

(19)



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(11)

EP 1 265 514 B1

(12)

EUROPEAN PATENT SPECIFICATION

(45) Date of publication and mention
of the grant of the patent:

07.12.2005 Bulletin 2005/49

(21) Application number: **01915953.2**

(22) Date of filing: **23.03.2001**

(51) Int Cl.7: **A47C 21/00**, A47C 31/00

(86) International application number:
PCT/NO2001/000129

(87) International publication number:
WO 2001/070076 (27.09.2001 Gazette 2001/39)

(54) **Cover for mattresses**

Matratzenüberzug

Enveloppe pour matelas

(84) Designated Contracting States:
**AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU
MC NL PT SE TR**

(30) Priority: **24.03.2000 NO 20001543**

(43) Date of publication of application:
18.12.2002 Bulletin 2002/51

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Description

Technical field

[0001] The present invention concerns a cover for mattresses.

Background of the invention

[0002] Beds often consist of two types of mattresses, a main mattress and a top mattress. Additionally, a mattress with a base may also be used.

[0003] The main mattress may be a reversible mattress, which may be used on both sides. Mattresses of this type may have a different degree of hardness on each of the two sides. Another type of main mattress is a frame mattress where the mattress is attached to a frame, usually of wood, which may be fitted with e.g. legs, bows or a base. A frame mattress may only be used on one side.

[0004] The core of the main mattress usually consists of a spring system, which may have different softness/hardness.

[0005] Between the spring system and the cover, there is usually found a lining. The lining may have varying degrees of softness, and is found in several materials, such as foamed plastic, synthetic fiber or natural latex. The lining material contains much air, and is compressed after repeated usage. It therefore has a limited lifetime, since it loses its resilience.

[0006] The cover is often made of cotton or viscose or mixtures thereof. A layer of fiber may be sown to the cover, which thereby gets the appearance of a bubbled or quilted cover. Covers for reversible mattresses consist of two surfaces of elastic web material and an edge piece, which are sown together. In addition, the cover may have a zipper in the end, which is used when the cover is machine-fitted onto the mattress.

[0007] In frame mattresses, the cover consists of one surface of elastic web material and one edge piece, which are sown together. The cover is fitted over the mattress and often permanently fastened to the frame, e.g. by stapling. There has also appeared on the market a solution where the cover is fastened with hook and loop fasteners.

[0008] The top mattress is placed on top of the main mattress. The top mattress may have a simple form of two sown-together surfaces of elastic web material with fiber, or in addition have a thin mattress between the surfaces of material, such as e.g. used as lining in the main mattress.

[0009] The cover for a top mattress having a mattress inside, often has an edge piece and a zipper at the end or along some of the edges, so that the mattress may be pulled out. The cover of the top mattress often has a quilted quality. The sown-on fiber may for example be of wool on one side and cotton on the other, to provide a reversible top mattress adapted to winter and summer

use, respectively.

[0010] The topside of the bed, especially the top mattress, is in closer contact to the body than other parts of the bed. This part of the furniture should therefore be cleaned regularly and more often than the other parts, or be replaced because of spillage and wear.

[0011] A problem when cleaning the cover of mattresses, and especially the top mattress, is disassembly and assembly of the cover itself. The cover is not always removable, or it may be difficult to remove. Assembly may be especially difficult owing to a small opening for introducing the mattress, and/or a strong friction between the inside of the cover and the outside of the mattress which is to be introduced.

[0012] If the cover is not removable, the whole mattress or top mattress needs to be changed even if it is only the cover, parts of the cover, the mattress itself or the lining that needs to be changed.

[0013] Another well-known problem is that the covers are too large to place in ordinary washing machines. Accordingly, industrial washing machines or dry-cleaning must be used, which makes cleaning more expensive and, in practice, results in a less frequent cleaning.

[0014] In the prior art it is known cover elements for mattresses, which partly solves the problems listed above. By using zippers along the whole edge of the mattress as described in US patent no. 2,907,055, the cover elements may more easily be removed. By using more than one zipper or zipper sides with starting point in both ends, this cover element may also be turned in relation to the other in order to move the worn or compressed parts of the cover to other positions as described in US patent no. 5,414,882.

[0015] The problem with these solutions is that the mattress has two different cover elements (over/under- or left/right sides), with differently arranged fastening systems. If one element of the cover is to be replaced, the correct cover element must be provided so that it fits the remaining cover element. The dealer must thereby store a stock of both types of cover elements. If the mattress or top mattress in addition is to have the possibility of different quality or properties on different sides as mentioned above, the dealer must likewise store a stock of each quality for two different types of cover elements, which is expensive. The alternative is to order the cover element, with the danger of wrong delivery, or restricting the possibilities for combination.

[0016] Neither do the above mentioned patents solve the problem of cleaning the cover elements for double beds. As the cover elements usually are of quilted quality, they remain too large and voluminous for a household washing machine.

[0017] There is therefore a need for removable covers for mattresses and top mattresses for both single and double bed(s) consisting of identical cover elements that may be used interchangeably.

Summary of the invention

[0018] The present invention solves the above-mentioned problems by using cover elements as claimed in claim 1, viz. a cover element of elastic wire material equipped with a fastening system consisting of two or more zipper sides around the edges such that the cover element may be coupled opposite at least one additional cover element, with an identically arranged fastening system where the starting points and ending points for the glider sides are opposite respective starting points and ending points of the box sides on the additional cover element and vice versa. The cover elements are removable and independent of each other, and may be used interchangeably and together.

Short description of the drawings

[0019] Examples of embodiments of the invention are shown in the following drawings:

- Fig. 1 is a perspective view of a first cover element according to the invention, and two details in larger scale.
- Fig. 2 is a similar view as Fig. 1, of a second cover element according to the invention.
- Fig. 3 is a perspective partial view, which illustrates the use of the cover element shown in Fig. 2.
- Fig. 4 is a perspective view illustrating the use of the cover element shown in Fig. 2.
- Fig. 5 is a perspective view of a third cover element according to the invention.
- Fig. 6 is a perspective view of a fourth cover element according to the invention.
- Fig. 7 is a perspective view of several cover elements, for use as a cover for a double mattress.
- Fig. 8 is a perspective view of a fifth cover element according to the invention.
- Fig. 9 is a perspective view of four cover elements as shown in Fig. 8, for use as a cover for a double mattress.
- Fig. 10 is a perspective view of a sixth cover element according to the invention.

[0020] A cover element is shown in Fig. 1, and consists of a surface of elastic web material 1 with two sewn-on zipper sides 2 and 6. The zipper sides are two matching pieces of a zipper, i.e. one glider side 2 with glider

3, and one box side 6. The zipper sides are mounted on the same side of the surface, such that both zipper sides have their starting points 4 and 7 in the same end of the surface 1, e.g. the short side, each runs along its side edge of the surface and has an end point 5 and 8 in the opposite end of the surface, e.g. opposite short end, as shown in the enlargements in Fig. 1. Matching starting point and end point thereby lie symmetrically around a center plane perpendicular to the surface plane. A cover element will have surface dimensions that fit the bed on which it is to be used, e.g. 200 cm x 80 cm.

