



(12) **EUROPEAN PATENT APPLICATION**

(43) Date of publication:
11.07.2007 Bulletin 2007/28

(51) Int Cl.:
A47G 9/02 (2006.01)

(21) Application number: **06250086.3**

(22) Date of filing: **09.01.2006**

(84) Designated Contracting States:
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC NL PL PT RO SE SI SK TR
 Designated Extension States:
AL BA HR MK YU

(72) Inventor: **Yang, Wei Hen**
Taipei City 111 (TW)

(74) Representative: **Pratt, David Martin et al**
Withers & Rogers LLP
Goldings House,
2 Hays Lane
London SE1 2HW (GB)

(71) Applicant: **Yang, Wei Hen**
Taipei City 111 (TW)

(54) **Three-dimensional shaped bedding**

(57) A three-dimensional shaped bedding comprising a confining member and a covering member is disclosed. The confining member encloses a predefined plane. The covering member is connected with the confining member in such a way that the predefined plane is situated on one side of the covering member. The covering member has at least an opening and at least one

apical surface. The apical surface is one height apart from the confining member to turn the covering member into a shape of predefined continuous curve and make the apical surface essentially the highest point. The covering member may be folded up through exertion of force, and when the force is removed, restores the shape of predefined continuous curve.

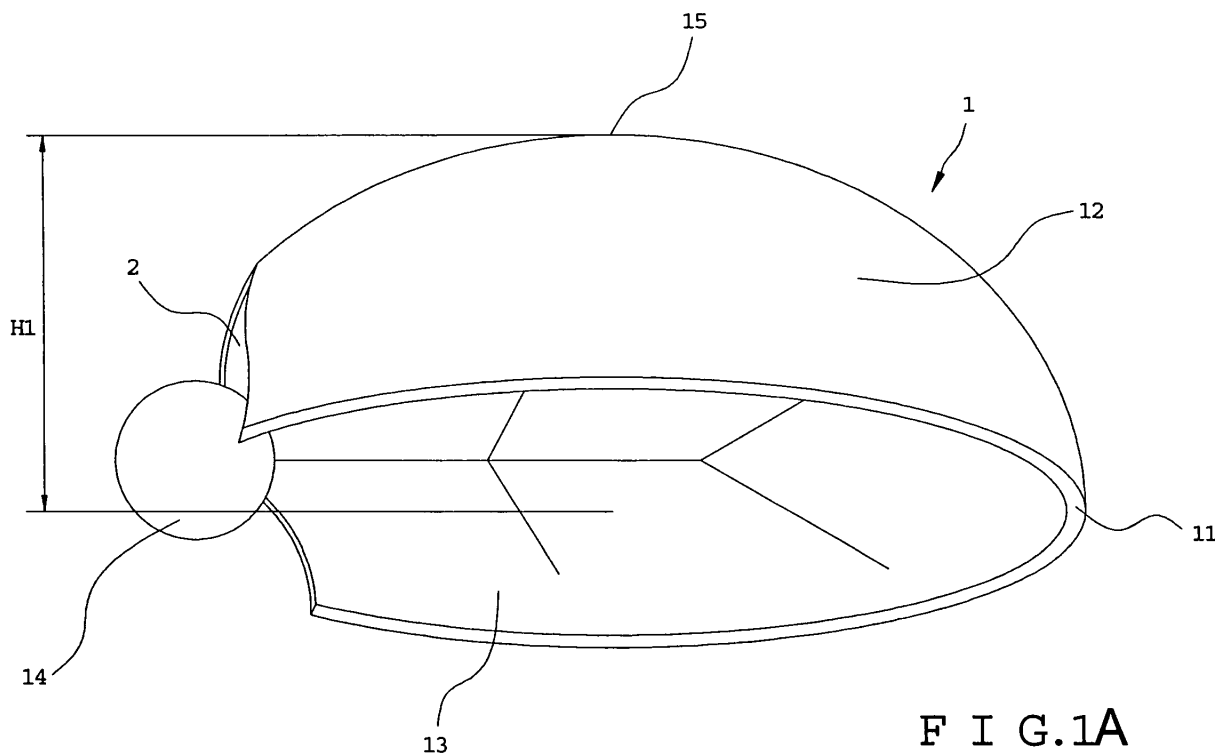


FIG. 1A

Description

BACKGROUND OF INVENTION

1. FIELD OF THE INVENTION

[0001] The present invention relates to a bedding, more particularly a kind of three-dimensional shaped bedding with predefined continuous curve.

