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(54) **MATTRESS**

MATRATZE

MATELAS

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Description

[0001] The present invention relates to a mattress system comprising a mattress with an upper face and a lower face, which upper face comprises a cavity, which is enclosed by a side face, placed adjacent the one end of the mattress and shaped to accommodate at least the head of a child.

Background of the invention

[0002] US 5,697,113 discloses a mattress for children comprising a face with a cavity, the size of which corresponds to the head and torso of a child. The mattress further comprises elements for tilting the mattress in an inclined angle, so that the cavity combined with the inclined angle may reduce the risk of SIDS, i.e. Sudden Infant Death Syndrome. The mattress of said patent specification is not suitable for use when the child has passed the critical age as the cavity of the mattress is integrated therein and thus cannot be filled out. Furthermore, the manner in which the mattress is inclined is relatively unstable as a supporting part is indicated where a pawl is extended to raise one side of the bed. This will consequently rest on two aligned points. Furthermore, the mattress as such may also be produced as a wedge-shaped mattress.

[0003] In similarity to the above, US 7,752,691 discloses a mattress where there is a desire to solve the same problems and where a cavity in the mattress is also provided, which cavity is irreversible and is maintained, and where the mattress in itself is wedge-shaped, for which reason it cannot be used as a flat-lying mattress.

[0004] US 3,146,469 discloses a mattress designed for patients who have undergone surgery, with several adjustable cavities in a regular rectangular mattress and underneath it a flat bottom construction spanning under the cavities.

Brief description of the invention

[0005] It is an object of the present invention to provide a mattress system without the disadvantages of the above-mentioned solutions or which at least provides an alternative solution to these.

[0006] This is achieved by a mattress system comprising a mattress with an upper face and a lower face, said upper face comprising a cavity, which is enclosed by a side face, placed adjacent one end of the mattress and shaped to accommodate at least the head of a child, where the mattress system further comprises a first mattress segment, which is arranged so that it can be placed in and fill out the cavity of the mattress, such that the upper face of the mattress appears intact and coherent, and where the mattress system also comprises additional mattress segments, which, with an upper face thereof, are arranged to abut parts of the lower face of the mattress.

[0007] According to the invention, the additional mattress segments comprise at least a first wedge-shaped element, which element comprises an upper face and a lower face as well as a first, a second, a third and a fourth side face connecting the upper and lower faces to each other, which upper face is inclined relatively to the lower face, which first side face is arranged to be placed diametrically opposed to the third side face, and the height of which first side face is larger than the height of which third side face.

[0008] According to the invention, the additional mattress segments comprise at least a second wedge-shaped element and a third wedge-shaped element, each of which has an outer geometry similar to the one of the first element.

[0009] According to the invention, the height of the third side face of the second wedge-shaped element is substantially identical to height of the first side face of the first wedge-shaped element, and the height of the third side face of the third wedge-shaped element is substantially identical to the height of the first side face of the second wedge-shaped element.

[0010] In this manner, a mattress is achieved, which may be used by a child in the critical age of 0-12 months where there is a risk of SIDS. This also reduces the risk of plagiocephaly. By constructing the mattress with such a cavity above which is placed a net, preferably by using a removable cover with an integrated net corresponding to the location of the cavity, the probability that the child keeps laying on its back is increased. Furthermore, any stomach contents are not aspirated by the child as a consequence of the wedge-shaped mattress segments lifting the mattress in the area in which the cavity is located. At the same time, the compliant cavity area, which is, e.g., covered by a net, ensures that the back of the head of the child is not flattened.

[0011] Once the child has reached the age of about one year, the risk of the above-mentioned diseases is essentially eliminated and the mattress may now be used in an ordinary manner as the cavity is filled out with the first segment, which ensures that the upper mattress face now appears as a coherent and ordinary mattress face. The wedge-shaped elements may be removed such that the mattress will lie flat. Optionally, the wedges may be used to a smaller extent as they, as it appears below, advantageously are composed of several segments, such that one segment results in a small lift of the mattress, while more segments result in a more marked lift of the mattress. The upper and lower faces of the mattress are essentially plane. The size of the cavity itself corresponds at least to the circumference of the head of a child, but will typically be so large that part of the torso of the child is also located on the net when this version of

the mattress is used. The upper face of the mattress is preferably face-parallel with the lower face of the mattress.

[0012] Connecting the side faces to the lower face in a right angle all the way around the first wedge-shaped element ensures that the lower face can lie stable on a base. As the upper face is inclined relative to the lower face, the wedge-shaped element thus obtained will lift the mattress at an appropriate angle when it is pushed under the mattress, preferably at an angle of 10-35 degrees, more preferably at an angle of 15-25 degrees, with a stable abutment against the base on which it rests.

[0013] Providing three wedge-shaped elements of similar outer geometry and with heights compatible with each other means that when the three elements are placed edge to edge, i.e. with the first side face of the first element against the third face of the second element, and the first face of the second element against the third face of the third element, a coherent and evenly extending wedge is formed. The first and third side faces are essentially plane and face-parallel with each other, and the second and fourth side faces are essentially plane and face-parallel with each other. Thus, as this wedge is composed of at least three part wedges, large flexibility is obtained as to the extent to which the mattress is lifted, whereby it is possible to adjust the angle of the mattress according to the number of wedges used.

[0014] In an advantageous embodiment, the first mattress segment comprises an upper first face and a lower first face, which faces are interconnected through an enclosing side first face, which side first face is congruent with the side faces of the cavity, and wherein the distance between the upper and lower first faces is identical to the depth of the cavity relatively to the upper face of the mattress.

[0015] This ensures that the mattress segment fills out the cavity of the mattress, such that the upper face of mattress appears coherent and plane. The cavity may extend completely through the mattress such that a plug is actually cut out of the mattress, or the cavity may only extend through part of the mattress. In this case, the dimensions of the first mattress segment correspond to the part which have been removed from the mattress. The lower and upper faces do not have to be face-parallel as the lower face may be inclined relative to the upper face. In this case, the lower face fits a corresponding, inclined face extending at the bottom of the cavity.

[0016] In an advantageous embodiment of the invention, the thickness of the first segment is identical to the thickness of the mattress.

[0017] This is the case when the cavity is provided by cutting/punching a plug out of the mattress.

[0018] In an advantageous embodiment of the invention, the wedge-shaped segments comprise fixing arrangements for attaching the wedge-shaped segments to each other, which fixing arrangements are located on the first sides, on the third sides or on both, whereby a coherent wedge shape may be obtained by attaching the wedge-shaped elements to each other.

[0019] In this manner, the abutting first and third sides are connected without the risk of separation during use.

[0020] In an advantageous embodiment of the invention, the fixing arrangements comprise a Velcro device.