[0021] The cover element may also include an edge piece 9 placed between the end edges of the surface 1 and the zipper sides 2 and 6. The height of the edge piece must be adapted to the mattress or lining to be used, e.g. 1-5 cm for top mattresses or e.g. 1-20 cm for main mattresses.

[0022] Two identical cover elements may be assembled together as shown in Fig. 3, since the glider side 2 of one cover element fits together with the box side 6 of the other piece and vice-versa, when one cover element is flipped over along its longitudinal axis. From the top cover, the starting point for the glider side 4 and the glider 3 fit the starting point of the box side 7 of the zipper on the lower cover element. Similarly, the starting point of the glider side 4 and the glider 3 of the lower cover element fits the starting point of the box side 7 of the zipper on the top cover element. The two zippers thereby connect the two cover elements together to form one cover, and this may constitute the cover for a top mattress. Between the cover elements there may be placed a thin mattress 10 in order to obtain a thicker top mattress, as shown in Fig. 3. Optionally, the cover elements may be used alone as a thin top mattress. Then, the cover elements do not need any edge piece, as shown in Fig. 1.

[0023] A cover element may be used as top cover for a main mattress as shown in Fig. 4, with edge piece 11 and basis 12. The main mattress may be a reversible mattress or a frame mattress, e.g. with bows 13. Optionally, the edge piece of the top cover and of the basis may be equally high, and will in a reversible mattress be identical and may thus be used interchangeably.

[0024] The cover element may also be equipped with a fastening system consisting of 4 or 8 zipper sides (i.e. 2 or 4 of each zipper side), as shown in Fig. 5 and 6, respectively. Optionally, several zipper sides may be used with an identical number of glider sides and box sides on one and the same surface side, where the respective starting points 4 and 7 and end points 5 and 8 are symmetrical around the center axis of the cover element perpendicular to the surface plane. These cover elements fit together, whether they are flipped along the longitudinal axis or the cross-directional axis. The cover elements of Fig. 5 and 6 may additionally be folded double once along the longitudinal center axis and/or once along the cross-directional center axis and be locked using the outer zipper sides, since these will be connect-

able zipper sides 2 and 6. This may be done in order to retain a folded and compact form, e.g. for transport, storage and keeping. The cover element in Fig. 6 can further be folded once along the longitudinal axis, with the same result.

[0025] A cover element for double mattresses may consist of half of any of the above-described cover elements, for example the one shown in Fig. 2, parted along the center longitudinal axis and where there is provided at least one zipper side along the parting edge, as exemplified in Fig. 7. The cover element for a double mattress may advantageously be designed as shown in Fig. 8, which has an edge piece 9 which only covers three of the four side edges. Preferably, there is provided one glider side and one box side with a starting point at midpoint of the length of the parting edge and with a stop point in the ends, in order to avoid discomfort during use. Four such identical cover elements as shown in Fig. 8 may be assembled as shown in fig. 9 to form a cover for a double top mattress. With high edge pieces 9, these cover elements may form a reversible double mattress. The zippers in the center joint may have an overlapping lip, for example of textile material, in order to avoid discomfort and wear of bed linen during use (not shown). The dimensions of the cover element will typically match the surface dimensions of the bed, e.g. 80 cm x 200 cm to fit a 160 cm x 200 cm double bed.

[0026] Fig. 10 shows a cover element with fastening system as shown in Fig. 2, where there is additionally provided a fastening system on the other surface side of the surface 1. The cover element constitutes a combined top cover for the main mattress and bottom cover for the top mattress. The cover element can, for example, be used between the cover elements shown in Fig. 4. The cover element may also be used in other combinations with more than two mattresses on top of each other, such as, for example, additionally to a bed with a base. The cover element may alternatively be equipped with alternative fastening means, as described above or as shown in Fig. 5, 6 and 7. The advantage of this cover element is that it may lock two mattresses together, and prevents the two mattresses from shifting in relation to each other while the bed is in use or e.g. during changing of linen. Additionally, the cover prevents the collection of dust and fluff between the mattresses, and replaces two cover elements, such as e.g. two of the ones shown in Fig. 2. The cover may also be fitted to a double bed. This will be one half of the cover part described above, parted along the longitudinal center axis, where there is provided at least one zipper side along the parting edge. The cover element may for example be identical to the one shown in Fig. 8, equipped with an edge piece and zipper sides like the ones existing on the other surface side, but symmetrically along the center latitudinal axis.

[0027] One advantage of the above-described system is that the cover elements are easy to assemble/disassemble with the zippers. It is easy to remove the pieces after opening the zippers, since the pieces may

be pulled off each other without any significant friction. For assembly, the pieces are placed on top of each other and locked together using the zippers.

[0028] The accessibility of the bed furniture's parts is improved, and makes it easy to replace for example the inner mattress and/or lining in either the top mattress or the main mattress. Over time, the cover will become stretched and the mattress will therefore become somewhat softer, which may be corrected by adding more lining. Optionally, the spring system or parts thereof in different zones may be replaced in order to change the softness of the main mattress. Parts of the mattress may therefore be replaced or improved and adjusted to conform to changes in the user, such as e.g. weight, height or preferences, without replacing the whole mattress. The system makes it easy to equip the mattress with e.g. heating elements under the whole of, or parts of, the cover.

[0029] The cover elements are also easily handled due to their small size, low weight and good foldability. This allows the pieces to be washed in a conventional washing machine.

[0030] The rest of the mattress may be left in the bed piece after removal of a cover element. When cleaning a cover element, it may take some time to dry it. One may therefore have one cover element extra, such that the bed is complete in the meantime. Since the fastening system is identical, one cover will fit a reversible mattress, a frame mattress or any side of a top mattress. This is an advantage in a household where, for example, all the covers may be used interchangeably during cleaning or if there is a need for replacement. Thereby, there are plenty of temporary solutions in case a cover cannot be used.

[0031] When replacing a cover, it will be of great advantage both for the supplier and the consumer that it is only necessary to have one type of cover in stock, i.e. no right/left or top/bottom side. There is thus no risk of delivering a wrong cover element that does not fit. This will additionally give a greater clarity concerning stocks, reduce the necessary storage capacity and enhance the availability.

[0032] The cover in itself may be produced in different qualities and materials. The fiber material with which the cover is lined may have different properties, as described above. A top mattress consisting of two cover parts may thereby have different properties on the two sides. A double top mattress may additionally have different properties on neighboring sides.

Claims

1. A cover element for mattresses comprising a rectangular surface with glider (3) of elastic wire material having a fastening system **characterised in that:**

said fastening system comprises at least one glider side (2) with glider (3) of a zipper sewn on to the rectangular surface and running along an edge of said surface and at least one box side (6) of a zipper sewn on to the rectangular surface and running along an edge of said surface, whereby the cover element can be connected to another cover element with an identically arranged fastening system.

