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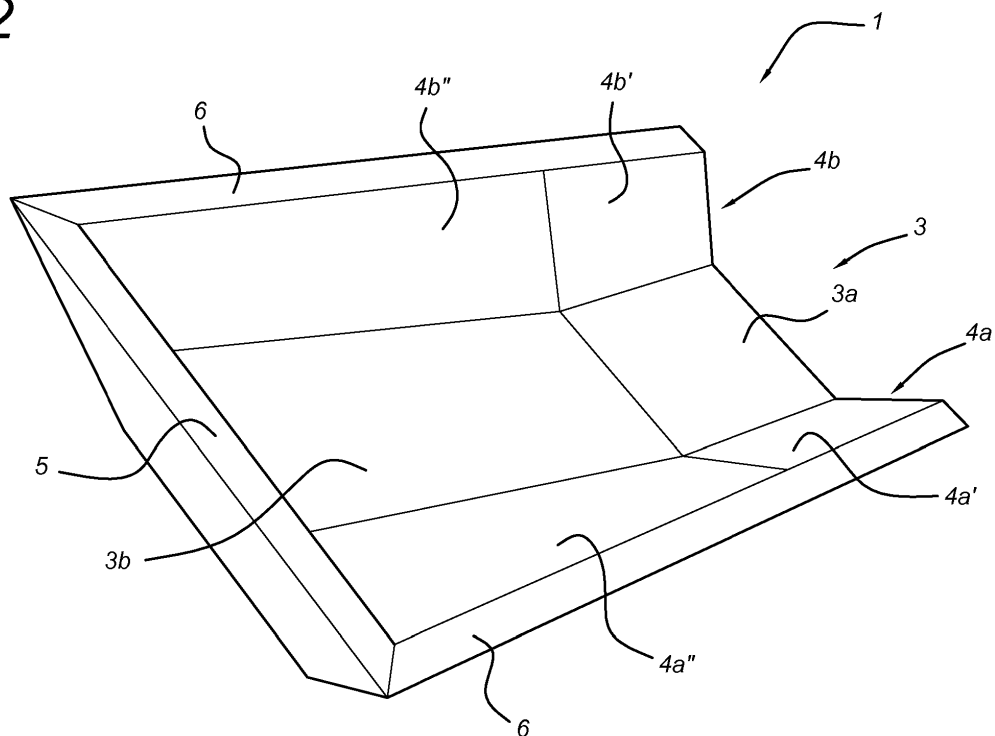
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(54) **Changing mat for an infant**

(57) Changing mat for an infant having a substantially flat backside (2) and an upper support surface (3). The upper support surface comprises a first flat part (3a) and a second part (3b) which is inclined upward relative to

the first part (3a). The first flat part (3a) has a length l of between 10% and 40% of a total length L of the changing mat (1).

Fig. 2



Description

Field of the invention

[0001] The present invention relates to a changing mat for an infant, the changing mat having a substantially flat backside and an upper support surface.

Prior art

[0002] American patent publication US2011/0265265 discloses a changing mat having securing features that allow a caretaker to easily and conveniently change the infant's diaper when traveling, at home, or elsewhere. The changing mat may include one or more mounts or groups of mounts which allow the infant to be strapped and secured to the mat. The mounts may be positioned such that the straps do not obstruct the diaper changing process. A stiffening element within the changing mat helps ensure that the infant's movements are restricted during changing. One or more gripping elements prevent the changing mat from sliding or moving when in use. A support surface may be provided to support and/or cushion to the infant. The changing mat may have a variety of shapes used to appeal to caretakers and to properly support the infant during a diaper change.

[0003] French patent publication FR-A-28 96 968 describes a contour changing pad for changing a diaper of a baby. It has an upper (sleeping) surface, on which the baby is set, and a horizontal base part that receives the pelvis of the baby and an upper part that receives the head of the baby. The upper part is inclined by a raising element, to avoid reflux (i.e. vomiting), and comprises roughly half of the pad surface in the embodiments disclosed.

Summary of the invention

[0004] The present invention seeks to provide an improved version of a changing mat for an infant, i.e. a baby or small child.

