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(54) **STUFFED TOY**

(57) Stuffed toy comprising as a stuffing at least one beeswax layer being enclosed by textile layers, the at least one beeswax layer making the toy plastically deformable.

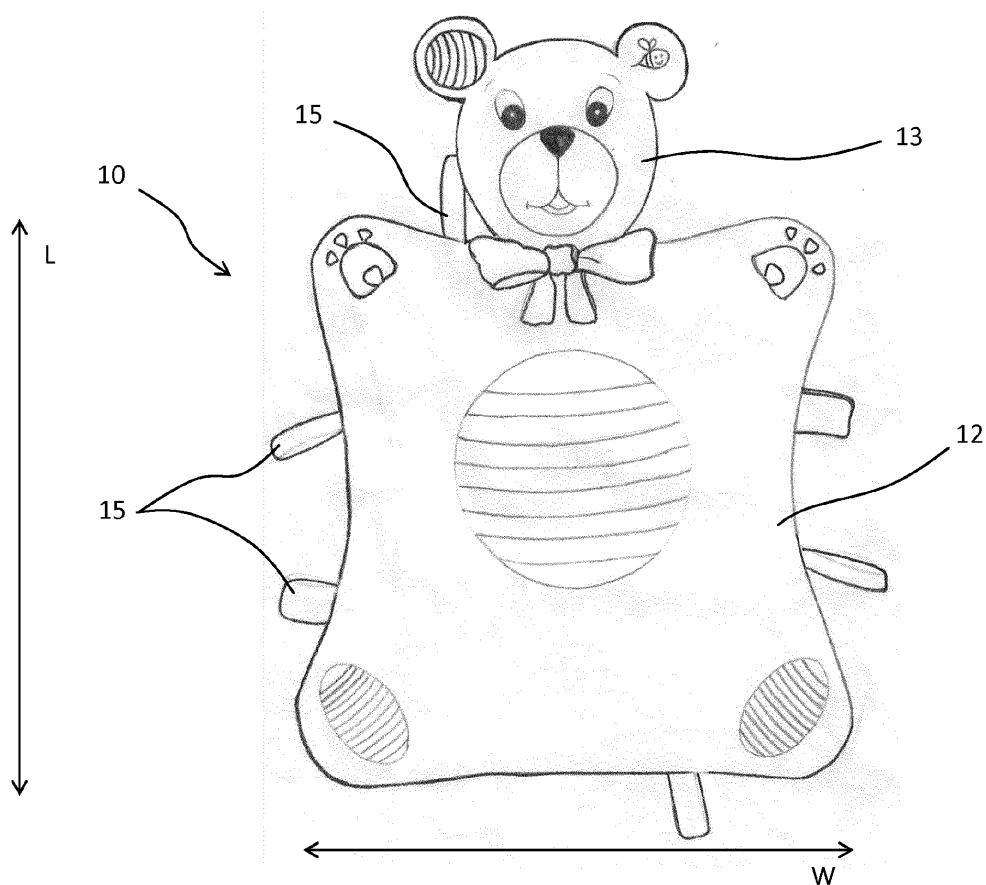


Fig. 1

Description

[0001] The invention pertains to a stuffed toy, in particular for a child.

[0002] Stuffed toys, as for example teddy bears, are usually made of an outer skin of textile which is stuffed with a flexible material such as for example cotton, straw or wood wool. Such stuffing makes the toy quite soft and cuddly and elastically deformable.

[0003] It is an object of the invention to create a stuffed toy which is more appealing to play with.

[0004] The invention achieves the object by the subject matter of claim 1. Advantageous embodiments can be found in the dependent claims, the description and the figures.

[0005] The invention solves the object in that the stuffed toy comprises as a stuffing at least one beeswax layer being enclosed by textile layers, the at least one beeswax layer making the toy plastically deformable.