[0021] In this arrangement, the "mother part" of the Velcro is placed on either the first or third side of one of the wedge-shaped elements, while the "father part" of the Velcro is placed on the adjacent face of an adjacent wedge-shaped element.

[0022] In an advantageous embodiment of the invention, the fixing means comprise a zip, push buttons, a cord, elastic or buttons.

[0023] In an advantageous embodiment of the invention, the mattress system is made from a polyurethane material.

[0024] Thereby, a soft and comfortable mattress is obtained for the child.

[0025] In an advantageous embodiment of the invention, the cavity has an oval shape and the first segment also has an oval shape and is formed to be congruent with the cavity.

[0026] In an advantageous embodiment of the invention, the mattress system comprises a removable cover, which cover comprises a net part corresponding to the area in which the cavity is located.

Figures

[0027] The invention will now be explained in more detail with reference to the figures, of which:

fig. 1A shows a mattress system according to the invention, in which a net is attached above the cavity,

fig. 1B shows a mattress segment for the mattress system shown in fig. 1A,

fig. 2 shows the mattress from fig. 1A without the mattress cover and the net and with the cavity open,

fig. 3 shows the mattress from fig. 2 with the first mattress segment placed in the cavity, which is thus closed,

fig. 4 shows an additional wedge-shaped mattress segment according to the invention,

fig. 5 shows additional wedge-shaped mattress elements attached to each other to provide a coherent wedge-

shaped base for the mattress, and

fig. 6 shows a longitudinal cross-section of the mattress system shown in fig. 1A.

Detailed description

[0028] Fig. 1A shows a mattress system 1 according to the invention and its relation to a child 35 and the location of the head 7 of the child 35 relative to a cavity 5 provided in the upper face 3 of the mattress. The cavity 5 is provided adjacent the one end 6A of the mattress 2. When the mattress 2 is used for the child 35 during its first year of living, the cavity 5 is covered with a net part 33, which is advantageously formed as an integrated part of a removable cover 32. The mattress 2 is made from a suitable material such as polyurethane, which is soft and comfortable to lie on. Opposite to the upper face 3 of the mattress 2 is its lower face 4, which abuts a base 26. In the one end 6A corresponding to the location of the cavity 5, the mattress system 1 also comprises additional mattress segments 10 against which the lower face 3 rests. In the illustrated case, three wedge-shaped mattress elements 20, 27, 28 are placed, which mattress elements 20, 27, 28 are interconnected to provide a coherent wedge-shaped and removable foam part, which raises the one end 6A of the mattress 2 relatively to the base 26 and relatively to the other end 6B of the mattress 2. The thickness 19 of the mattress 2 is essentially the same throughout the length of the mattress 2, such that the upper face 3 of the mattress 2 is face-parallel with the lower face 4 of the mattress 2 when the mattress 2 is not subjected to external forces. The cavity 5 with the overlying net part 33 has an oval shape and is sized such that at least the head 7 of the child 35 can rest on the net part 33. Advantageously, it is sized so that also the upper part of the torso 8 of the child 7 can rest on the net part 33 covering the cavity 5.

[0029] Fig. 1B shows a first mattress segment 9, which can be placed in the mattress cavity 5 shown in fig. 1A, such that the mattress 2 appears with a plane and coherent upper face 3. Thus, the first mattress segment 9 is made from the same material as the mattress 2 and it is typically provided in the form of a suitable cut-out - a plug - corresponding to the first mattress segment 9 from a mattress 2, which is preferably rectangular in shape. The plug/first mattress segment 9 is typically cut out from the mattress for which the plug/first mattress segment 9 is to be used for closing the cavity 5 and, thus, it is complementary to the cavity 5. Thus, when the first mattress segment 9 is placed in the cavity 5, the upper face 12 of the first mattress segment 9 will be aligned with the upper face 3 of the mattress 2. The lower first face 13 of the first mattress segment 9, which is positioned diametrically opposite to the upper first face 12, abuts the bottom of the cavity 5 or, in cases where the first mattress segment 9 extends throughout the mattress 2, the base 26 below the mattress 2. The thickness 16 of the first mattress segment 9, which is the distance between the upper first face 12 and the lower first face 13, corresponds to the depth of the cavity 5. The first mattress segment 9 is shaped such that it fills out the cavity 5 completely and such that the mattress 2 appears with a plane, intact upper face 3 and a plane, intact lower face 4.

[0030] Fig. 2 shows the mattress 2 from fig. 1A with the cover 42 removed, such that the cavity 5 is visible. In this case, the cavity 5 extends through the mattress 2 from the upper face 3 of the mattress 2 to the opposing lower face 4 of the mattress 2, whereby the depth 17 of the cavity 5 is identical to the thickness 19 of the mattress 2. The cavity 5 is oval in shape when it is seen from above and it is delimited by a circumferential coherent side face 15.

[0031] Fig. 3 shows the mattress from fig. 2 where the first mattress segment 9 is located in the cavity 5 and where the side faces of the first mattress segment 9 are congruent with the delimiting side face 15 of the cavity 5. Thus, the first mattress segment 9 fits completely into the cavity 5 whereby the mattress 2 appears coherent.

[0032] Fig. 4 shows an additional mattress segment 10, which has a wedge-shaped outer geometry and a width corresponding to the width of the mattress 2. The illustrated additional mattress segment 10 is a first wedge-shaped element 20, which comprises an upper face 21 and an opposing lower face 22 as well as a first side face 23A, a third side face 23C opposite to the first side face 23A and face-parallel with this, a second side face 23B and a fourth side face 23D opposite to the second side face 23B and face-parallel with this. The side faces 23A-D are interconnected at an angle of preferably 90 degrees. The lower face 22 of the first wedge-shaped element 20 is connected to these side faces 23A-D at an angle of 90 degrees, while the upper face 21 is inclined relative to the lower face 22 at an angle of 10-35 degrees, preferably 15-25 degrees. This is provided by the height 24 of the first side face 23A exceeding the height 25 of the third side face 23C. For the first wedge-shaped element 20, the height 24 of the first side face 23A is typically 4-5 cm, while the height 25 of the third side face 23C is typically 1-2 cm.