2. A cover element according to claim 1, wherein the fastening system consists of one glider side (2) and one box side (6) arranged on the same side of the cover element wherein matching starting point (4 and 7) and end point (5 and 8) lie symmetrically around a center plane perpendicular to the surface.
3. A cover element according to claim 1, wherein the fastening system consists of two or more glider sides (2) and an equal number of box sides (6) arranged on the same side of the cover element wherein the respective starting points (4 and 7) and end points (5 and 8) are symmetrical around the center axis of the cover, perpendicular to the surface.
4. A cover element according to any of the preceding claims, wherein the cover element consists of an end piece (9) arranged between the edges of the surface (1) and the zipper sides (2, 6).
5. A cover element according to any of the preceding claims, further comprising a corresponding fastening system on the other side of the rectangular surface (1).
6. A cover element, **characterized in that** it comprises one half of a cover element according to any of the previous claims parted along the centre longitudinal axis, and further comprising at least one side of a zipper along the parting edge.
7. A cover element according to claim 6, wherein there are arranged on the parting edge a glider side and a box side if a zipper with their starting points (4 and 7) arranged at midpoint of the parting edge and their end points at the ends of the parting edge.
8. A cover for a mattress consisting of two identical cover elements according to any of the claims 1-4.
9. A cover for a mattress consisting of four cover elements according to claim 6 or 7.
10. A frame mattress, comprising a cover element according to any of claims 1-7, and a base having a fastening system identical to that of the cover element.

11. A frame mattress, comprising two cover elements according to claim 6 or 7, and a base having a corresponding fastening system.

Patentansprüche

1. Überzugelement für Matratzen, das eine rechteckige Oberfläche (1) von elastischem Drahtmaterial aufweist, das ein Befestigungssystem hat, **dadurch gekennzeichnet, dass** das Befestigungssystem wenigstens eine Gleiteinrichtungsseite bzw. -flanke (2) mit Gleiteinrichtung (3) eines Reißverschlusses, der an der rechteckigen Oberfläche angenäht ist, und entlang eines Randes der Oberfläche läuft, und wenigstens eine Behälterseite bzw. -flanke (6) eines Reißverschlusses aufweist, der an der rechteckigen Oberfläche angenäht ist und entlang eines Randes der Oberfläche läuft, wodurch das Überzugelement an einem anderen Überzugelement mit einem identisch angeordneten Befestigungssystem angeschlossen bzw. verbunden werden kann.
2. Überzugelement gemäß Anspruch 1, wobei das Befestigungssystem aus einer Gleiteinrichtungsseite bzw. -flanke (2) und einer Behälterseite bzw. -flanke (6) besteht, die an derselben Seite des Überzugelementes angeordnet sind, wobei sich passende Ausgangspunkte (4 und 7) und Endpunkte (5 und 8) symmetrisch um eine Mittelebene herum, senkrecht zu der Oberfläche, befinden.
3. Überzugelement gemäß Anspruch 1, wobei das Befestigungssystem aus zwei oder mehr Gleiteinrichtungsseiten bzw. -flanken (2) und einer gleichen Anzahl Behälterseiten bzw. -flanken (6) besteht, die an derselben Seite des Überzugelementes angeordnet sind, wobei sich die jeweiligen Ausgangspunkte (4 und 7) und Endpunkte (5 und 8) symmetrisch um die Mittelachse des Überzuges herum, senkrecht zu der Oberfläche befinden.
4. Überzugelement gemäß irgendeinem der vorhergehenden Ansprüche, wobei das Überzugelement aus einem Endstück (9) besteht, das zwischen den Rändern der Oberfläche (1) und den Reißverschlusseiten bzw. -flanken (2, 6) angeordnet ist.
5. Überzugelement gemäß irgendeinem der vorhergehenden Ansprüche, das ferner ein entsprechendes Befestigungssystem an der anderen Seite der rechteckigen Oberfläche (1) aufweist.
6. Überzugelement, **dadurch gekennzeichnet, dass** es eine Hälfte eines Überzugelementes gemäß irgendeinem der vorhergehenden Ansprüche aufweist, geteilt entlang des Zentrums bzw. Mittelpunktes der Längsachse, und ferner wenigstens eine

Seite eines Reißverschlusses entlang des Teilungsrandes aufweist.

7. Überzugelement gemäß Anspruch 6, wobei an dem Teilungsrand eine Gleiteinrichtungsseite bzw. -flanke und eine Behälterseite bzw. -flanke angeordnet sind, wenn ein Reißverschluss mit seinen Ausgangspunkten (4 und 7) an dem Mittelpunkt des Teilungsrandes und seinen Endpunkten an den Enden des Teilungsrandes angeordnet ist.
8. Überzug für eine Matratze, der aus zwei identischen Überzugelementen gemäß irgendeinem der Ansprüche 1 bis 4 besteht.
9. Überzug für eine Matratze, der aus vier Überzugelementen gemäß den Ansprüchen 6 oder 7 besteht.
10. Rahmen- bzw. Gestellmatratze, die ein Überzugelement gemäß irgendeinem der Ansprüche 1 bis 7 und eine Basis bzw. Unterteil aufweist, die bzw. das ein Befestigungssystem identisch zu dem des Überzugelementes hat.
11. Rahmen- bzw. Gestellmatratze, die zwei Überzugelemente gemäß Anspruch 6 oder 7 und eine Basis bzw. Unterteil aufweist, die bzw. das ein entsprechendes Befestigungssystem hat.

Revendications

1. Un élément d'enveloppe pour matelas comprenant une surface rectangulaire (1) en fil élastique, comprenant un système de fixation, **caractérisé en ce que** :
ledit système de fixation comprend au moins un côté de glissière (2) avec une glissière (3) d'une fermeture à glissière cousue sur la surface rectangulaire et passant le long d'un bord de ladite surface, et au moins un côté de boîtier (6) d'une fermeture à glissière cousue sur la surface rectangulaire et passant le long d'un bord de ladite surface, de sorte que l'élément d'enveloppe peut être relié à un autre élément d'enveloppe avec un système de fixation disposé de manière identique.
2. Un élément d'enveloppe selon la revendication 1, dans lequel le système de fixation se compose d'un côté de glissière (2) et d'un côté de boîtier (6) disposés sur le même côté de l'élément d'enveloppe, où le point de départ (4 et 7) et le point de fin (5 et 8) qui se correspondent se trouvent de manière symétrique autour d'un plan central perpendiculaire à la surface.
3. Un élément d'enveloppe selon la revendication 1, dans lequel le système de fixation se compose de deux côtés de glissière (2) ou davantage et d'un nombre égal de côtés de boîtier (6) disposés sur le même côté de l'élément d'enveloppe, où les points de départ (4 et 7) et les points d'extrémité (5 et 8) respectifs sont symétriques autour de l'axe central de l'enveloppe, perpendiculairement à la surface.
4. Un élément d'enveloppe selon l'une quelconque des revendications précédentes, dans lequel l'élément d'enveloppe se compose d'une partie d'extrémité (9) disposée entre les bords de la surface (1) et les côtés de glissière (2, 6).
5. Un élément d'enveloppe selon l'une quelconque des revendications précédentes, comprenant en outre un système de fixation correspondant sur l'autre côté de la surface rectangulaire (1).
6. Un élément d'enveloppe, **caractérisé en ce qu'il** comprend une moitié d'un élément d'enveloppe selon l'une quelconque des revendications précédentes séparées le long de l'axe longitudinal central, et comprenant en outre au moins un côté d'une fermeture à glissière le long du bord de séparation.
7. Un élément d'enveloppe selon la revendication 6, dans lequel sont disposés, sur le bord de séparation, un côté de glissière et un côté de boîtier d'une fermeture à glissière avec leurs points de départ (4 et 7) disposés au niveau du point milieu du bord de séparation et leurs points d'extrémité au niveau des extrémités du bord de séparation.
8. Une enveloppe pour un matelas se composant de deux éléments d'enveloppe identiques selon l'une quelconque des revendications 1-4.
9. Une enveloppe pour un matelas se composant de quatre éléments d'enveloppe selon la revendication 6 ou 7.
10. Un matelas à châssis, comprenant un élément d'enveloppe selon l'une quelconque des revendications 1-7, et une base comprenant un système de fixation identique à celui de l'élément d'enveloppe.
11. Un matelas à châssis, comprenant deux éléments d'enveloppe selon la revendication 6 ou 7, et une base comprenant un système de fixation correspondant.

