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(54) **Comfort top mattress with fastening provision**

(57) A top mattress comprising a mattress portion having an upper side, an underside virtually parallel thereto, and a head and foot, at least the upper side of the top mattress being intended as lying surface, while, with the aid of a fastening provision, the mattress portion can be fastened to a lower mattress, wherein the fasten-

ing provision is designed such that with the top mattress in a condition placed on the lower mattress, displacement of the top mattress relative to the lower mattress is minimized and that thus, a connection to a standard mattress can be realized.

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## Description

**[0001]** The invention relates to a top mattress comprising a mattress portion having an upper side, an under side virtually parallel thereto and a head and foot, at least the upper side of the top mattress being intended as lying surface, while, with the aid of a fastening provision, the mattress portion can be fastened to a lower mattress.

**[0002]** Such a top mattress is known from US patent 4,955,095. In this US patent, a removable pillow top for mattresses is described, which can be fastened to a lower mattress with the aid of Velcro tape, the loop elements of which being provided on the lower mattress and the hook elements on the underside of the pillow top. The pillow top and the lower mattress can be provided on several places with Velcro tape parts.

**[0003]** Further, from US patent 6,715,173, it is known to lay a comfort unit on a lower mattress while movement of this comfort unit relative to the lower mattress is limited in that the upper side of the lower mattress is provided with a layer of friction material preventing the comfort unit from sliding relative to the lower mattress.

**[0004]** A drawback of a top mattress that can be fastened to a lower mattress by means of a fastening means of which one portion is provided on the top mattress and a second portion on the lower mattress, is that the top mattress cannot be universally used on other lower mattresses, for instance a lower mattress without a fastening means portion. If, nevertheless, the top mattress is used on a lower mattress without fastening means, the top mattress cannot be fastened on the lower mattress so that it is probable that the top mattress will slide relative to the lower mattress.

**[0005]** The same also holds for the top mattress which is kept from sliding by means of a friction material on a lower mattress. If the top mattress is placed on a different lower mattress, with this mattress not having friction material, this may lead to sliding of the top mattress relative to the lower mattress, the more so when the person lying on the assembly of top mattress and lower mattress moves and turns. It is noted that a Velcro connection has as a further drawback that it may become undone as a result of the user turning, which is accompanied by an unpleasant sound that can wake the user.

**[0006]** The present invention is based on the insight that it would be highly favorable when a top mattress could be solidly fastened to a standard lower mattress and be removable again therefrom. It would also be favorable if a top mattress were also usable on other types of standard lower mattresses.

**[0007]** To this end, the invention provides a top mattress of the type described in the opening paragraph, which is characterized in that the fastening provision is designed such that with the top mattress in a condition placed on the lower mattress, displacement of the top mattress relative to the lower mattress is minimized and that thus a connection to a standard mattress can be realized.

**[0008]** As the top mattress comprises a fastening provision requiring no special provisions on the lower mattress, fastening a top mattress to a standard lower mattress is simple. Here, the lower mattress can be any mattress such as a single mattress, a double mattress, a children's mattress, a waterbed, a folding bed, a sofa bed, a self inflatable spare bed or a camping bed, depending on the size of the top mattress. As the top mattress is suitable for several types of lower mattresses, this entails that by utilizing a top mattress, separate beds can be coupled to form one larger bed.

**[0009]** Also, the top mattress can be used for stiffening an existing lower mattress so that the lying quality of the lower mattress, no longer having the desired comfort or the desired stability, can be increased. One application hereof is a waterbed provided with a top mattress thereby increasing the stability of the waterbed so that a person lying on the waterbed can turn more easily.

**[0010]** According to a further elaboration of the invention, the fastening provision comprises a fitted sheet connected to or connectable to the mattress portion, while the top mattress, after fastening to the lower mattress, envelopes it for a large part. The fitted sheet connected to the top mattress extends along the entire outer circumference of the lower mattress, which minimizes the top mattress sliding relative to the lower mattress.