[0033] On the first side face 23A, a fastening element 30 is mounted to attach the first wedge-shaped element 20 to another wedge-shaped element 27 placed against it. This is illustrated in fig. 5, where the additional mattress segments 10 comprise a total of three wedge-shaped elements, namely a first wedge-shaped element 20, a second wedge-shaped element 27 and a third wedge-shaped element 28. It is characteristic of these wedge-shaped elements 20, 27, 28 that, when they are placed with the first side face 23A of the first wedge-shaped element 20 against the third side face 23C of the second wedge-shaped element 27 and with the first side face 23A of the second wedge-shaped element 27 plan-parallel against the third side face 23C of the third wedge-shaped element 28, a coherent foam wedge 20, 27, 28 is

provided. This wedge 20, 27, 28 appears with an upper plane and inclining face, while the lower face of this coherent foam wedge 20, 27, 28 abuts and is in complete face-parallel contact with a base 26. With this arrangement, it is possible to use the foam wedge 20, 27, 28 to adjust the extent to which the mattress 2 should be raised, as the upper face 21 of the wedge 20, 27, 28 abuts the lower face 4 of the mattress 2 at the one end 6A thereof, corresponding to the location of the cavity 5.

[0034] Typical heights of the first and third side faces of the individual wedge-shaped elements are:

First wedge-shaped element 20:	4-5 cm and 1-2 cm, respectively
Second wedge-shaped element 27:	6-7 cm and 4-5 cm, respectively
Third wedge-shaped element 28:	8-9 cm and 6-7 cm, respectively

[0035] In this case, "wedge-shaped element" should be interpreted as an element having an upper face 21 inclining relative to the opposite face 22. It is, however, noted that no acute angle is provided at the position where the two faces 21, 22 meet as they are connected by a third side face 23C with a length as specified in order to provide a face for attaching a possible adjoining wedge-shaped element 20, 27.

[0036] In cases where only the first wedge-shaped element 20 is used, the head end 6A of the mattress 2 is, all other things being equal, raised less than compared to the situation shown in fig. 5. Thus, with this arrangement, three different height adjustments of the mattress 2 is possible. The additional mattress segments 10 can, of course, comprise more than three wedge-shaped elements 20, 27, 28, and the wedge-shaped elements 20, 27, 28 can be constructed such that they are much shorter in the longitudinal direction of the mattress 2, resulting in even more adjustment options. The wedge-shaped elements 20, 27, 28 are placed such that the longitudinal axis of the individual wedge-shaped elements 20, 27, 28, which extend from the second side face 23B to the fourth side face 23D, is perpendicular to the longitudinal axis of the mattress 2. Between the side faces 23A, 23C abutting each other between the individual wedge-shaped elements 20, 27, 28, the fixing means 30 are provided, preferably in the form of Velcro devices, but attachments such as zips, cords, push buttons and buttons can also be used.

[0037] Fig. 6 shows a longitudinal sectional view of the mattress system 1 according to the invention, where the relation between the additional mattress segments 10 and the cavity 5 is seen, as the cavity 5 extends across the longitudinal extent of the coherent wedge-shaped elements 20, 27, 28. As can be seen, the wedge-shaped elements 20, 27, 28 abut a base 26 and lie stable against this, while the upper face 21 of the wedge-shaped elements 20, 27, 28 raise the mattress 2 in an appropriate angle.

[0038] The mattress 2 can be made from many different materials, for example polyurethane, but an ordinary spring mattress can also be used. In this case, the cut out first mattress segment 9 must be constructed in connection with the actual production of the mattress system 1. It is also possible to vary the materials such that the mattress 2 itself and the first mattress segment 9 are made from one type of material, while the additional mattress segments 10 are from another and possibly less compliant material in order to obtain the wedge-shaped effect.

[0039] The cavity 5 can be shaped as a hollow space in the mattress 2 and is then delimited at the bottom and side by the mattress 2, in which it is located. The cavity 5 can also be shaped as a through-hole in the actual mattress 2 such that there is an opening both from the lower face 4 and from the upper face 3 of the mattress 2. The two openings will typically be equal in size. The cavity 5 can also be shaped such that the delimiting side faces 15 are conical instead of parallel.

[0040] The number of wedge-shaped foam elements 20, 27, 28 may be higher than what is shown here. In the case of, for instance, 10 wedge-shaped elements 20, 27, 28, the extent of each wedge-shaped element 20, 27, 28 in the longitudinal direction of the mattress 2 will typically be small, and due to the high number of wedge-shaped elements 20, 27, 28, it will be possible to fine-tune the extent to which the mattress is lifted at its one end 6A.

List of reference numbers

[0041]

1. Mattress system
2. Mattress
3. Upper face of mattress
4. Lower face of mattress
5. Cavity
- 6a. One end of the mattress
- 6b. Other end of the mattress
7. Head of a child

- 8. Part of the torso of a child
- 9. First mattress segment
- 10. Additional mattress segments
- 11. Upper face of additional mattress element
- 5 12. Upper face of first mattress segment
- 13. Lower first of first mattress segment
- 14. Enclosing side first face of first mattress segment
- 15. Delimiting side face of the cavity
- 16. Thickness of the first mattress segment
- 10 17. Depth of the cavity
- 18. Distance between the upper and lower faces of the first mattress segment
- 19. Thickness of the mattress
- 20. First wedge-shaped element
- 21. Upper face of the first wedge-shaped element
- 15 22. Lower face of the first wedge-shaped element
- 23a. First side face of the first wedge-shaped element
- 23b. Second side face of the first wedge-shaped element
- 23c. Third side face of the first wedge-shaped element
- 23d. Fourth side faces of the first wedge-shaped element
- 20 24. Height of first side face of the first wedge-shaped element
- 25. Height of third side face of the first wedge-shaped element
- 26. Base
- 27. Second wedge-shaped element
- 28. Third wedge-shaped element
- 25 29. Outer geometry
- 30. Fixing arrangements for attaching wedge-shaped segments to each other
- 31. Velcro device
- 32. Removable cover
- 33. Net part
- 30 34. Bottom of cavity

Claims

- 35 1. A mattress system (1) comprising a mattress (2) with an upper face (3) and a lower face (4), said upper face (3) comprising a cavity (5), which is enclosed by a side face (15), placed adjacent one end (6A) of the mattress and shaped to accommodate at least the head (7) of a child (35), where the mattress system (1) further comprises a first mattress segment (9), which is arranged so that it can be placed in and fill out the cavity (5) of the mattress (2), such that the upper face (3) of the mattress (2) appears intact and coherent, and where the mattress system (1) also comprises additional mattress segments (10; 20, 27, 28), which, with an upper face thereof (21), are arranged to abut parts of the lower face (4) of the mattress (2), **characterised in, that** the additional mattress segments (10; 40 20, 27, 28) comprise at least a first wedge-shaped element (20), which element comprises an upper face (21) and a lower face (22) as well as a first (23A), a second (23B), a third (23C) and a fourth side face (23D) connecting the upper (21) and lower faces (22) to each other, which upper face (21) is inclined relatively to the lower face (22), which first side face (23A) is arranged to be placed diametrically opposed to the third side face (23C), and the height (24) of which first side face (23A) is larger than the height (25) of which third side face (23C), wherein the additional 45 mattress segments (10; 20, 27, 28) comprise at least a second wedge-shaped element (27) and a third wedge-shaped element (28), each of which has an outer geometry similar to the one of the first wedge-shaped element (20) and wherein the height of the third side face of the second wedge-shaped element (27) is substantially identical to height (24) of the first side face (23A) of the first wedge-shaped element (20), and the height of the third side face of the third wedge-shaped element (28) is substantially identical to the height of the first side face of the second 50 wedge-shaped element (27).
- 55 2. A mattress system (1) according to claim 1, wherein the first mattress segment (9) comprises an upper first face (12) and a lower first face (13), which faces are interconnected through an enclosing side first face (14), which side first face (14) is congruent with the side faces (15) of the cavity (5), and wherein the distance (16) between the upper (12) and lower first faces (13) is identical to the depth of the cavity (17) relatively to the upper face (3) of the mattress (2).