2. DESCRIPTION OF THE PRIOR ART

[0002] Average person spends a third of their life sleeping, which makes the comfort of bedding particularly important. But bedding with warm covering that feels comfortable when you lie down is not necessarily good bedding. The fabric used for the facing, content material, weaving method and colors are all key factors affecting the quality of sleep. Good choices of mattress, padding, bed sheet, pillow and blanket can be beneficial to health, and exquisitely designed and good quality sheets, blanket cover, pillow case, and bed spread are a way of life that provide relaxation and comfort to sleepers.

[0003] Mattress and blanket are the first things to consider in the choice of bedding. The selection of mattress should first determine the size desired, and then try it out. Good mattress should keep the spine in natural and relaxed state, which in combination with warm and soft blanket, gives the sleepers comfort and a sense of satisfaction. Sleeping bag is an alternative for modern people. The working principle of sleeping bag is to create non-flowing air with a layer of inflated filler, which wraps the user in an accommodation space to cut down the contact with outside environment. When the cool air outside is kept out and the human body produces thermal convection, the body temperature can be maintained, hence keeping the user warm. The design of sleeping bags available on the market has typically mummy style that comes with a head cover and a taper shape to conform to the shape of human body. The side of the sleeping bag has a zipper to make in and out easier. Such sleeping bag design is good for heat retention. There are also envelop-shaped sleeping bag that is both comfortable and may be unzipped to be used as a blanket.

[0004] For the convenience of usage and storage, sleeping bags are usually made of certain materials and have fixed thickness and simple style. In order to accommodate the shape of human body, the design of sleeping bag basically confines body movement. Thus it may not be suitable for all kinds of circumstances. The proximity of sleeping bag interior to the body keeps the body warm, but it sometimes makes the user feel stuffy and even damp when perspiration damps the bag.

[0005] It is common for small children in kindergarten and nursery to take a nap during lunch break. Because schools usually do not have bedroom for children, they would prepare sleeping bags and have the children sleep on classroom floor. The conventional sleeping bag is mo-

notonous in appearance and confines the movement of typically energetic teenagers or small children. The sultry feel it causes also makes it less popular with users. In this plural society, a bedding will become popular and garner more market share if it also offers other functions in addition to providing comfortable sleeping environment.

SUMMARY OF INVENTION

[0006] The primary object of the present invention is to provide a three-dimensional shaped bedding, which is formed in one piece through pressure molding of special materials to achieve the effect of a continuous curve.

[0007] Another object of the present invention is to provide a three-dimensional shaped bedding, which is formed in one piece and restores its three-dimensional shape when used to achieve the effect of easy storage and use.

[0008] A further object of the present invention is to provide a three-dimensional shaped bedding, which forms a shape of continuous, three-dimensional curve through the design of a covering member to offer bigger accommodation space and aesthetic effect.

[0009] Yet another object of the present invention is to provide a three-dimensional shaped bedding, which achieves the effect of a play tool for children through the design of different three-dimensional shapes of covering member.

[0010] Yet a further object of the present invention is to provide a three-dimensional shaped bedding, which can have varying accommodation sizes through the design of covering member into different style patterns to allow young children to hide inside for game playing and give them a sense of security.

[0011] To achieve the aforesaid objects, the present invention provides a three-dimensional shaped bedding, comprising a confining member and a covering member. The confining member encloses a predefined plane. The covering member is connected with the confining member in such a way that the predefined plane is situated on one side of the covering member. The covering member has at least an opening and at least one apical surface. The apical surface is one height apart from the confining member to turn the covering member into a shape of predefined continuous curve and make the apical surface essentially the highest point. The covering member may be folded up through exertion of force, and when the force is removed, restores the shape of predefined continuous curve.