Fig. 1

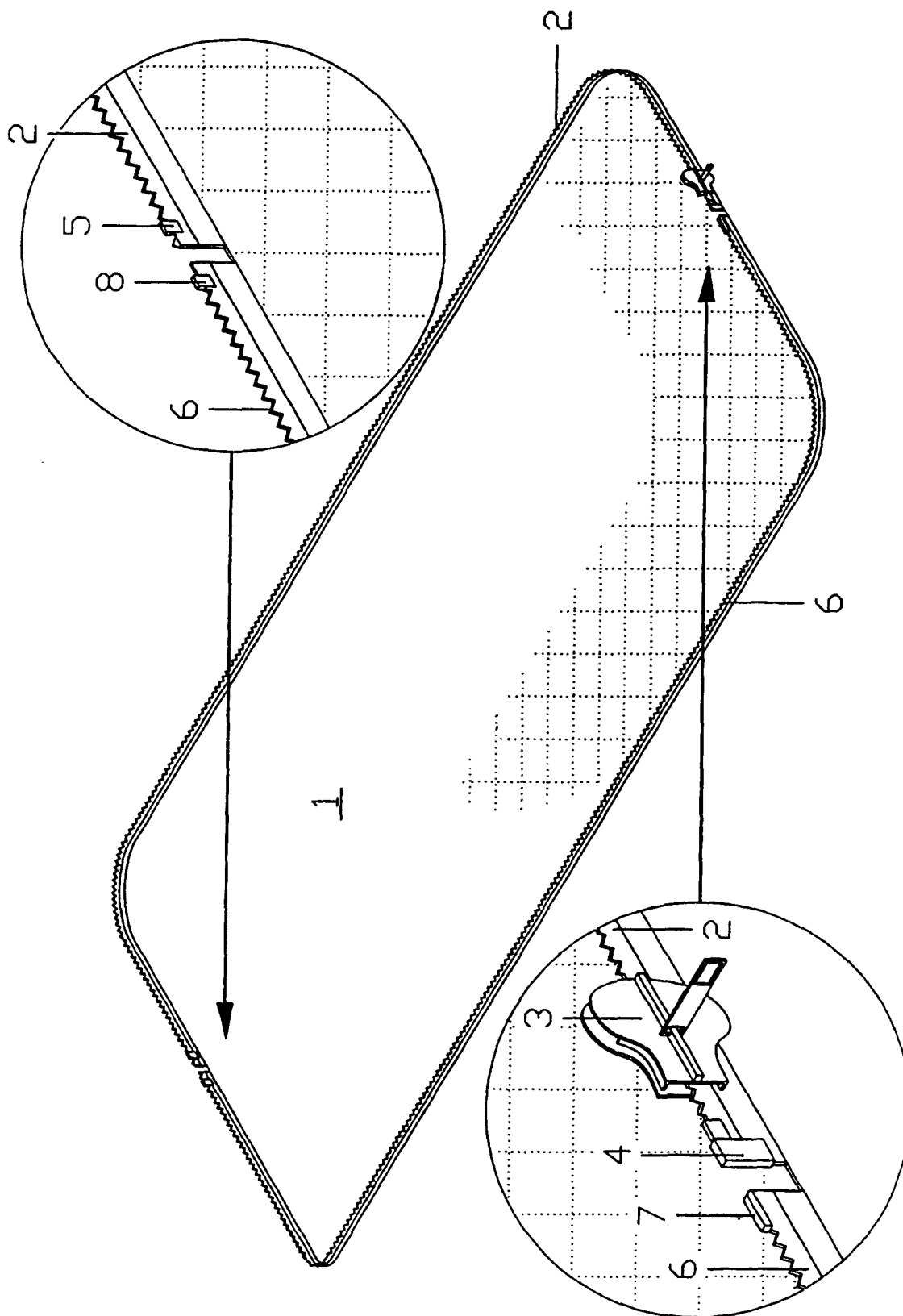


Fig. 2

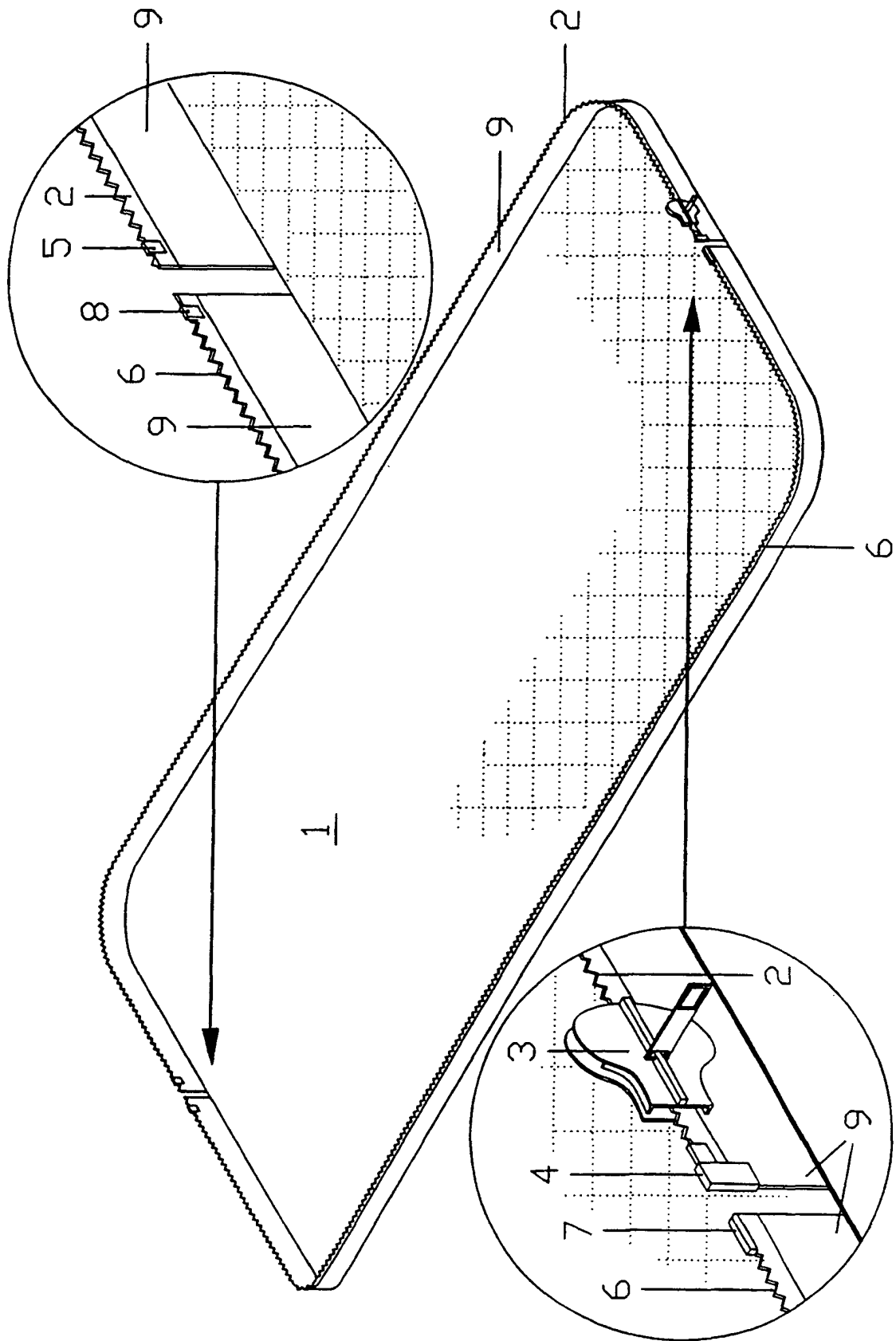