3. A mattress system (1) according to any of the preceding claims, wherein the thickness (16) of the first segment (9) is identical to the thickness (19) of the mattress (2).
- 5 4. A mattress system (1) according to any of the preceding claims, wherein the wedge-shaped segments (10; 20, 27, 28) comprise fixing arrangements (30) for attaching the wedge-shaped segments (10; 20, 27, 28) to each other, which fixing arrangements (30) are located on the first sides (23A), on the third sides (23C) or on both, whereby a coherent wedge shape may be obtained by attaching the wedge-shaped elements (10; 20, 27, 28) to each other.
- 10 5. A mattress system (1) according to claim 4, wherein the fixing arrangements (30) comprise a Velcro device.
6. A mattress system (1) according to claim 4, wherein the fixing arrangements (30) comprise a zip, push buttons, elastic or buttons.
- 15 7. A mattress system (1) according to any of the preceding claims, wherein the mattress system (1) is made from a polyurethane material.
8. A mattress system (1) according to any of the preceding claims, wherein the cavity (5) has an oval shape and the first segment (9) also has an oval shape and is formed to be congruent with the cavity (5).
- 20 9. A mattress system (1) according to any of the preceding claims, wherein the mattress system (1) comprises a removable cover (32), which cover comprises a net part (33) corresponding to the area in which the cavity is located.

Patentansprüche

- 25 1. Matratzensystem (1), das eine Matratze (2) mit einer oberen Fläche (3) und einer unteren Fläche (4) umfasst, wobei die obere Fläche (3) eine Aussparung (5) umfasst, die von einer seitlichen Fläche (15) umrandet wird und die nahe an einem Ende (6A) der Matratze platziert ist und dafür geformt ist, wenigstens den Kopf (7) eines Kindes (35) aufzunehmen, wobei das Matratzensystem (1) außerdem ein erstes Matratzenssegment (9) umfasst, das derart eingerichtet ist, dass es in der Aussparung (5) der Matratze (2) platziert werden und diese ausfüllen kann, derart, dass die obere Fläche (3) der Matratze (2) intakt und durchgehend erscheint, und wobei das Matratzensystem (1) ebenfalls zusätzliche Matratzenssegmente (10; 20, 27, 28) umfasst, die, mit einer zu ihnen gehörenden oberen Fläche (21), dafür eingerichtet sind, an Teilen der unteren Fläche (4) der Matratze (2) anzuliegen, **dadurch gekennzeichnet, dass** die zusätzlichen Matratzenssegmente (10; 20, 27, 28) wenigstens ein erstes keilförmiges Element (20) umfassen, wobei dieses Element eine obere Fläche (21) und eine untere Fläche (22) sowie eine erste (23A), eine zweite (23B), eine dritte (23C) und eine vierte seitliche Fläche (23D), die die obere (21) und untere Fläche (22) miteinander verbinden, umfasst, wobei die obere Fläche (21) relativ zur unteren Fläche (22) geneigt ist und wobei die erste seitliche Fläche (23A) derart angeordnet ist, dass sie diametral entgegengesetzt zur dritten seitlichen Fläche (23C) platziert ist, und die Höhe (24) der ersten seitlichen Fläche (23A) größer ist als die Höhe (25) der dritten seitlichen Fläche (23C), wobei die zusätzlichen Matratzenssegmente (10; 20, 27, 28) wenigstens ein zweites keilförmiges Element (27) und ein drittes keilförmiges Element (28) umfassen, von denen jedes eine äußere geometrische Form ähnlich derjenigen des ersten keilförmigen Elements (20) hat, und wobei die Höhe der dritten seitlichen Fläche des zweiten keilförmigen Elements (27) im Wesentlichen gleich der Höhe (24) der ersten seitlichen Fläche (23A) des ersten keilförmigen Elements (20) ist und die Höhe der dritten seitlichen Fläche des dritten keilförmigen Elements (28) im Wesentlichen gleich der Höhe der ersten seitlichen Fläche des zweiten keilförmigen Elements (27) ist.
- 30 2. Matratzensystem (1) nach Anspruch 1, wobei das erste Matratzenssegment (9) eine obere erste Fläche (12) und eine untere erste Fläche (13) umfasst und wobei diese Flächen durch eine umrandende seitliche erste Fläche (14) miteinander verbunden sind, wobei die seitliche erste Fläche (14) kongruent mit den seitlichen Flächen (15) der Aussparung (5) ist und wobei der Abstand (16) zwischen der oberen (12) und unteren ersten Fläche (13) gleich der Tiefe der Aussparung (17) in Bezug auf die obere Fläche (3) der Matratze (2) ist.
- 35 3. Matratzensystem (1) nach einem der vorhergehenden Ansprüche, wobei die Dicke (16) des ersten Segments (9) gleich der Dicke (19) der Matratze (2) ist.
- 40 4. Matratzensystem (1) nach einem der vorhergehenden Ansprüche, wobei die keilförmigen Segmente (10; 20, 27, 28) Befestigungseinrichtungen (30) umfassen, um die keilförmigen Segmente (10; 20, 27, 28) aneinander zu be-
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festigen, wobei die Befestigungseinrichtungen (30) sich an den ersten Seiten (23A), an den dritten Seiten (23C) oder an beiden befinden und wobei durch das Befestigen der keilförmigen Elemente (10; 20, 27, 28) aneinander eine durchgehende Keilform erreicht werden kann.