**[0011]** According to an alternative, further embodiment of the invention, the fastening provision can be at least one tuck-in strip connected to or connectable to the mattress portion.

**[0012]** According to a further elaboration of the invention, the fastening provision is connected to a ticking in which the mattress portion can be received. In order to provide for the mattress portion to be receivable in and removable from the ticking, the ticking is provided with a zipper situated at least on one side of the top mattress, preferably at the underside of the top mattress, so that the mattress can be included in and removed from the ticking. An advantage hereof is that the ticking can be cleaned which is particularly favorable from a viewpoint of hygiene, especially when a bed is regularly slept on by different persons. The invention also offers the possibility, if necessary, to replace the mattress portion. According to a further elaboration of the invention, the ticking can be of different types of material, among which a stretch material, an anti allergenic material or an incontinence cloth, which entails that the top mattress can be adapted to the personal requirements and desires of the user.

**[0013]** According to a further elaboration of the invention, the upper layer of the top mattress is provided with a ventilating layer, the preferred ventilating layer being of a three-dimensionally woven fabric. This has as an advantage that the air-transmissiveness and dryability of the top mattress are better.

**[0014]** According to a further elaboration of the invention, the mattress portion may be of open foam, viscoelastic foam or a combination of the two. As the mattress

portion of the lower mattress can easily be provided with a mattress portion of a different sort of material, also, a self inflatable version or a version comprising an inside casing, provided or not provided with chambers filled with a separate stuffing, belong to the possibilities. One application comprises independent use of the top mattress, i.e. the use of the top mattress in a condition not placed on a lower mattress.

**[0015]** According to a further elaboration of the top mattress, the fastening possibility can be used as a packaging when the top mattress is rolled up. In rolled-up condition, the top mattress can be included in a flap of the fastening provision, so that the top mattress obtains a manageable size and is easily movable.

**[0016]** The top mattress according to the invention has diverse fields of application, among others use in hotels, on camping sites, but also use on any standard lower mattress for purposes of prolonging the lifespan and improving quality.

**[0017]** The present invention will be further clarified on the basis of an exemplary embodiment with reference to the different Figures.

Fig. 1 shows a perspective view of a top mattress which is fastened to a lower mattress;

Fig. 2 shows a bottom view of the top mattress;

Fig. 3 shows a longitudinal cross-section of the top mattress which is fastened to a lower mattress;

Fig. 4 shows a perspective view of a top mattress in rolled-up condition.

**[0018]** Fig. 1 shows a mattress 1 containing a mattress portion 2 having an upper side 3, an underside 4 virtually parallel thereto and a head 5 and foot 6. The upper side of the top mattress 1 is indented as lying surface. The mattress portion can be fastened to a lower mattress 12 with the aid of a fastening provision 7. The fastening provision is designed such that with the top mattress in a condition placed on the lower mattress 12, displacement of the top mattress 1 relative to the lower mattress 12 is minimized and that thus, a connection to a standard mattress can be realized. This fastening provision 7 is a fitted sheet connected to or connectable to a mattress portion 2, but can also be a tuck-in strip or a different fastening provision as further described in the subclaims. The top mattress 1 if further provided with a ticking 8 in which the mattress portion 2 can be received. The upper side of the top mattress 1 is provided with a ventilating layer 10 extending over the entire upper side, the preferred ventilating layer being of a three-dimensionally woven fabric. The mattress portion 2 is preferably of an open foam, a viscoelastic foam or a combination of the two, but can also be designed in the form of a self-inflatable mattress.

**[0019]** Fig. 2 shows a bottom view of the top mattress 1, with the underside 4 comprising a zipper 9 through which the mattress portion 2 can be included in the ticking 8. However, the zipper 9 can also be a different type of fastening such as, for instance, a Velcro fastening further

described in the subclaims, and can also be located at a different location on the surface of the ticking. It is also clearly visible that the fastening provision 7 extends around the outer circumference of the top mattress 1.