[0005] According to the present invention, a changing mat according to the preamble defined above is provided, wherein the upper support surface comprises a first flat part and a second part which is inclined upward relative to the first part, wherein the first flat part has a length l of between 10% and 40% of a total length L of the changing mat. The combination of flat and inclined part, and ratio of length of flat and inclined part have the beneficial effect of providing a proper support for a baby, e.g. during diaper change, wherein the posture of the baby will result in less chance of reflux or vomiting occurring and improve its safety. Further embodiments with their specific advantages are discussed and described in the detailed description below.

Short description of drawings

[0006] The present invention will be discussed in more detail below, using a number of exemplary embodiments, with reference to the attached drawings, in which

Fig. 1 shows a cross sectional view of an embodiment of a changing mat according to the present invention; and

Fig. 2 shows a perspective view of a further embodiment of a changing mat according to the present invention.

Detailed description of exemplary embodiments

[0007] In Fig. 1, a cross sectional side view is shown of a changing mat 1 according to an embodiment of the present invention. The changing mat 1 is provided with a flat back 2 and an upper support surface 3 on which the baby can rest. The total length L of the changing mat 1 is indicated in the top of Fig. 1, and is e.g. 685mm.

[0008] As indicated by the dashed lines in Fig. 1, the upper support surface 3 is divided in two parts, a first flat part 3a and a second part 3b which is inclined upward relative to the first part 3a. The inclination of the second part 3b aids in keeping the baby in position during use, and also helps to prevent reflux and/or vomiting to occur.

[0009] In a first embodiment, the first flat part 3a has a length l of between 10% and 40% of a total length L of the changing mat 1. In this range, sufficient flat surface area of the first flat part 3a remains, and the second inclined part 3b helps handling the baby e.g. during diaper change. In a further embodiment, the first flat part 3a has a length l of between 20% and 35% of a total length L of the changing mat 1, and in an even further embodiment, the first flat part 3a has a length l of about 28% of a total length L of the changing mat 1. E.g. if the total length L of the changing mat is 685mm, the length l of the first flat part 3a is e.g. 180mm or 194mm. This range and specific values are sufficient for a changing mat 1 for use with a baby and/or infant of zero to about 4-5 years of age.

[0010] In a further embodiment, the second inclined part 3b is at an angle α between 10° and 30° relative to the first flat part 3a, e.g. at 18° . This is sufficiently high to hold a baby sufficiently upright during use to prevent reflux or vomiting. These dimensions are especially important in keeping the child's head above its waist and stomach level while its diaper is being changed. Simultaneously, the lifting of the hips/buttocks of the child (in changing the diaper or clothes) doesn't lead to a compression of the neck (chin moving toward its chest) in such a manner that injury or sprain results. The surface 3a is sufficiently flat on order to properly and easy hold the baby in position. The changing mat 1 is multi-purpose, and can not only be used for diaper changing and feeding, but also for dressing or even washing the infant.

[0011] As shown more clearly in the perspective view of an embodiment of a changing mat 1 according to the

present invention in Fig. 2, the changing mat 1 further comprises raised side elements 4a, 4b. This aids in keeping an infant (baby/child) in position and from rolling away from the changing mat 1. As shown in the specific embodiment of Fig. 2, the raised side elements 4a, 4b each comprise two parts 4a', 4a'', 4b', 4b'' congruent with the first flat part 3a and second inclined part 3b, respectively. This ensures a neat fitting and combined effect of the anti-rolling feature and anti-reflux feature as discussed above. The raised side elements 4a, 4b may further be augmented by a flat top surface side 6 as shown in the embodiment of Fig. 2.

[0012] The cross sectional view of the Fig. 1 embodiment shows that at the lower end (where the first flat part 3a is located), a height h_1 of the changing mate 1 is about 96 mm, and at the higher end (at the top of the second inclined surface 3b) a second height h_2 of the changing mat is about 196mm. These heights correspond to the heights of the raised side elements 4a, 4b, plus the thickness of the changing mat at the location of the flat back 2 and first flat part 3a. In other words, the lower end of the changing mat 1 has a first height h_1 which is about half of a second height h_2 of the opposite end of the changing mat 1.