Fig. 3

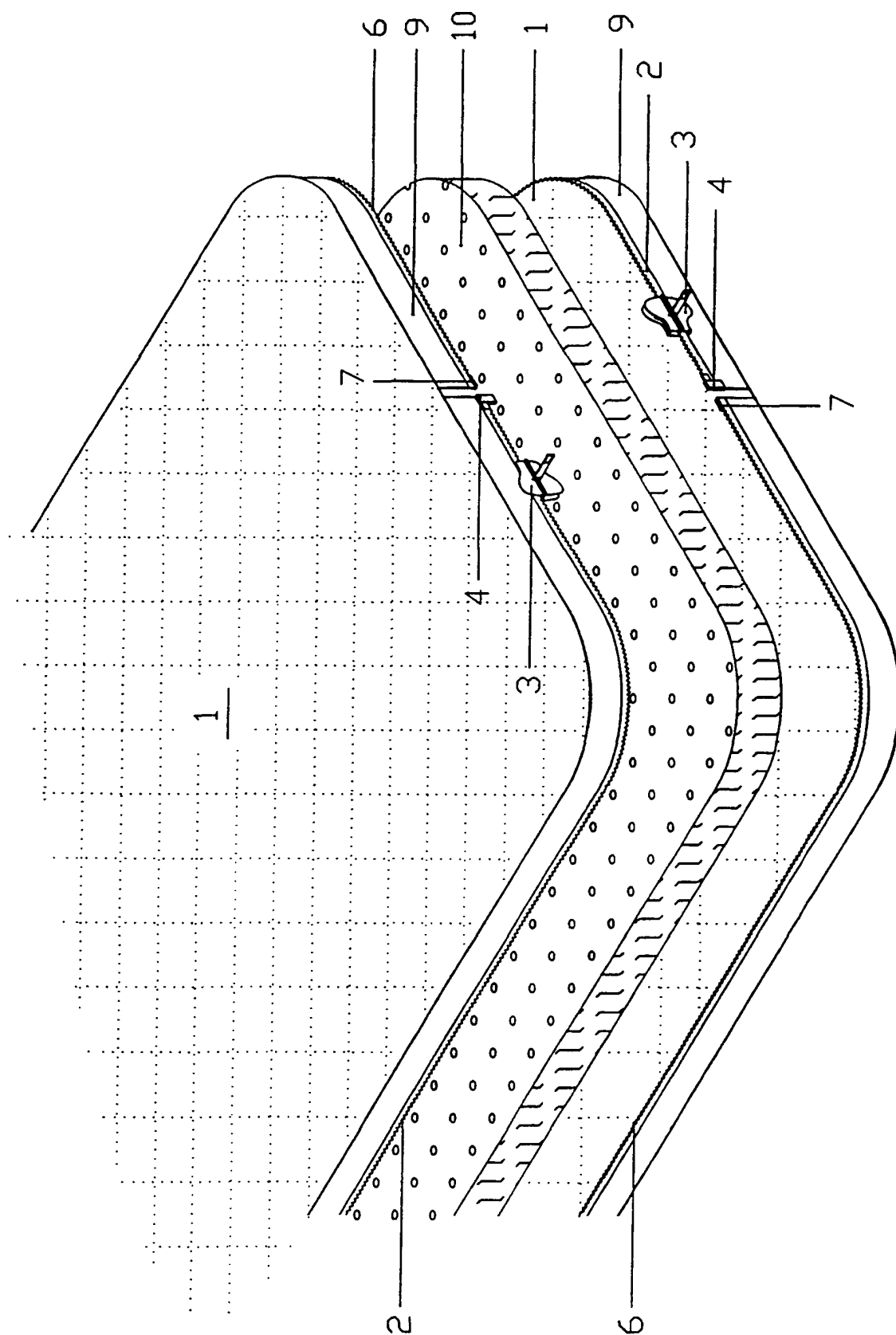


Fig. 4

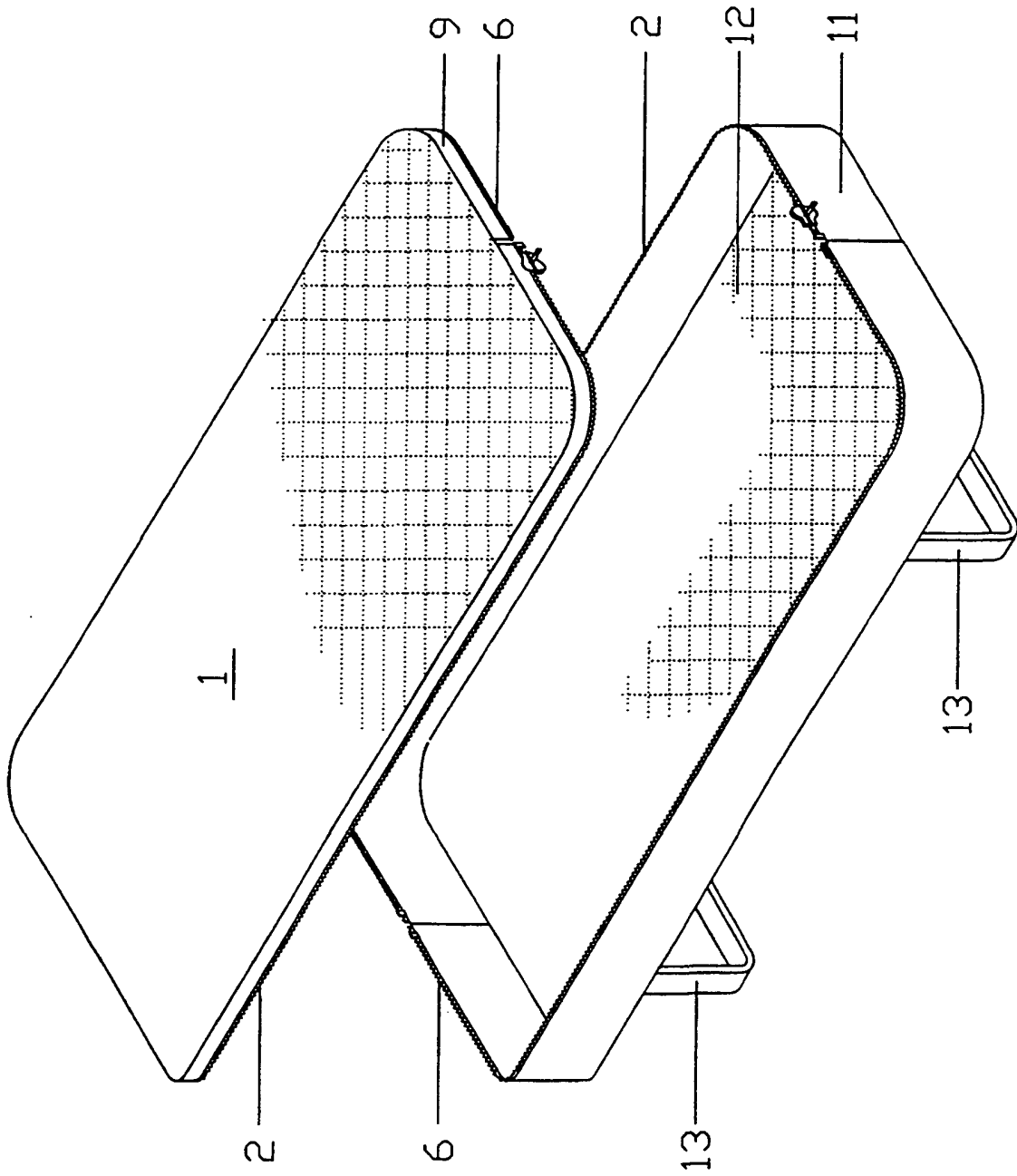