[0006] The toy may comprise an outer skin, made in particular of a textile, and a stuffing. Stuffing means that a flexible material - that is the at least one beeswax layer - is arranged completely inside the stuffed toy, the beeswax layer thus being an internal part of the toy. The toy may comprise further stuffing as for example synthetic fiber batting, cotton, straw, wood wool, plastic pellets or beans. Preferably, however, the toy comprises no further stuffing but the at least one beeswax layer enclosed by the textile layers. The beeswax layer consists of a beeswax material, in particular essentially of natural beeswax. The beeswax layer is relatively thin compared to its length and width. In a non-deformed state the beeswax layer may be plate-shaped. The stuffed toy may comprise multiple beeswax layers, wherein each of these layers may be enclosed by textile layers. These layers may thus be separated from one another by textile layers. Alternatively, multiple beeswax layers may jointly be enclosed by textile layers, i.e. without being separated from one another by textile layers. The textile layers may form the outer skin of the toy. Alternatively, the textile layers may be formed separately from the outer skin of the toy. The textile layers are textile in that they are of a flexible material consisting of a network of interlacing natural or artificial fibers. The textile may also be called a fabric or cloth. The textile layers may be made through e.g. weaving, knitting, spreading, crocheting, or bonding. In particular, the textile layers may be in direct contact with the beeswax layer. Alternatively, additional layers of another material may be arranged between the beeswax layer and the textile layers.

[0007] According to the invention, at least a part of the toy is plastically deformable due to the beeswax layer. The beeswax layer may therefore extend through at least a part of the stuffed toy such that at least said part is plastically deformable. In particular, the beeswax layer may extend through the toy such that basically the whole toy is plastically deformable. For example, the beeswax layer may extend through a main part, e.g. a torso, of the toy such that said main part is plastically deformable. In the alternative or additionally the beeswax layer may extend through an extension part, e.g. an arm, a leg or a head, of the toy arranged at and extending from the main part such that said extension part is plastically deformable. Plasticity or plastic deformability means that if the toy is deformed as a result of an external force it maintains its deformed shape exactly or at least in part even after the external force vanishes. However, the deformation may be reversed by applying again a sufficient external force. Due to the inventive stuffing, i.e. the beeswax layer(s), the stuffed toy may be deformed plastically instead of elastically as the stuffed toys of the state of the art. Such deformability is haptically very appealing, in particular for a child.

[0008] Furthermore, beeswax is a natural material and exudes a pleasant and soothing scent, in particular when heated, which is appealing as well. In addition, the beeswax layer is a so called phase change material and may therefore serve as a heat storage giving off heat for a relatively long time at a relatively constant temperature. Also, beeswax is ecologic and harmless to health. Finally, the beeswax layer has an antimicrobial, in particular antibacterial, effect. The textile layers protect the beeswax layer. At the same time, the textile material is permeable to air, so that in particular when heating the beeswax material a pleasant fragrance is exuded.

[0009] According to an embodiment the at least one beeswax layer is sewn into the enclosure formed by the textile layers. Thus, the textile layers enclosing the beeswax layer may be held together by a seam thereby forming the enclosure which encompasses the beeswax layer. The seam may be without contact to the beeswax layer. In particular, the enclosure may have an excess with respect to the beeswax. According to an embodiment the enclosure has an excess in the range of 0.5% to 3% of the dimensions of the at least one beeswax layer. Said oversize is related to room temperature and may prevent the relatively large temperature expansion of the beeswax material from causing unwanted deformations of the enclosing textile layers and possibly the toy. However, additional seams may be provided which extend from one textile layer to another through the at least one beeswax layer. Thus, the seam may contact the beeswax layer which may lead to a better fixation of the beeswax layer within the textile enclosure. For example, multiple seams may extend across the textile layers thus forming multiple chambers of textile enclosing each a part of the beeswax layer.

[0010] According to an embodiment the textile layers consists exclusively of natural fibers. The natural fibers may in particular be cotton fibers, but also other natural fibers, for example hemp, flax, wool or silk. By dispensing with synthetic fibers, the textile material is ecologically harmless.

[0011] According to an embodiment the at least one beeswax layer extends over a substantial part of the toy. The beeswax layer may e.g. extend over more than 50%, preferably more than 70%, in particular more than 80% or more

than 90% of the toy. The beeswax layer may thus extend through a main part of the toy, as mentioned above. The beeswax layer may in particular extend over a substantial area of the toy, in particular over a substantial part of a cross sectional area. The beeswax layer may extend over a substantial part of an inner wall or circumference. A larger extent of the beeswax layer may lead to a larger part of the toy being plastically deformable. Of course, additional beeswax layers may be provided which do not extend as such.