[0012] To achieve the aforesaid objects, the present invention provides another three-dimensional shaped bedding, comprising at least a covering member and at least a frame member. The covering member has a structure of predefined shape. The frame member further consists of a top surface and a bottom surface, which is a height apart from each other. The top surface has a structure corresponding to the covering member. When the

frame members props up the covering member, the covering member and the frame member form an accommodation space through the height and exhibit a structure of predefined shape.

[0013] To achieve the aforesaid objects, the present invention provides yet another three-dimensional shaped bedding, comprising a padding member, at least a covering member, a shaping member, and at least a frame member. The padding member may be laid on a flat surface. The covering member is connected to the periphery of padding member, and the part of periphery that is not connected forms at least an opening. The shaping member is connected with the covering member and protrudes from the outer rim surface of covering member. The frame member is arranged on the padding member to prop up the covering member to a height away from the padding member and form an accommodation space.

[0014] The features and structure of the three-dimensional shaped bedding according to the invention are depicted in detail with examples below.

BRIEF DESCRIPTION OF THE DRAWINGS

[0015] The details of the present invention will be more readily understood from a detailed description of the preferred embodiments taken in conjunction with the following Figures.

[0016] FIG 1A is a structural view of the three-dimensional shaped bedding according to a first embodiment of the invention.

[0017] FIG. 1B is a structural view of the three-dimensional shaped bedding according to a second embodiment of the invention.

[0018] FIG. 1C is a structural view of the three-dimensional shaped bedding according to a third embodiment of the invention.

[0019] FIG. 1 D is a structural view of the three-dimensional shaped bedding according to a fourth embodiment of the invention.

[0020] FIG. 1E is a structural view of the three-dimensional shaped bedding according to a fifth embodiment of the invention.

[0021] FIG 1F is a structural side view of the three-dimensional shaped bedding according to a sixth embodiment of the invention in a first operating condition.

[0022] FIG 1 G is a structural side view of the three-dimensional shaped bedding according to the sixth embodiment of the invention in a second operating condition.

[0023] FIG. 2A is a structural view of a preferred embodiment of the three-dimensional shaped bedding used as a sleeping bag.

[0024] FIG. 2B is a perspective view of the three-dimensional shaped bedding used as a sleeping bag according to a first preferred embodiment of the invention.

[0025] FIG 2C is a perspective view of the three-dimensional shaped bedding used as a sleeping bag according to a second preferred embodiment of the inven-

tion.

[0026] FIG 2D is a perspective view of the three-dimensional shaped bedding used as a sleeping bag according to a third preferred embodiment of the invention.

[0027] FIG. 2E is a perspective view of the three-dimensional shaped bedding used as a sleeping bag according to a fourth preferred embodiment of the invention.

[0028] FIG. 3A is an external view of the first style of the three-dimensional shaped bedding used as a sleeping bag.

[0029] FIG 3B is an external view of the second style of the three-dimensional shaped bedding used as a sleeping bag.

[0030] FIG. 3C is an external view of the third style of the three-dimensional shaped bedding used as a sleeping bag.

[0031] FIG 3D is an external view of the fourth style of the three-dimensional shaped bedding used as a sleeping bag.

[0032] FIG 4 is an external view of a special three-dimensional shaped bedding according to a preferred embodiment of the invention.

[0033] FIG. 5A is a structural view of the frame member according to a first preferred embodiment of the invention.

[0034] FIG. 5B is a structural view of the frame member according to a second preferred embodiment of the invention.

[0035] FIG 5C is a structural view of the frame member according to a third preferred embodiment of the invention.

[0036] FIG 5D is a structural view of the frame member according to a fourth preferred embodiment of the invention.

[0037] FIG 5E is a structural view of the frame member according to a fifth preferred embodiment of the invention.

[0038] FIG. 5F is a structural view of the frame member according to a sixth preferred embodiment of the invention.

[0039] FIG 5G is a structural view of the frame member according to a seventh preferred embodiment of the invention.