Fig. 5

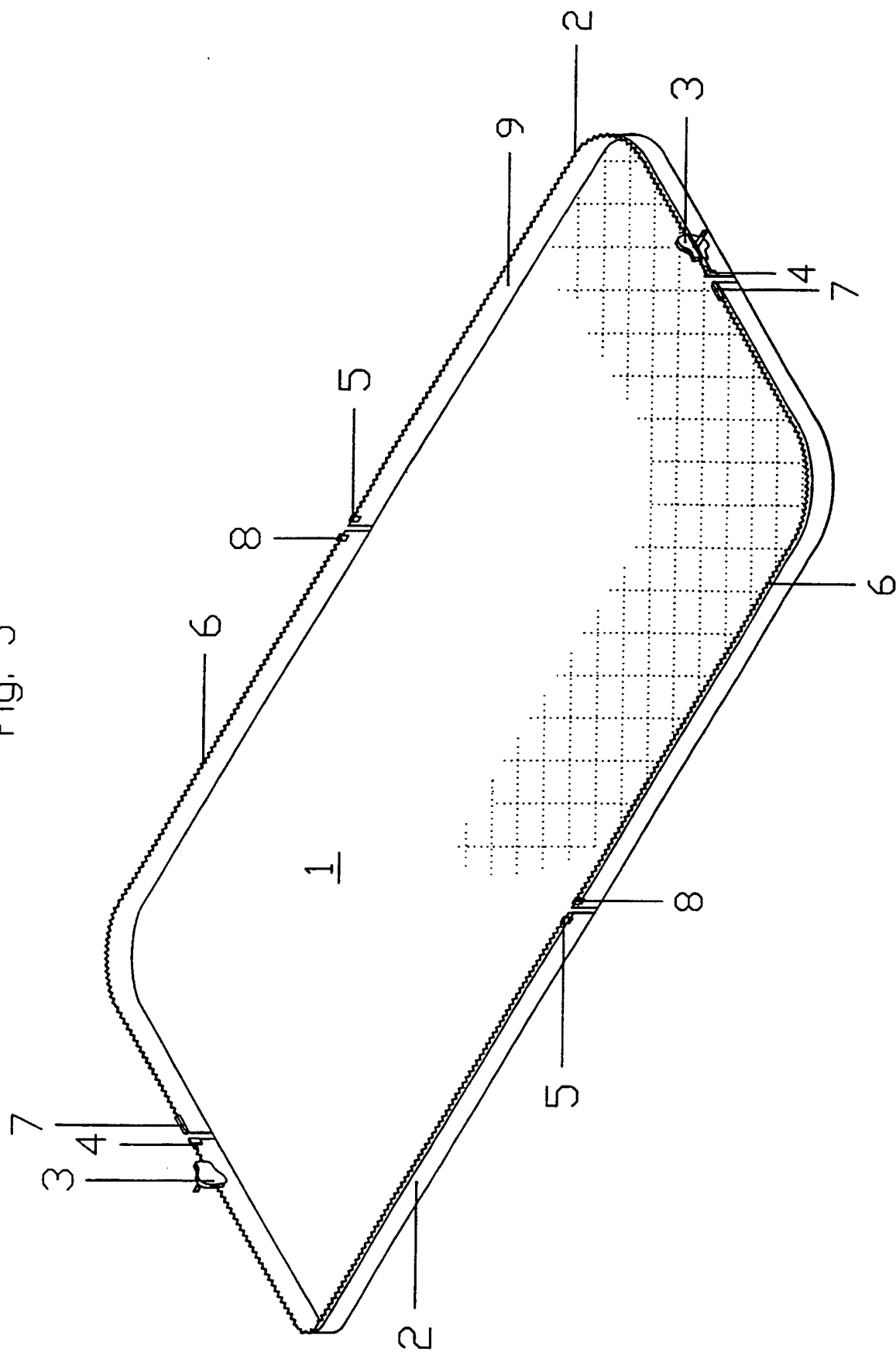


Fig. 6