[0012] According to an embodiment the at least one beeswax layer has a thickness in the range of 1 mm to 10 mm. In particular, the at least one beeswax layer may have a thickness of 1 mm to 6 mm. Preferably, the at least one beeswax layer may have a thickness of 2 mm to 3 mm. Experiments have shown that in such a range the plasticity of the beeswax layer is particularly advantageous. In particular in the range of 2 mm to 3 mm of thickness the beeswax layers provides the right amount of resistance against deformation such that the toy is enjoyable to play with. According to an embodiment at least one of the at least one beeswax layers extends through a main part of the toy, said main part being relatively thin compared to its length and width. The main part may be relatively flat and may in particular comprise only the at least one beeswax layer enclosed in the textile layers as a stuffing. Thereby a large part of the toy may be plastically deformable. Of course, further beeswax layers may be provided having a different thickness.

[0013] According to an embodiment the at least one beeswax layer comprises a honeycomb structure. The honeycomb structure may have hexagonal cells, such as natural honeycombs. The cells may have a pitch in the range of about 4 mm to about 7 mm, in particular about 5.5 mm. The hexagonal cells may be closed on one side and open on the opposite side. The honeycomb structure has advantageous mechanical properties, in particular sufficient flexibility.

[0014] According to an embodiment at least one beeswax layer is manufactured by rolling a cast plate of beeswax. By rolling, the structures of the cast plate formed on cooling the beeswax are modified, which increases the flexibility of the layer. The layer is therefore mechanically more resistant.

[0015] According to an embodiment the toy comprises a main part and an extension part arranged at the main part wherein at least one of the at least one beeswax layer extends between the main part and the extension part. When the extension part is moved, e.g. tilted or turned, relative to the main part the beeswax layer is deformed plastically and the extension part may therefore stay in its newly attained position. The main part may be a torso, e.g. of a teddy bear, and the extension part may be a head, a leg or an arm, e.g. of said teddy bear. Due to the beeswax layer extending between the main part and the extension part the respective head, leg or arm may stay in its once assumed position relative to the torso. Of course, additional beeswax layers may be provided at other parts of the toy.

[0016] Embodiments of the invention will be explained in the following with respect to the figures. The figures show:

Fig. 1 stuffed toy according to the invention in a front view,

Fig. 2 a sectional view of the toy of fig. 1,

Fig. 3 beeswax layers as stuffing for the toy of fig. 1 in a first embodiment,

Fig. 4 beeswax layers as stuffing for the toy of fig. 1 in a second embodiment.

[0017] Unless otherwise indicated in the following the same reference signs denote the same elements.

[0018] Fig. 1 shows a front view of a stuffed toy according to the invention. The stuffed toy 10 resembles a teddy bear with a torso as a main part 12 and a head as an extension part 13 extending from the main part 12. The main part 12 is relatively thin compared to its length and width, i.e. it has much a greater length L and width W than a thickness T. The main part 12 and the extension part 13 each comprise outer skins, made e.g. of a textile, and a stuffing. Of course, the stuffed toy may have any other kind of shape, it may resemble e.g. an animal or an inanimate object. The toy further comprises multiple optional hangers 15.

[0019] Fig. 2 shows very schematically a cross sectional view through the toy of fig. 1. It can be seen that the main part 12 comprises a stuffing made of two beeswax layers 14, 16 each being enclosed by textile layers 20, 22, 24. Textile layers 20, 24 enclose the beeswax layer 14 and are sewn together via seams 21, 23. Textile layers 22, 24 enclose the beeswax layer 16 and are sewn together via seams 21, 23 as well. The beeswax layers 14, 16 are thus distanced by the textile layer 24. The beeswax layers 14, 16 each extend through a substantial part of the main part 12 of the toy.

[0020] Due to the beeswax layers 14, 16 as stuffing the main part 12 of the stuffed toy 10 is plastically deformable and may therefore maintain a position once taken. It may be deformed in any way, e.g. crinkled or twisted. Also, beeswax is a natural material and exudes a pleasant and soothing scent, in particular when heated. In addition, the beeswax layer, being a phase change material, may serve as a heat storage giving of heat for a relatively long time at a relatively constant temperature. Finally, beeswax is an ecologic material and harmless to health. The textile layers protect the beeswax layer. At the same time, the textile material is permeable to air, so that in particular when heating the beeswax material a pleasant fragrance is perceived.