DETAILED DESCRIPTION

[0040] Referring to FIG. 1A and 1B which show the structural views of three-dimensional shaped bedding according to a first and a second embodiment of the invention, the three-dimensional shaped bedding 1 comprises: a confining member 11 and a covering member 12. The confining member 11 encloses a predefined plane 13. In a preferred embodiment, the predefined plane 13 is oval shaped, which can also be round shaped. The covering member 12 is connected with the confining member 11 in such a way that that the predefined plane 13 is situated on one side of covering member 12. The covering member 12 has at least an opening 14 and at

least one apical surface 15. As shown in FIG 1A, the opening 14 is arranged at one end of covering member 12 that allows the user 2 to pass through and enter the three-dimensional shaped bedding 1. As shown in FIG 1B, the three-dimensional shaped bedding 1 a has an opening 14a situated at the central part of covering member 12a.

[0041] The apical surface 15 is one height H1 away from the confining member 11 to turn the covering member 12 into a shape of predefined continuous curve and make the apical surface 15 essentially the highest point. In a preferred embodiment, the covering member 12 displays a semi-oval sphere, which can also be hemispherical in shape. The covering member 12 is fabricated by pressure moulding of foam and non-woven fabric, hence can be made in one piece. The covering member 12 has elasticity, hence can be folded up under the exertion of force. The confining member 11 is at least a cord or at least an elastic band. When the confining member 11 is pulled, it will draw covering member 12 close in alignment with it and the covering member 12 can be folded up for storage. But when the force is removed, the covering member 12 restores the shape of predefined continuous curve.

[0042] The other preferred embodiments described below have identical or similar elements to those described earlier. Those elements are assigned the same numeral (with only a English letter suffix for distinction purpose) and names and their detailed constitutions will not be elaborated. FIGS. 1C ~ 1E show the side views of several embodiments of three-dimensional shaped bedding according to the invention. As shown in FIG. 1C, the three-dimensional shaped bedding 1b further comprises a plurality of frame members 16 arranged inside the covering member 12b in a predetermined manner. The frame member 16 consists of at least two arc curves 161, at least an overlapping end 162 and two adjoining ends 163. The two adjoining ends 163 adjoin the confining member 11 respectively and the overlapping end 162 is situated exactly on the apical surface 15. As shown in FIG 1D, the frame members 16a of the three-dimensional shaped bedding 1c are sewed to the covering member 12c, and the frame member 16a is roughly the shape of a honeycomb composed of a plurality of hexagons. Naturally, the frame member 16a can also be wavy or other shapes. In FIG 1E, the confining member 11 of the three-dimensional shaped bedding 1d is further connected to a padding member 18 with a connecting member 17. The padding member 18 is the predefined plane enclosed by the confining member 11, and the connecting member 17 in this embodiment is a zipper so the confining member 11 and the padding member 18 may be separated in an open state or zipped up in a closed state in the internal space of the three-dimensional shaped bedding 1d.

[0043] Please refer to FIGS. 1 F and 1G, which are structural side views of the three-dimensional shaped bedding according to the sixth embodiment of the invention under two different operating conditions. The three-

dimensional shaped bedding 1e further comprises an extending part 19. The extending part 19 is connected with the covering member 12e by an inclined angle θ by means of a connecting element 191. A preferred embodiment of the connecting element 191 is a long strip of zipper. In addition, a substantially triangle-shaped inter-connecting part 192 is connected between two separate strips of the zipper (connecting element 191). When the zipper (connecting element 191) is zipped-in, the inter-connecting part 192 is folded and located inside the connecting element 191. In the meantime, the extending part 19 is inclined by the angle θ relative to the bottom surface of the covering member 12e, as shown in FIG 1F. When the zipper (connecting element 191) is zipped-out (i.e., opened into two separate strips), the inter-connecting part 192 will expose to outside environment and also interconnect inner spaces of the extending part 19 and the covering member 12e. In the meantime, the extending part 19 and the covering member 12e will be connected like a straight line, as shown in FIG. 1G.