- 5 5. Matratzensystem (1) nach Anspruch 4, wobei die Befestigungseinrichtungen (30) eine Klettverschlussvorrichtung umfassen.
6. Matratzensystem (1) nach Anspruch 4, wobei die Befestigungseinrichtungen (30) einen Reißverschluss, Druckknöpfe, Gummibänder oder Knöpfe umfassen.
- 10 7. Matratzensystem (1) nach einem der vorhergehenden Ansprüche, wobei das Matratzensystem (1) aus einem Polyurethan-Material hergestellt ist.
- 15 8. Matratzensystem (1) nach einem der vorhergehenden Ansprüche, wobei die Aussparung (5) eine ovale Form hat und das erste Segment (9) ebenfalls eine ovale Form hat und derart geformt ist, dass es kongruent mit der Aussparung (5) ist.
- 20 9. Matratzensystem (1) nach einem der vorhergehenden Ansprüche, wobei das Matratzensystem (1) eine abnehmbare Abdeckung (32) umfasst und wobei die Abdeckung einen Netzteil (33) umfasst, der dem Bereich entspricht, in dem sich die Aussparung befindet.

Revendications

- 25 1. Système de matelas (1) comprenant un matelas (2) avec une face supérieure (3) et une face inférieure (4), ladite face supérieure (3) comprenant une cavité (5), qui est délimitée par une face latérale (15), placée adjacente à une extrémité (6A) du matelas et mise en forme pour recevoir au moins la tête (7) d'un enfant (35), où le système de matelas (1) comprend en outre un premier segment de matelas (9), qui est agencé de telle sorte qu'il peut être placé dans la cavité (5) du matelas (2) et la remplir, de telle manière que la face supérieure (3) du matelas (2) paraît uniforme et lisse, et où le système de matelas (1) comprend également des segments de matelas additionnels (10 ; 20, 27, 28), qui, avec une face supérieure de celui-ci (21), sont agencés pour venir contre des parties de la face inférieure (4) du matelas (2), **caractérisé en ce que** les segments de matelas additionnels (10 ; 20, 27, 28) comprennent au moins un premier élément de forme biseautée (20), lequel comprend une face supérieure (21) et une face inférieure (22) ainsi qu'une première (23A), une deuxième (23B), une troisième (23C) et une quatrième face latérale (23D) reliant les faces supérieure (21) et inférieure (22) l'une à l'autre, laquelle face supérieure (21) est inclinée par rapport à la face inférieure (22), laquelle première face latérale (23A) est agencée de manière à être placée diamétralement opposée à la troisième face latérale (23C), et la hauteur (24) de laquelle première face latérale (23A) est supérieure à la hauteur (25) de laquelle troisième face latérale (23C), dans lequel les segments de matelas additionnels (10 ; 20, 27, 28) comprennent au moins un deuxième élément de forme biseautée (27) et un troisième élément de forme biseautée (28), dont chacun a une géométrie externe similaire à celle du premier élément de forme biseautée (20) et dans lequel la hauteur de la troisième face latérale du deuxième élément de forme biseautée (27) est sensiblement identique à la hauteur (24) de la première face latérale (23A) du premier élément de forme biseautée (20), et la hauteur de la troisième face latérale du troisième élément de forme biseautée (28) est sensiblement identique à la hauteur de la première face latérale du deuxième élément de forme biseautée (27).
- 30 2. Système de matelas (1) selon la revendication 1, dans lequel le premier segment de matelas (9) comprend une première face supérieure (12) et une première face inférieure (13), lesquelles faces sont reliées l'une à l'autre par l'intermédiaire d'une première face latérale de délimitation (14), laquelle première face latérale (14) est conforme aux faces latérales (15) de la cavité (5), et dans lequel la distance (16) entre les premières faces supérieure (12) et inférieure (13) est identique à la profondeur de la cavité (17) par rapport à la face supérieure (3) du matelas (2).
- 35 3. Système de matelas (1) selon l'une quelconque des revendications précédentes, dans lequel l'épaisseur (16) du premier segment (9) est identique à l'épaisseur (19) du matelas (2).
- 40 4. Système de matelas (1) selon l'une quelconque des revendications précédentes, dans lequel les segments de forme biseautées (10 ; 20, 27, 28) comprennent des agencements de fixation (30) pour attacher les segments de forme biseautées (10 ; 20, 27, 28) les uns aux autres, lesquels agencements de fixation (30) sont situés sur les premiers
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côtés (23A), sur les troisièmes côtés (23C) ou sur les deux, moyennant quoi une forme de forme biseautée lisse peut être obtenue en attachant les éléments de forme biseautées (10 ; 20, 27, 28) les uns aux autres.

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5. Système de matelas (1) selon la revendication 4, dans lequel les agencements de fixation (30) comprennent un dispositif Velcro.
6. Système de matelas (1) selon la revendication 4, dans lequel les agencements de fixation (30) comprennent un zip, des boutons-pressions, un élastique ou des boutons.
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7. Système de matelas (1) selon l'une quelconque des revendications précédentes, dans lequel le système de matelas (1) est fabriqué à partir d'un matériau en polyuréthane.
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8. Système de matelas (1) selon l'une quelconque des revendications précédentes, dans lequel la cavité (5) a une forme ovale et le premier segment (9) a également une forme ovale et est formé de manière à être conforme à la cavité (5).
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9. Système de matelas (1) selon l'une quelconque des revendications précédentes, dans lequel le système de matelas (1) comprend un revêtement amovible (32), lequel revêtement comprend une partie filet (33) correspondant à la surface dans laquelle la cavité est située.

