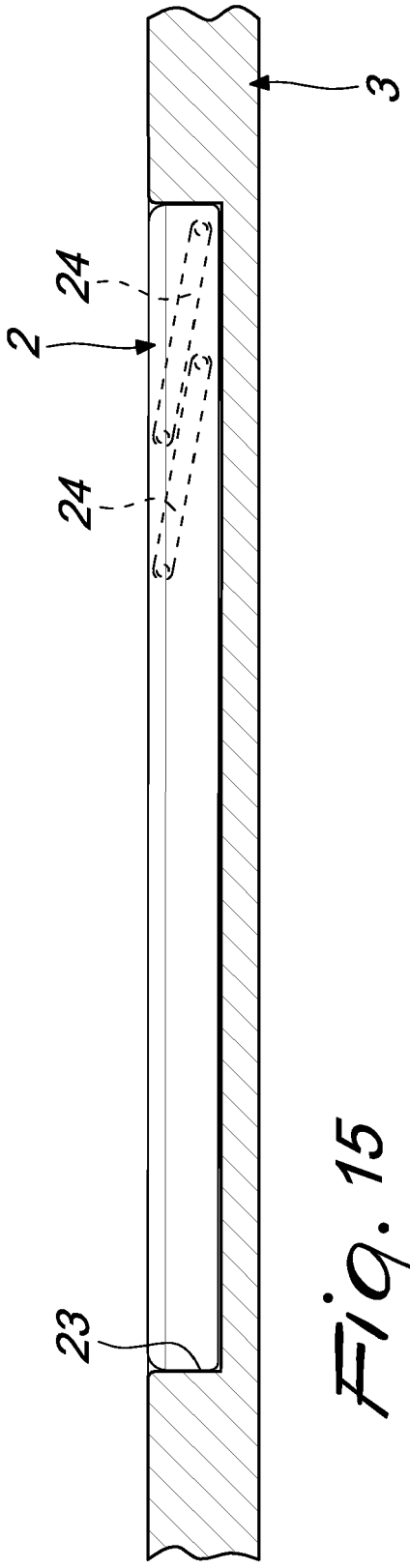

Fig. 15

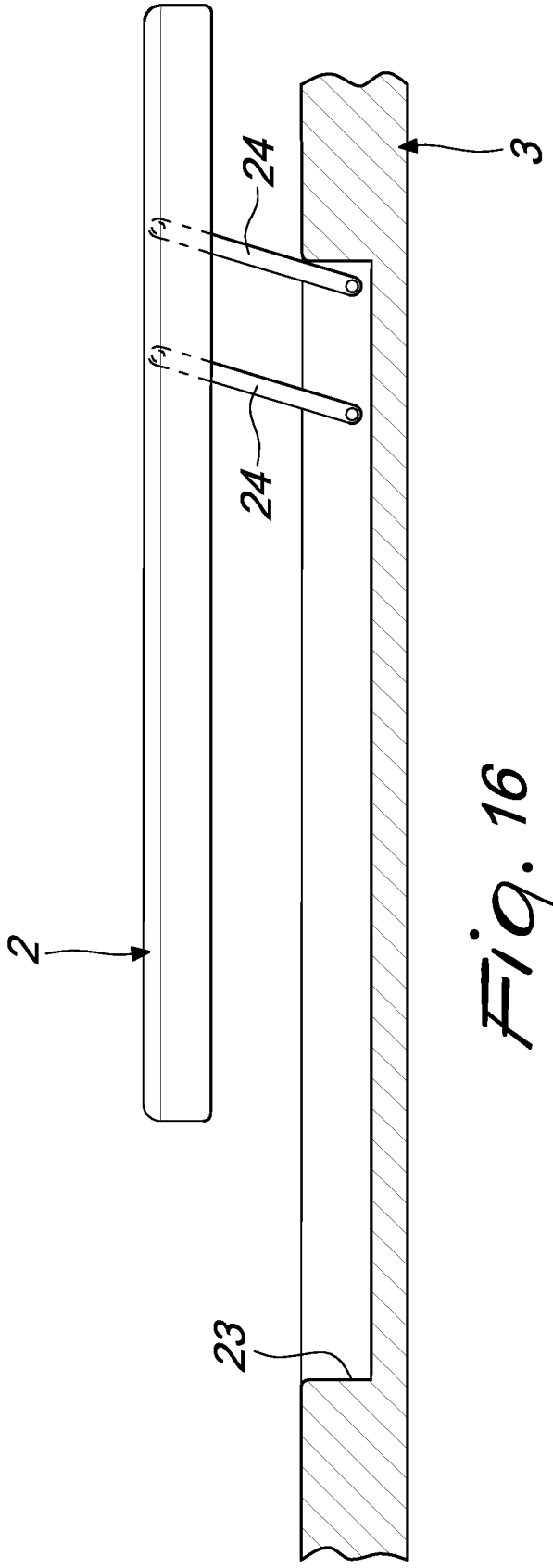

Fig. 16

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EUROPEAN SEARCH REPORT

Application Number
EP 11 15 5143

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	US 2 888 760 A (SHAFFER GRACE L) 2 June 1959 (1959-06-02) * column 1, line 40 - column 2, line 38; figures 1-3 * -----	1,2	INV. D06F81/12
X	CH 309 163 A (ZWYSSIG KLINGLER PETER [CH]) 31 August 1955 (1955-08-31) * page 1, line 32 - page 2, line 17; figure 1 * -----	1	
A	EP 1 724 391 A1 (LEIFHEIT AG [DE]) 22 November 2006 (2006-11-22) * figures * -----	1-13	

TECHNICAL FIELDS SEARCHED (IPC)

D06F

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
Munich	25 August 2011	Stroppa, Giovanni

CATEGORY OF CITED DOCUMENTS

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1

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ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO. EP 11 15 5143

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25-08-2011

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For more details about this annex : see Official Journal of the European Patent Office, No. 12/82

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Patent documents cited in the description

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