[0044] FIG 2A to FIG 2E is respectively a structural view of a preferred embodiment of the three-dimensional shaped bedding used as a sleeping bag, and a perspective view of several examples. The three-dimensional shaped sleeping bag bedding 2 comprises: a padding member 21, at least a covering member 22, a shaping member 26, and a frame structure 23. The padding member 21 may be laid on a flat surface 24. In a preferred embodiment, the padding member 21 is made of cotton, feather, fabric or composite materials thereof that provides user 25 comfort when lying down. When the sleeping bag is used outdoor, it might get damp. Therefore the surface of padding member 21 in contact with the flat surface 24 may be made of nylon or its composite material. To prevent the tossing and turning of user 25 in the sleeping bag from causing its collapse, the padding member 21 can be further designed into an ergonomically structured arc shape to give the user 25 more comfort when lying down and let the user 25 toss and turn along the arc to an equilibrium point with the lowest relative potential energy so as to prevent the collapse of sleeping bag.

[0045] The covering member 22 is connected to the periphery of padding member 21, and the part of periphery that is not connected forms at least an opening 221. The shaping member 26 is connected with the covering member 22 and protrudes from the outer rim surface of covering member 22. The shaping member 26 further consists of an acoustooptical body 261. The acoustooptical body 261 allows the shaping member 26 to provide light and sound signals. The frame structure 23 is arranged on the padding member 21 to prop up the covering member 22 to a height H2 away from the padding member 21 and form an accommodation space 222 therebetween, so the user 25 can enter the accommodation space 222 from the opening 221. In a preferred embodiment, the frame structure 23 is a hollow piece with two ends disposed respectively at two sides of covering

member 22. Thus a flexible rod may be provided inside the frame structure 23 so that the frame structure 23 can be deformed into different shapes under the exertion of force. The frame structure 23 can also be closed and sealed with specific gas. Like kind variations of the frame structure 23 will not be elaborated here.

[0046] The frame structure 23 can also be designed with a plurality of positioning members 231 and a flexible strip 232 immobilized by the positioning members 231. In a preferred embodiment, the positioning member 231 is a sleeve connected to the covering member 22 for the insertion of flexible strip 232. The positioning member 231 can also be a rope conjoined to the covering member 22 to tie the flexible strip 232. The flexible strip 232 can also be immobilized by a ring, buckle or Velcro. All modifications and alterations made according to the descriptions above by those familiar with the skill without departing from the essentials or the spirits and scope of the invention will not be elaborated here. The frame structure 23 can also be a rigid structure made of a plurality of rigid pieces.

[0047] In a preferred embodiment, the frame structure 23 is situated in the middle of covering member 22 so the covering member 22 is hemispherical in shape. The covering member 22 can also be disposed inside or outside the frame structure 23, and in coordination with the shaping member 26, embroidered or pasted with a plurality of circular patterns on its external surface to provide a ladybug shaped sleeping bag structure. The acoustooptical body 261 can provide intermittent flashes and summertime buzz sound of insects. To reinforce the structure of covering member 22 and undergo shape change at a plurality of spots on the covering member 22 in coordination with varying shaping members 26, the frame structure 23 can be designed to be two or more in number. The frame structure 23 can also be a hemisphere made of foam material, and prop up the covering member 22. The frame structure 23 can further be a plastic strip, plastic sheet, spring steel strip, foam, foam strip, bubble strip, glass fiber strip or carbon fiber strip.

[0048] To avoid the situation where the sleeping bag cannot provide the effect of thermal insulation, the three-dimensional shaped sleeping bag bedding 2a further contains a blanketing member 27 as shown in FIG 2C. The blanketing member 27 can be an independent piece disposed inside the accommodation space 222 and situated between padding member 21 and covering member 22. In another embodiment of the invention as shown in FIG 2D, the blanketing member 27a of the sleeping bag bedding 2b is connected to the periphery of padding member 21 and at the same time connected to the periphery of inner rim of covering member 22. As shown in FIG 2E, the sleeping bag bedding 2c further comprises a head covering member 28 connected with the opening 221. The bottom of the head covering member 28 has a regular pillow structure, while its top surface can provide the effect of eye shield and prop up the design of animal head.