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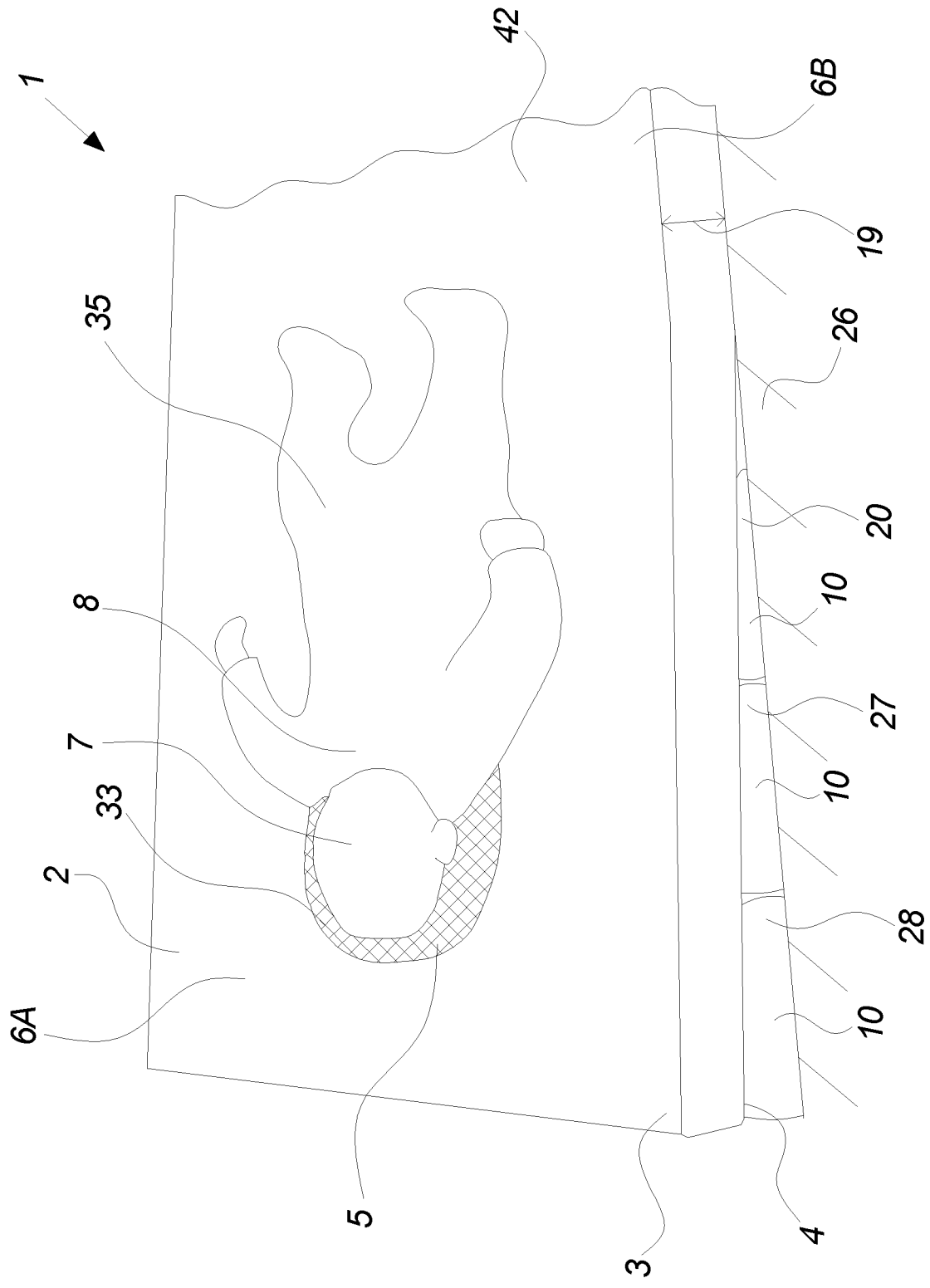