**[0020]** Fig. 3 shows a longitudinal cross-section A-A' of the top mattress 1 where it is clearly visible that the ticking 8 envelopes the mattress portion 2. The top mattress 1 envelopes the lower mattress 12 by means of the fitted sheet 7, extending around the entire outer circumference of the lower mattress 12.

**[0021]** Fig. 4 shows the top mattress 1 in rolled-up condition, the top mattress being rolled-up in the longitudinal direction of the top mattress, while the fitted sheet 7 also forms a packaging in which the rolled-up top mattress 1 is included.

**[0022]** It will be clear that not only the above-mentioned exemplary embodiment falls within the framework of the invention. For instance, the present invention also relates to top mattresses of other materials, top mattresses having different sizes, but also to top mattresses with a fastening provision of elastic bands or straps.

## Claims

1. A top mattress (1), comprising a mattress portion (2) having an upper side (3), an underside (4) virtually parallel thereto, and a head (5) and foot (6), at least the upper side of the top mattress being intended as lying surface, while, with the aid of a fastening provision (7), the mattress portion can be fastened to a lower mattress, **characterized in that** the fastening provision is designed such that with the top mattress in a condition placed on the lower mattress, displacement of the top mattress relative to the lower mattress is minimized and that thus a connection to a standard mattress can be realized.
2. A top mattress according to claim 1, wherein the fastening provision is a fitted sheet connected to or connectable to the mattress portion.
3. A top mattress according to claim 1, wherein the fastening provision is at least one tuck-in strip connected to or connectable to the mattress portion.
4. A top mattress according to claim 1, wherein the fastening provision is an elastic provision connected to or connectable to the mattress portion.
5. A top mattress according to claim 1, wherein the fastening provision is a strap connected to or connectable to the mattress portion.
6. A top mattress according to any one of the preceding claims, wherein the fastening provision is connected to a ticking (8) in which the mattress portion can be included.

7. A top mattress according to claim 6, wherein the ticking is provided with a zipper.
8. A top mattress according to claim 6, wherein the ticking is provided with a Velcro tape fastening. 5
9. A top mattress according to claim 6, wherein the ticking is provided with a button fastening.
10. A top mattress according to claim 6, wherein the ticking is provided with a snap fastener. 10
11. A top mattress according to any one of claims 6 - 10, wherein the ticking is of stretch material. 15
12. A top mattress according to any one of claims 6 - 10, wherein the ticking is of an anti-allergenic material or incontinence cloth.
13. A top mattress according to any one of the preceding claims, **characterized in that** the upper side of the top mattress comprises a ventilating layer (10) on the side of the lying surface. 20
14. A top mattress according to claim 13, wherein the ventilating layer is of a three-dimensionally woven fabric. 25
15. A top mattress according to any one of the preceding claims, wherein the mattress is of an open foam. 30
16. A top mattress according to any one of claims 1- 14, wherein the mattress is of a viscoelastic foam.
17. A top mattress according to any one of claims 1- 14, wherein the mattress is of a combination of open foam and viscoelastic foam. 35
18. A top mattress according to any one of claims 1- 14, wherein the mattress portion is a self-inflatable mattress. 40
19. A top mattress according to any one of claims 1- 14, wherein the mattress portion comprises an inside casing which is filled with a separate stuffing. 45
20. A top mattress according to claim 19, wherein the inside casing is provided with chambers for keeping the stuffing in place. 50
21. A top mattress according to any one of the preceding claims, wherein the top mattress can be rolled-up and the fastening provision forms a packaging (11) in which the rolled-up top mattress can be included. 55