[0013] In a further embodiment, the changing mat 1 is further provided with a raised surface part 5 (for the head), e.g. as a further extension of the upper support surface 3 as shown in the perspective view of Fig. 2. The raised head part 5 is then at a height near or at the second height h_2 of the top end of the changing mat 1 as discussed above. This allows to hold the baby's head in a comfortable position during use. Also it prevents the child from injuring itself (more specifically it's head) when it pushes itself up the changing mat (with its legs).

[0014] As shown in the cross sectional view of Fig. 1, the flat back 2 is provided with an anti-skid surface 7, e.g. a separate sheet of material, or integrated with the flat back surface 2. In further alternative embodiments, the anti-skid surface 7 may comprise multiple (e.g. corner) blocks of anti-skid material, or the material of the flat back 2 may comprise an anti-skid material. This ensures an easy and safe use of the changing mat 1 independent of the type of surface on which it is being used.

[0015] In a further embodiment, the changing mat 1 is foldable, allowing it to be carried around easily. E.g. the (internal and/or outer) material of the changing mat 1 may be selected to allow compression under pressure (e.g. using a internal foam material). Alternatively, the changing mat 1 is provided in a plurality of parts with folding lines in between, e.g. a folding line 8 between the first flat part 3a and second inclined part 3b, allowing easy folding yet sufficient rigidity during use. E.g. the baby changing mat 1 may be provided with Velcro-type of surfaces between the plurality of parts.

[0016] In an even further embodiment, an outer surface of the changing mat 1 is made of stain repellent material, such as a plastic or water proof material (e.g. PVC or PU). This provides for an easy cleaning, especially in

combination with the structure of surfaces which can get into contact with a baby of the embodiments presented herein.

[0017] The present invention embodiments of a (baby) changing mat 1 provide a number of clear benefits. Higher edges 4a, 4b are provided to prevent rolling (usually from around 2 months of age). A higher top edge 5 is provided to stop bumping of the head (usually from around 2-3 months of age). The upper surface 3b is slightly sloped to prevent vomiting or reflux problems (first six months). An anti-skid surface 7 is provided on the bottom surface 2 to provide sufficient stability on every possible surface. The stain repellent material of the outside surface of the changing mat 1 allows prolonged use and easy cleaning.

[0018] In a further embodiment, the changing mat 1 is further provided with a removable covering adapted to the specific shape of the changing mat 1, possibly made of a material with the stain-repellent surface as discussed above.

[0019] The changing mat 1 is provided with an accessory holding element in a further embodiment, e.g. a magnetic or Velcro-type strip positioned on a side wall of the changing mat 1.

[0020] The present invention embodiments have been described above with reference to a number of exemplary embodiments as shown in the drawings. Modifications and alternative implementations of some parts or elements are possible, and are included in the scope of protection as defined in the appended claims.

Claims

1. Changing mat for an infant, the changing mat having a substantially flat backside (2) and an upper support surface (3), wherein the upper support surface comprises a first flat part (3a) and a second part (3b) which is inclined upward relative to the first part (3a), wherein the first flat part (3a) has a length l of between 10% and 40% of a total length L of the changing mat (1).
2. Changing mat according to claim 1, wherein the first flat part (3a) has a length l of between 20% and 35% of a total length L of the changing mat (1).
3. Changing mat according to claim 1, wherein the first flat part (3a) has a length l of between 28% of a total length L of the changing mat (1).
4. Changing mat according to any one of claims 1-3, wherein the second inclined part (3b) is at an angle α between 10° and 30° relative to the first flat part (3a).
5. Changing mat according to any one of claims 1-4,

wherein the upper support surface (3) is further provided with a raised surface part (5).