Fig. 1A

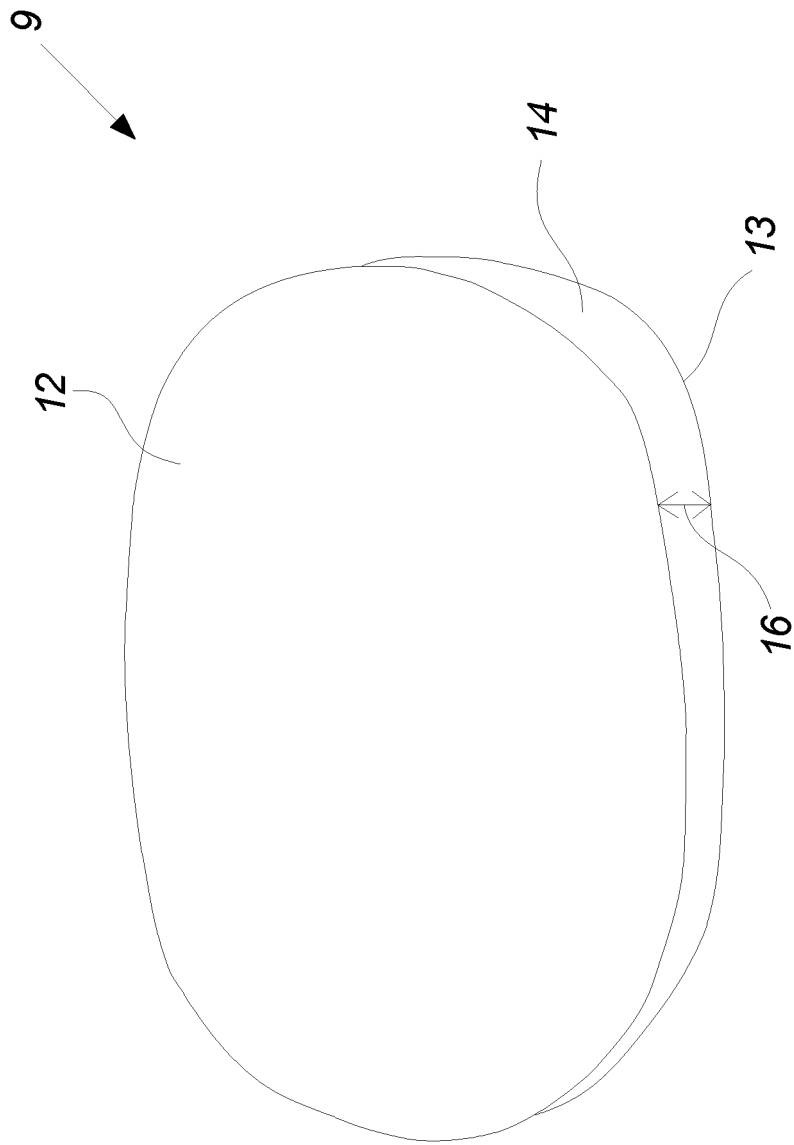


Fig. 1B

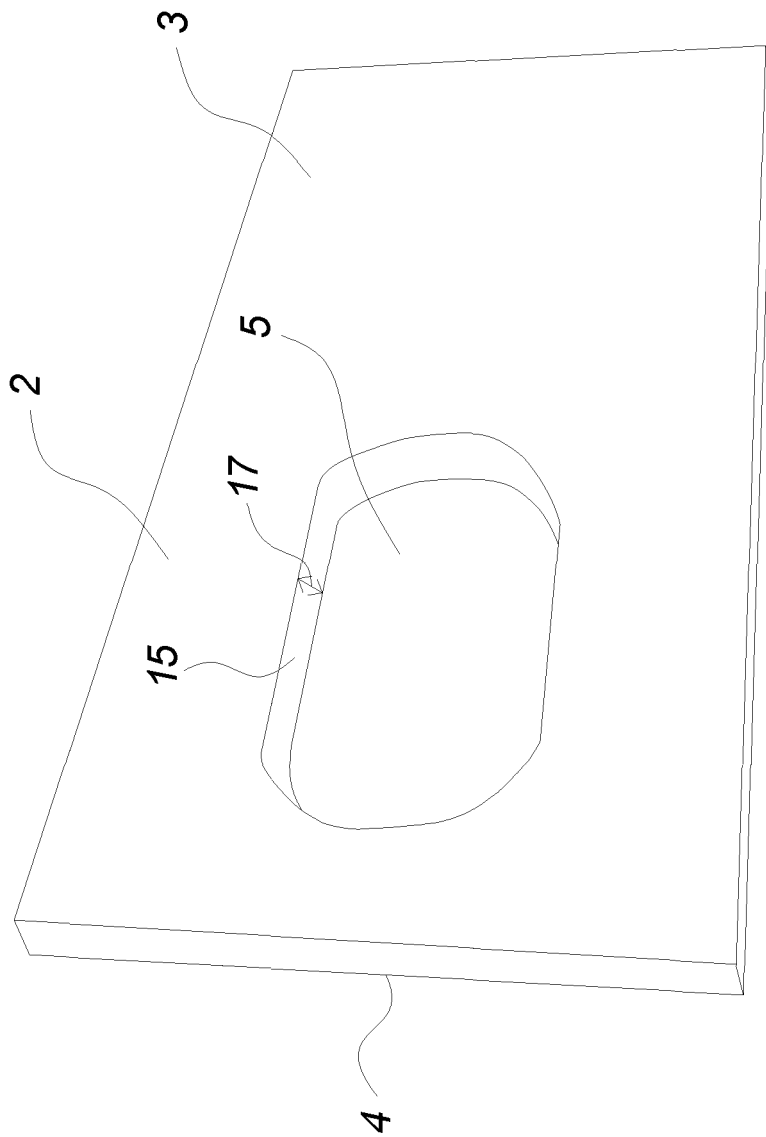


Fig. 2

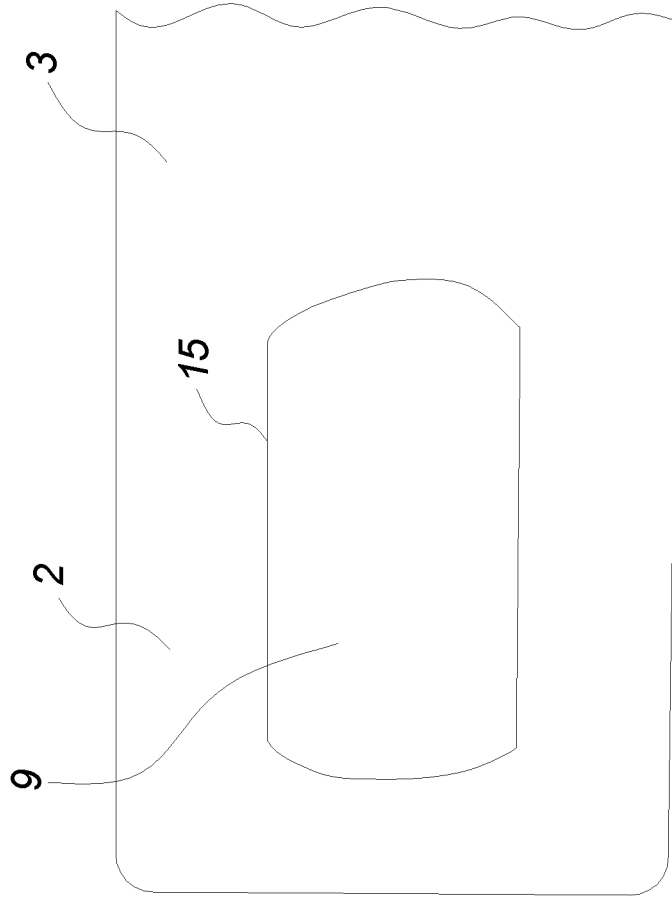


Fig. 3

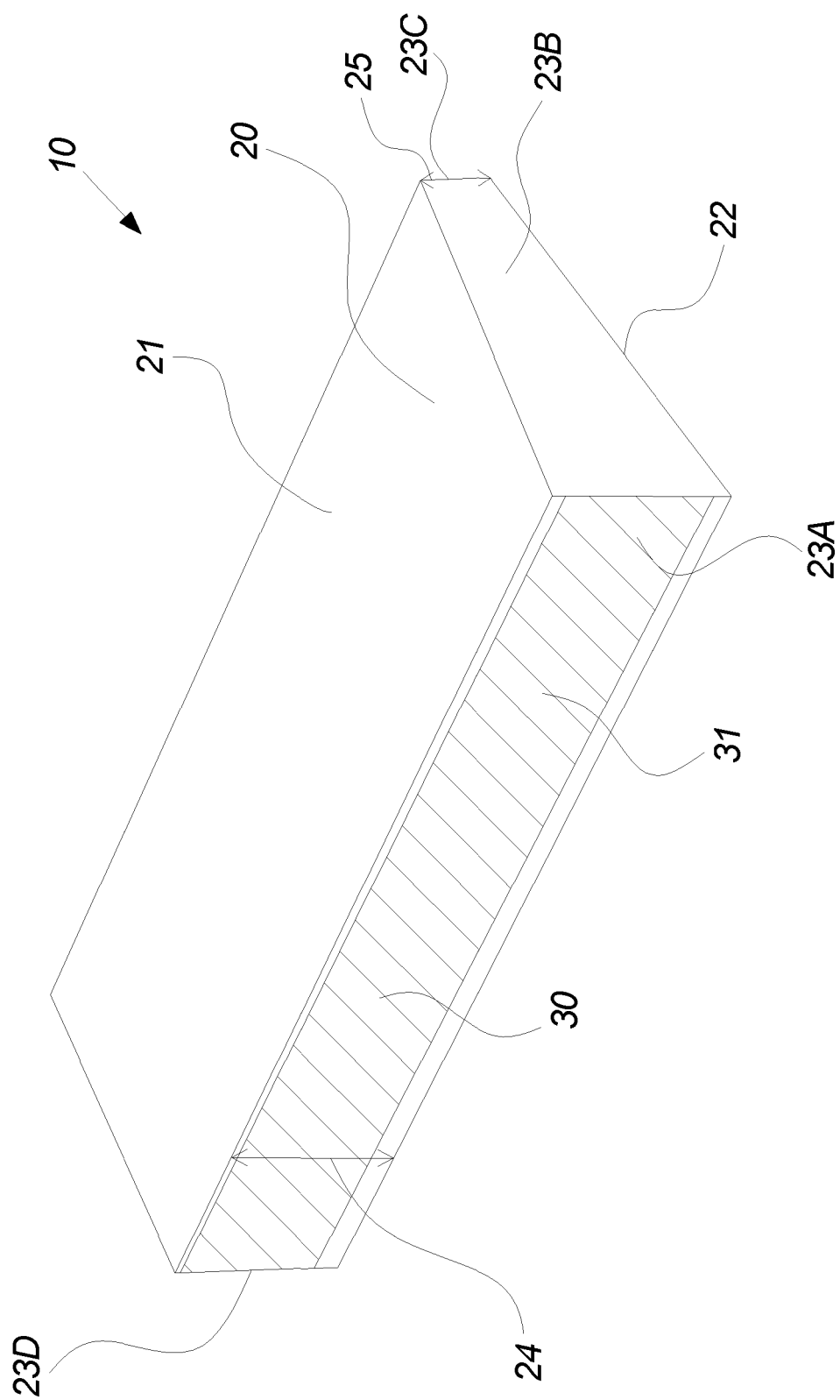