[0049] The other preferred embodiments described below have identical or similar elements to those described earlier. Those elements are assigned the same numeral (with only a English letter suffix for distinction purpose) and names and their detailed constitutions will not be elaborated. FIGS. 3A ~ 3D are external views of three-dimensional sleeping bag bedding in a plurality of styles according to the invention. As shown in FIG 3A, an embodiment shows the sleeping bag bedding in the shape of a dinosaur. In such a bedding, the covering member 22a has a hemispherical shape. The shaping member 26a consists of a plurality of ridges connected to the apical surface of covering member 22a. The shaping member 26a can further has a foot and the exterior surface of the covering member 22a may be embroidered or pasted with a plurality of circular patterns. The head covering member 28a is designed into a dinosaur. As shown in FIG 3B, an embodiment shows the sleeping bag bedding in the shape of a rabbit. In such a bedding, the covering member 22b is hemispherical in shape. The shaping member 26b is designed as a tail at one end of the covering member 22b, and can further have feet structure. The head covering member 28b is designed into a rabbit head with two long ears. As shown in FIG 3C, an embodiment shows the sleeping bag bedding in the shape of a swan. In such a bedding, the covering member 22c is hemispherical in shape. The shaping member 26c is designed as wings on both sides of the covering member 22c. The head covering member 28c is designed into the head of the swan. As shown in FIG 3D, an embodiment shows sleeping bag bedding in the shape of a flower. In such a bedding, the covering member 22d is hemispherical in shape. The shaping member 26d is designed into a plurality of petals connected to the outer rim of covering member 22d, and can be further arranged with a plurality of patterns to display the pattern of pistils. The head covering member 28d is designed into leaves.

[0050] FIG 4 is an external view of a special three-dimensional shaped bedding according to a preferred embodiment of the invention. The special three-dimensional shaped bedding 3 comprises: at least a covering member 31 and at least a frame member 32. The covering member 31 has a predefined shaped structure 311. In this embodiment, the bedding has the shape of a camel. Thus the covering member 31 has two protruding members 312, which can be hollow or stuffed inside. The special three-dimensional shaped bedding 3 further consists of an acoustooptical member 313 connected to the covering member 31 and corresponding to the shaped structure 311 to provide the shaped structure 311 with light and sound signals.

[0051] The frame member 32 further includes a top surface 321 and a bottom surface 322. The covering member 31 can be disposed inside or outside the frame member 32. The top surface 321 and the bottom surface 322 are a height H3 apart. The top surface 321 has a shaped structure corresponding to the covering member

31. In the embodiment of a camel shaped bedding, when the protruding member 312 has a hollow structure, the frame member 32 also extends to provide two hump frames 323; when the protruding member 312 has stuffing inside, the top surface 321 of frame member 32 is an oval curve construction. Thus when the frame member 32 supports the covering member 31, the covering member 31 forms an accommodation space 33 with frame member 32 through a height H3 and exhibits a predefined shaped structure 311.

[0052] The bottom surface 322 is laid on a flat surface 34, and the bedding with arc curve further comprises a head covering member 35, which is connected to the covering member 31 to further manifest the predefined shaped structure. In this camel shaped embodiment, the head covering member 35 is designed into the head of camel, and the bedding further comprises a sleeping bag body (not shown in the figure). The sleeping bag body is disposed inside the accommodation space 33 to provide resting. The covering member 31 and the frame member 32 show the predefined mould. The sleeping bag body can also be connected with the covering member 31 in one piece. In another embodiment the special three-dimensional shaped bedding 3 further comprises a padding (not shown in the figure). The padding can adjoin the bottom surface 322 and is connected to the covering member 31 to form at least an opening (not shown in figure). The padding and the covering member together form a well-ventilated shaped structure. The head covering member 35 can also be connected with the padding.