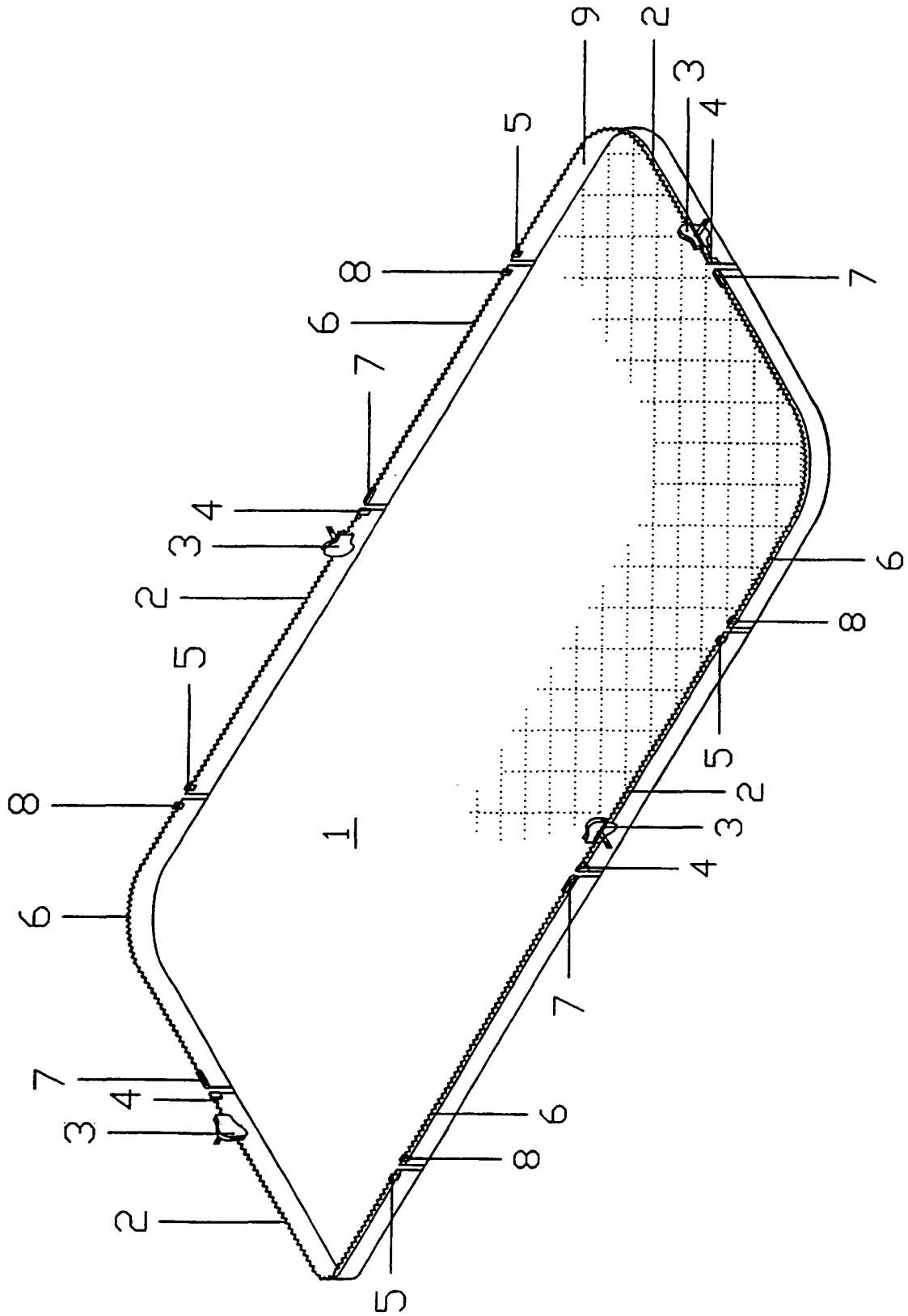


Fig. 7

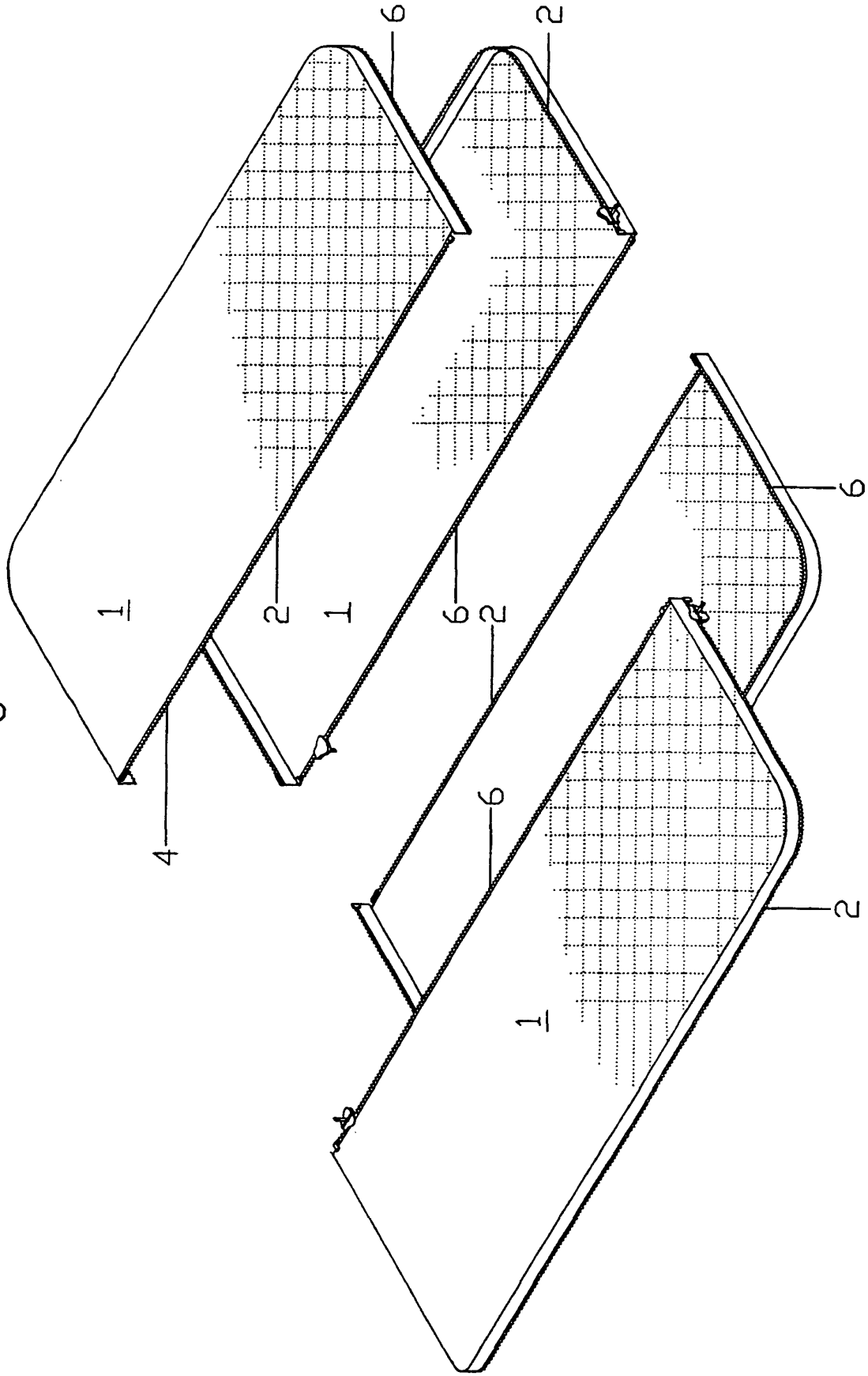


Fig. 8