6. Changing mat according to any one of claims 1-5, wherein the changing mat (1) further comprises raised side elements (4a, 4b). 5
7. Changing mat according to claim 6, wherein the raised side elements (4a, 4b) comprise two parts (4a', 4a", 4b', 4b") congruent with the first flat part (3a) and second inclined part (3b), respectively. 10
8. Changing mat according to any one of claims 1-7, wherein the flat backside (2) is provided with an anti-skid surface (7). 15
9. Changing mat according to any one of claims 1-8, wherein the changing mat (1) is foldable.
10. Changing mat according to any one of claims 1-9, wherein an outer surface of the changing mat (1) is made of stain repellent material. 20
11. Changing mat according to any one of claims 1-10, further comprising a removable covering adapted to the specific shape of the changing mat (1). 25
12. Changing mat according to any one of claims 1-11, further comprising an accessory holding element. 30

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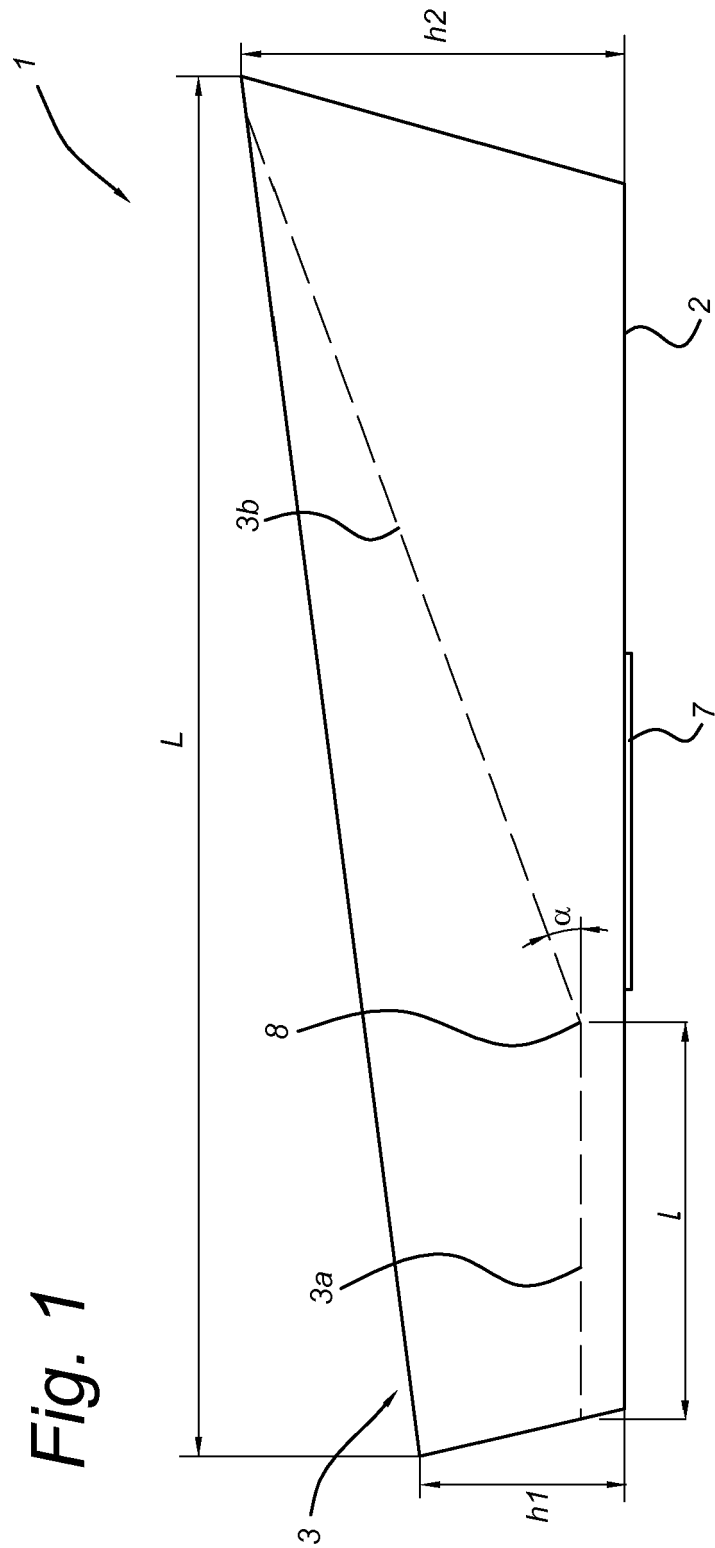
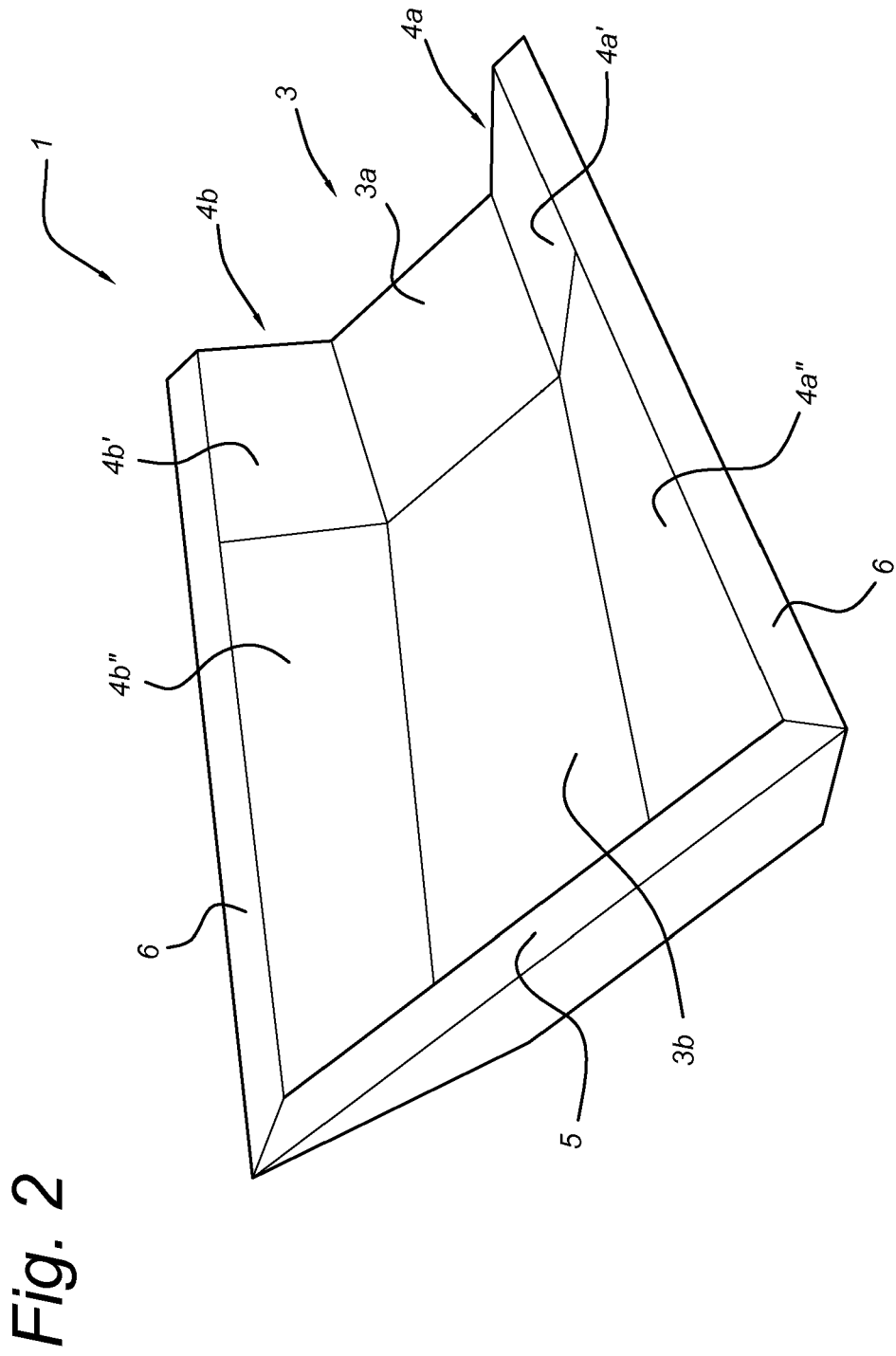


Fig. 1





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Application Number
EP 13 19 2695

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The present search report has been drawn up for all claims			
Place of search		Date of completion of the search	Examiner
The Hague		20 February 2014	Lehe, Jörn
CATEGORY OF CITED DOCUMENTS			
X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document	

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**ANNEX TO THE EUROPEAN SEARCH REPORT
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EP 13 19 2695

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

REFERENCES CITED IN THE DESCRIPTION

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