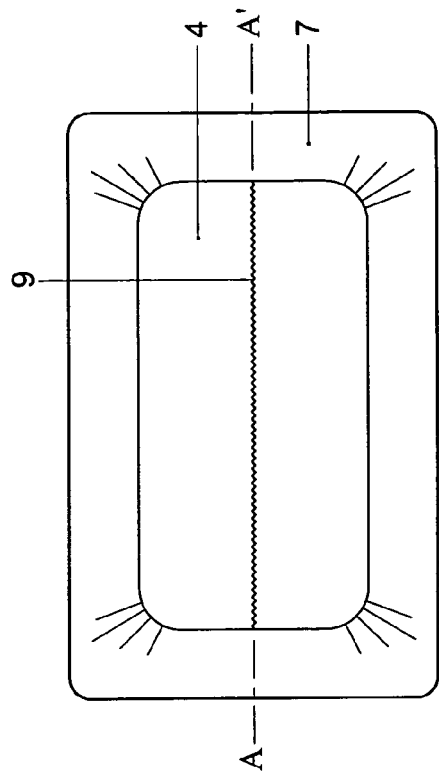


Fig. 2

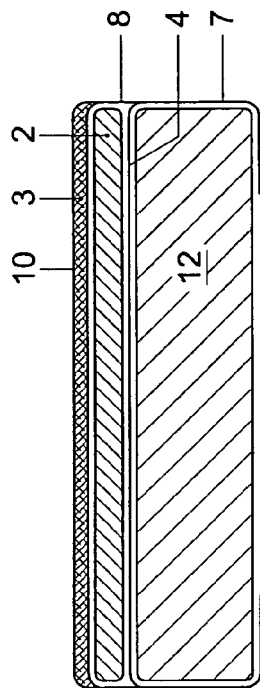


Fig. 3

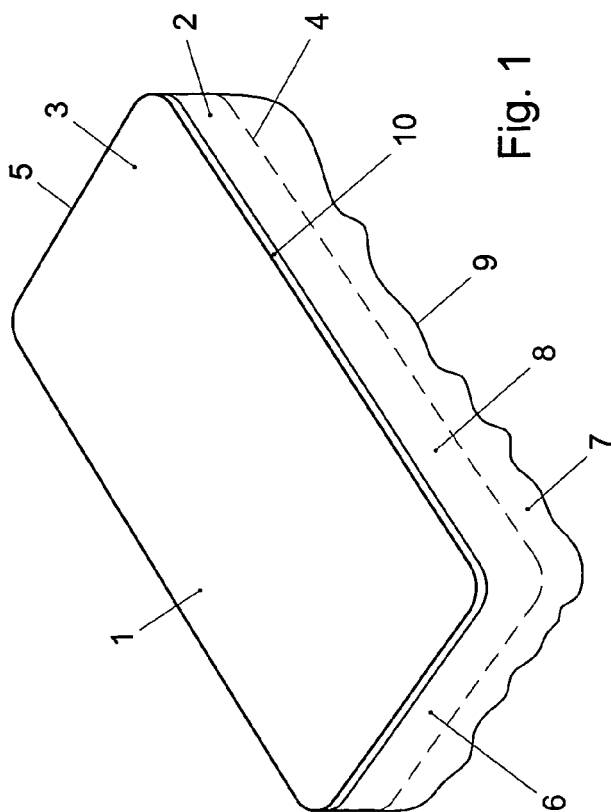


Fig. 4

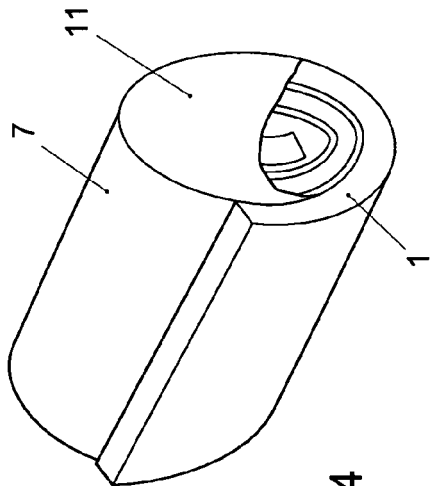


Fig. 5