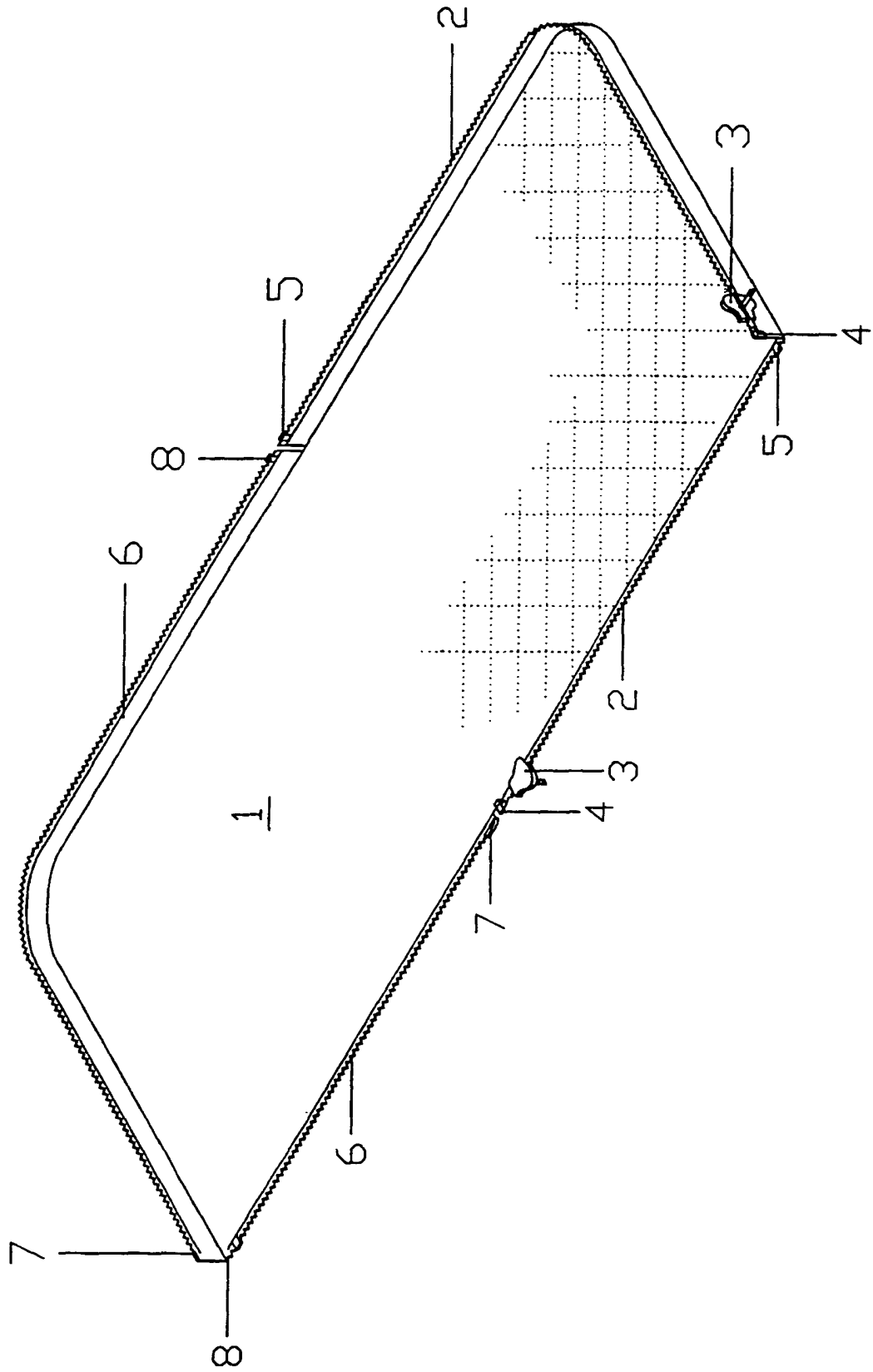


Fig. 9

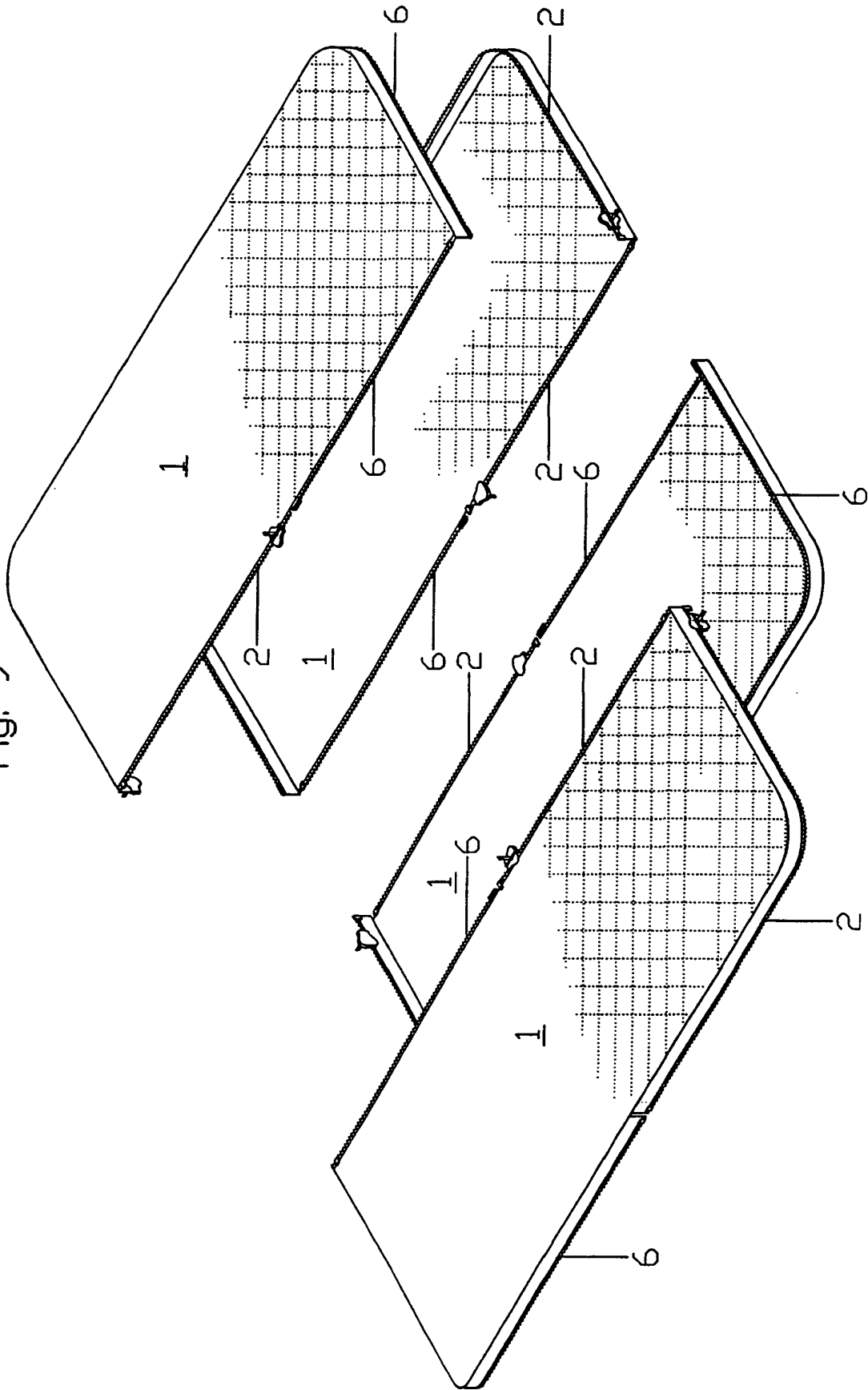


Fig. 10