[0021] The stuffed toy 10 comprises another beeswax layer 18 extending between the main part 12 and the extension

part 13 enclosed in textile layers 26, 28. The textile layers 26, 28 are sewn together via seams 30, 32. The seam 23 reaches through the textile layers 26, 28 and the beeswax layer 18. The beeswax layer 18 may be considered as part of the stuffing of the main part 12 as well as of the extension part 13. The extension part 13 may comprise further stuffing as for example synthetic fiber batting, cotton, straw, wood wool, plastic pellets or beans and may therefore be elastically deformable in a manner known per se. However, due to the beeswax layer 18 the extension part 13 is plastically deformable relative to the main part 12 and may thus maintain a position relative to the main part 12. For example, the head of the teddy may stay in a position looking up or down or to the sides.

[0022] As explained, the beeswax layers 14, 16, 18 are each sewn into enclosures formed by the textile layers 20, 22, 24, 26, 28, respectively. The enclosures formed by said textile layers each have an excess in the range of 0.5% to 3% of the dimensions of the at least one beeswax layer with respect to the axis L. Thus, the beeswax layers 14, 16, 18 are distanced from their respective enclosing textile layers 20, 22, 24, 26, 28 along the length L and the width W of the main part 12 of the toy. Such oversize may prevent the relatively large temperature expansion of the beeswax material from causing unwanted deformations of the enclosing textile layers and possibly the toy. However, along the thickness T of the main part 12 the enclosures form no excess, contrary to the schematic representation in fig. 2. Instead the textile layers 20, 22, 24, 26 directly rest against the respective beeswax layers 14, 16, 18.

[0023] However, the beeswax layers 14, 16, 18 may also extend to the edges of their respective enclosing textile layers as can be seen in fig. 3, i.e. the enclosure forming no excess. The beeswax layers 14, 16 may comprise additional seams 36 extending through the respective textile layers 20, 22, 24 and the beeswax layers 14, 16 as well, in particular along horizontal and vertical lines, as can be seen in fig. 4. This way an unwanted movement of the beeswax layers 14, 16 within the textile layers 20, 22, 24 may be prevented. The beeswax layers 14, 16, 18 have a honeycomb structure as can be seen in particular in figs. 3 and 4. The beeswax layers 14, 16, 18 may have a thickness in the range of preferably 2 mm to 3 mm.

List of references

[0024]

10	stuffed toy
12	main part
13	extension part
15	hangers
14, 16, 18	beeswax layers
20, 22, 24, 26, 28	textile layers
21, 23, 30, 32, 36	seams
L	length
T	thickness
W	width

Claims

1. Stuffed toy comprising as a stuffing at least one beeswax layer (14, 16, 18) being enclosed by textile layers (20, 22, 24, 26, 28), the at least one beeswax layer (14, 16, 18) making the toy plastically deformable.
2. Stuffed toy according to claim 1, **characterized in that** the at least one beeswax layer (14, 16, 18) is sewn into the enclosure formed by the textile layers (20, 22, 24, 26, 28).
3. Stuffed toy according to claim 2, **characterized in that** the enclosure has an excess in the range of 0.5% to 3% of the dimensions of the at least one beeswax layer (14, 16, 18).
4. Stuffed toy according to one of the preceding claims, **characterized in that** the textile layers (20, 22, 24, 26, 28) consists exclusively of natural fibers.
5. Stuffed toy according to one of the preceding claims, **characterized in that** the at least one beeswax layer (14, 16, 18) extends over a substantial part of the toy, in particular over more than 50%, preferably more than 70%, of the toy.
6. Stuffed toy according to claim 5, **characterized in that** the at least one beeswax layer (14, 16, 18) extends through a main part (12) of the toy, said main part (12) being relatively thin compared to its length and width.