Fig. 4

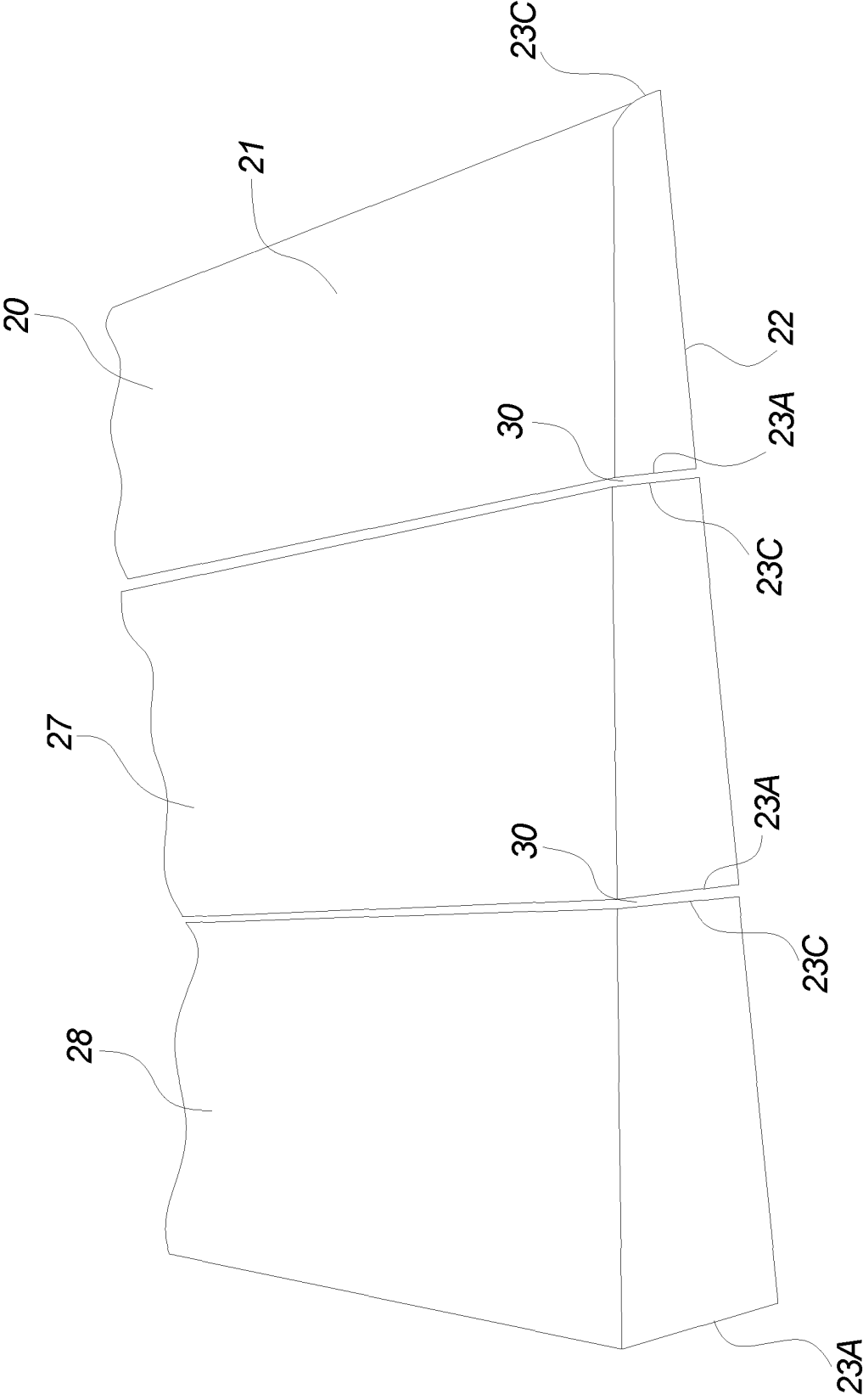


Fig. 5

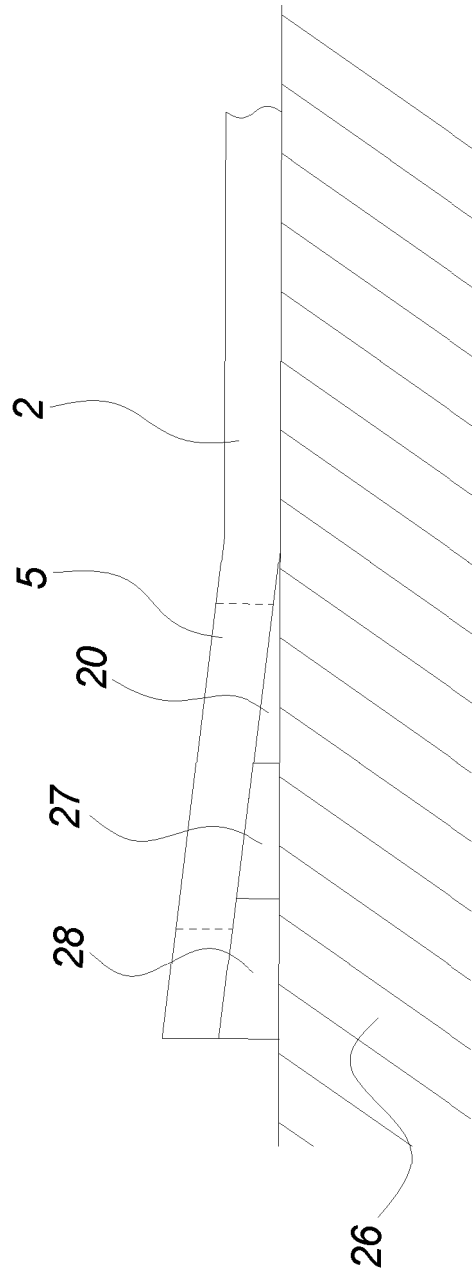


Fig. 6

REFERENCES CITED IN THE DESCRIPTION

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