7. Stuffed toy according to one of the preceding claims, **characterized in that** the at least one beeswax layer (14, 16, 18) has a thickness in the range of 1 mm to 10 mm, preferably 2 mm to 3 mm.
8. Stuffed toy according to one of the preceding claims, **characterized in that** the at least one beeswax layer (14, 16, 18) comprises a honeycomb structure.
9. Stuffed toy according to one of the preceding claims, **characterized in that** the at least one beeswax layer (14, 16, 18) is manufactured by rolling a cast plate of beeswax.
10. Stuffed toy according to one of the preceding claims, **characterized in that** the toy comprises a main part (12) and an extension part (14) arranged at the main part (12) wherein at least one beeswax layer (18) extends between the main part (12) and the extension part (14).

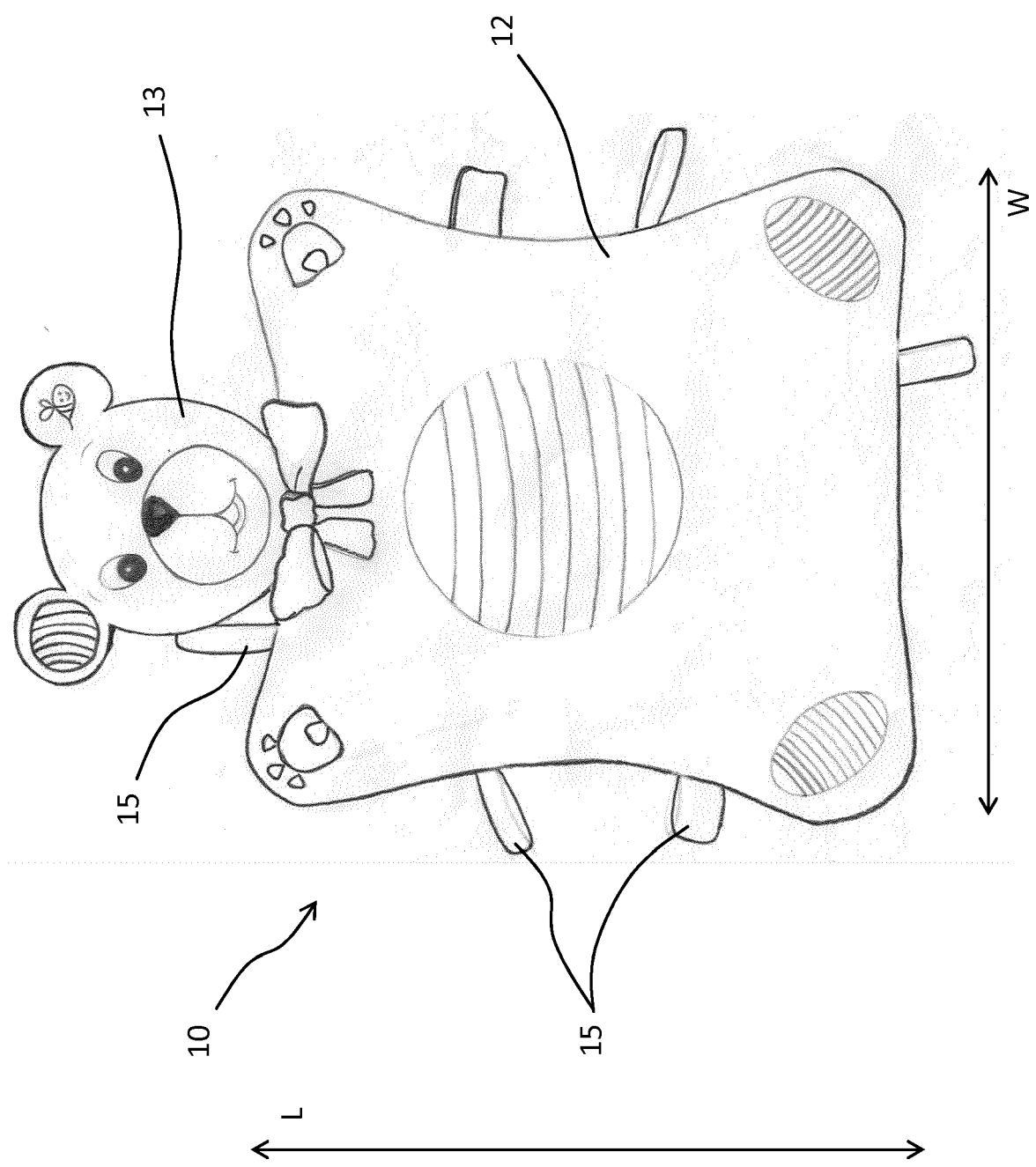


Fig. 1

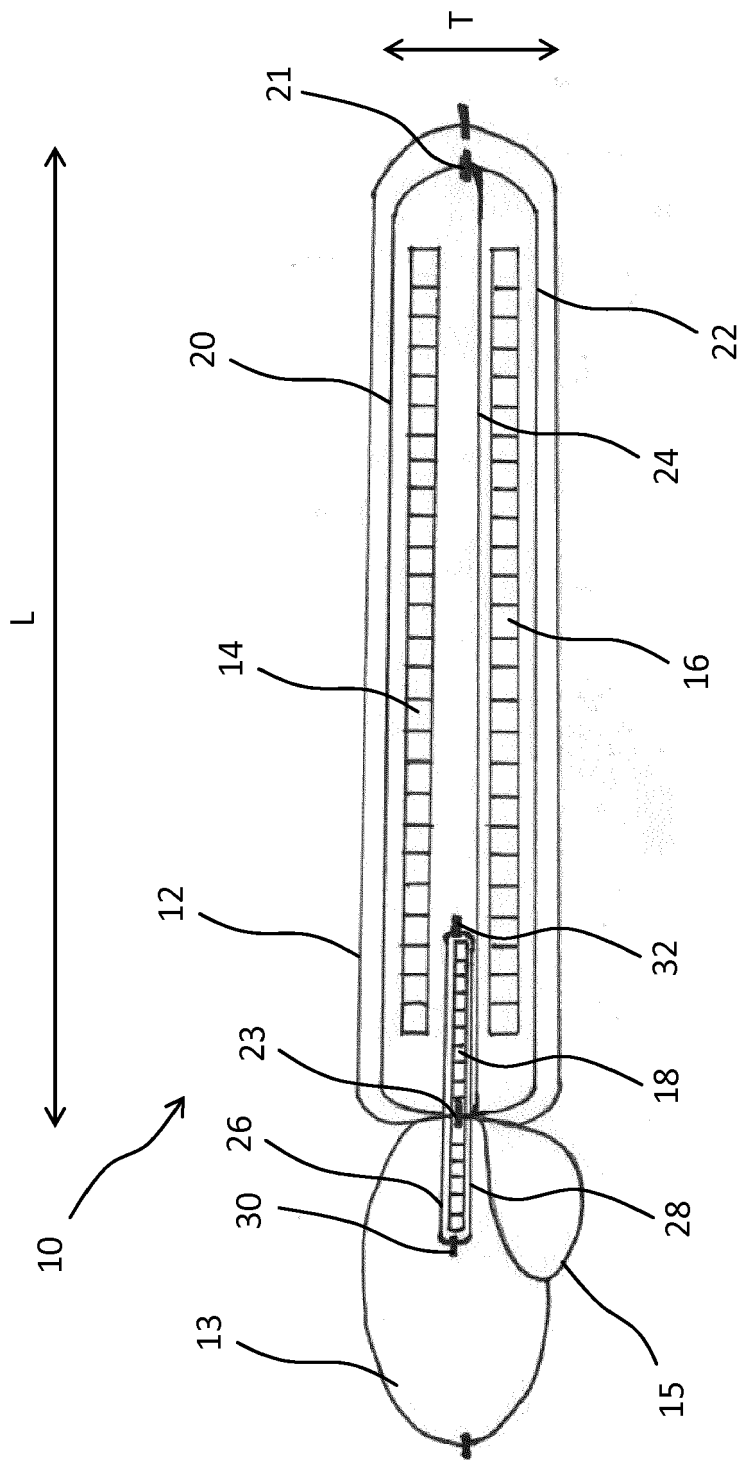


Fig. 2

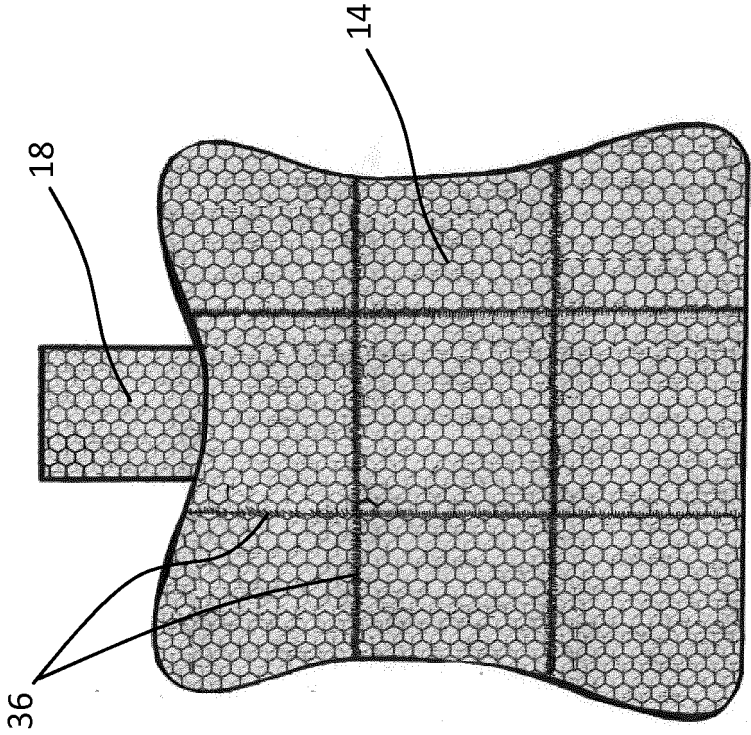


Fig. 4

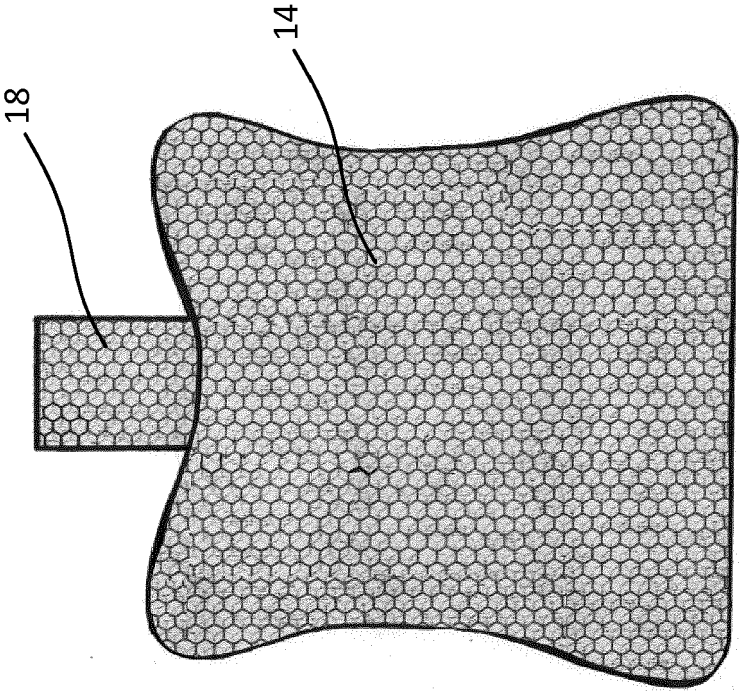


Fig. 3



EUROPEAN SEARCH REPORT

 Application Number
 EP 18 20 4795

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A	* page 1, paragraph 0016 - paragraph 0017; figures 1-6 *	8-10	A63H3/00 A63H3/02
A	US 6 800 015 B1 (DERGES PATRICIA A [US]) 5 October 2004 (2004-10-05) * column 4, line 38 - column 5, line 31; figures 1-2 *	1-10	
A	CN 104 941 186 A (ZHUANG KEXIANG) 30 September 2015 (2015-09-30) * the whole document *	1-10	
			TECHNICAL FIELDS SEARCHED (IPC)
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The present search report has been drawn up for all claims			
Place of search Munich		Date of completion of the search 18 December 2018	Examiner Brumme, Ion
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**ANNEX TO THE EUROPEAN SEARCH REPORT
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The members are as contained in the European Patent Office EDP file on
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For more details about this annex : see Official Journal of the European Patent Office, No. 12/82