[0053] FIGS. 5A ~ 5G are structural views of the frame member in several embodiments of the invention. As shown in FIG 5A, the frame member 22 consists of a plurality of frames 22a in mesh arrangement to form the shape of a camel. The other preferred embodiments described below have identical or similar elements to those described earlier. Those elements are assigned the same numeral (with only a English letter suffix for distinction purpose) and names and their detailed constitutions will not be elaborated. As shown in FIG 5B, the frame member 22a consists of a plurality of frames 224a with better strength which are arranged in such a way to form the shape of a camel. As shown in FIG 5C, the frame member 22b consists of a plurality of wider frames 224b which are arranged in such as way to form the shape of a camel. As shown in FIG 5D, the frame member 22c consists of a plurality of foam frames 224c in one shape which are arranged and connected to form the shape of a camel. As shown in FIG 5E, the frame member 22d consists of one foam frame 224d in one piece. As shown in FIG 5F, the frame member 22e consists of two spring steel frames 224e which form the shape of a camel to facilitate folding and storage. As shown in FIG 5G, the frame member 22f consists of a plurality of frames 224f in radial arrangement to form the shape of a camel to facilitate folding and storage. The frame 224 can also be a plastic strip, plastic sheet, spring steel strip, foam, foam strip, bubble strip, glass fiber strip or carbon fiber strip.

[0054] The three-dimensional shaped bedding according to the invention offers at least the following advantages:

1. It provides bedding functions.
2. The covering does not touch the user's body to lessen the feel of stuffiness and dampness.
3. The bedding is made of special material formed in one piece by pressure moulding to give it the shape of continuous curve and facilitate folding up and usage.
4. The frame member and covering member of the bedding can be separated to facilitate folding and assembly.
5. The bedding can be made into special shapes (e.g. animal, transportation vehicle, cartoon character, and appliance) to make users or observers feel more pleasant.
6. The bedding can be used as a game tool for children.
7. The accommodation space provided by the bedding structure satisfies the mentality of small children to hide, while giving them a sense of security and allowing them to play.

[0055] The preferred embodiments of the invention have been disclosed above, which however should not be construed as a limitation on the actual application of the invention. Hence all modifications and alterations made by those familiar with the skill without departing from the spirits of the invention and appended claims shall remain within the protected scope of the invention.

Claims

1. A three-dimensional shaped bedding, comprising a confining member which encloses a predefined plane; and a covering member connected to the confining member in such a way that the predefined plane is situated on one side of covering member and having at least an opening and at least an apical surface, the apical surface being one height apart from the confining member to turn the covering member into the shape of a predefined continuous curve and make the apical surface essentially the highest point; wherein the covering member may be folded up by the exertion of force and display the shape of predefined continuous curve when the force is removed.
2. The three-dimensional shaped bedding according to

claim 1, wherein said covering member is made of foam and non-woven fabric under pressure moulding; wherein said bedding is folded up by the alignment and pulling of confining member.

3. The three-dimensional shaped bedding according to claim 1, the bedding further comprising a plurality of frame members arranged in a predetermined manner inside the covering member.

5
4. The three-dimensional shaped bedding according to claim 3, wherein said frame member has at least two arc curves, at least an overlapping end and two adjoining ends, the two adjoining ends adjoining the confining member and the overlapping end situating exactly on the apical surface

10
5. The three-dimensional shaped bedding according to claim 3, wherein said frame member is sewn on the covering member.

15
6. The three-dimensional shaped bedding according to claim 1, wherein said confining member is further connected with a padding member, the padding member being exactly the shape of predefined plane enclosed by the confining member.

20
7. The three-dimensional shaped bedding according to claim 1, wherein the three-dimensional shaped bedding further comprises an extending part; the extending part is connected with the covering member by an inclined angle by means of a connecting element.

25
8. A three-dimensional shaped bedding, comprising at least a covering member having a predefined shaped structure; and at least a frame member further consisting of a top surface and a bottom surface, the top surface being a height apart from the bottom surface and having a shaped structure corresponding to the covering member; wherein when the frame member aligns and pulls to support the covering member, the covering member and the frame member form an accommodation space through said height and display the predefined shaped structure.

30
9. The three-dimensional shaped bedding according to claim 8, wherein said bedding further comprises an acoustooptical member that allows the shaped structure to provide light and sound signals.

35
10. A three-dimensional shaped bedding, comprising a padding member that can be laid on a flat surface; at least a covering member connected to the periphery of padding member and the part unconnected forming at least an opening; at least a shaping member connected with the cov-

40

ering member and protruding from the outer rim surface of covering surface; and at least a frame member disposed on the padding member and propping up the covering member to a height apart from the padding member to form an accommodation space.

45

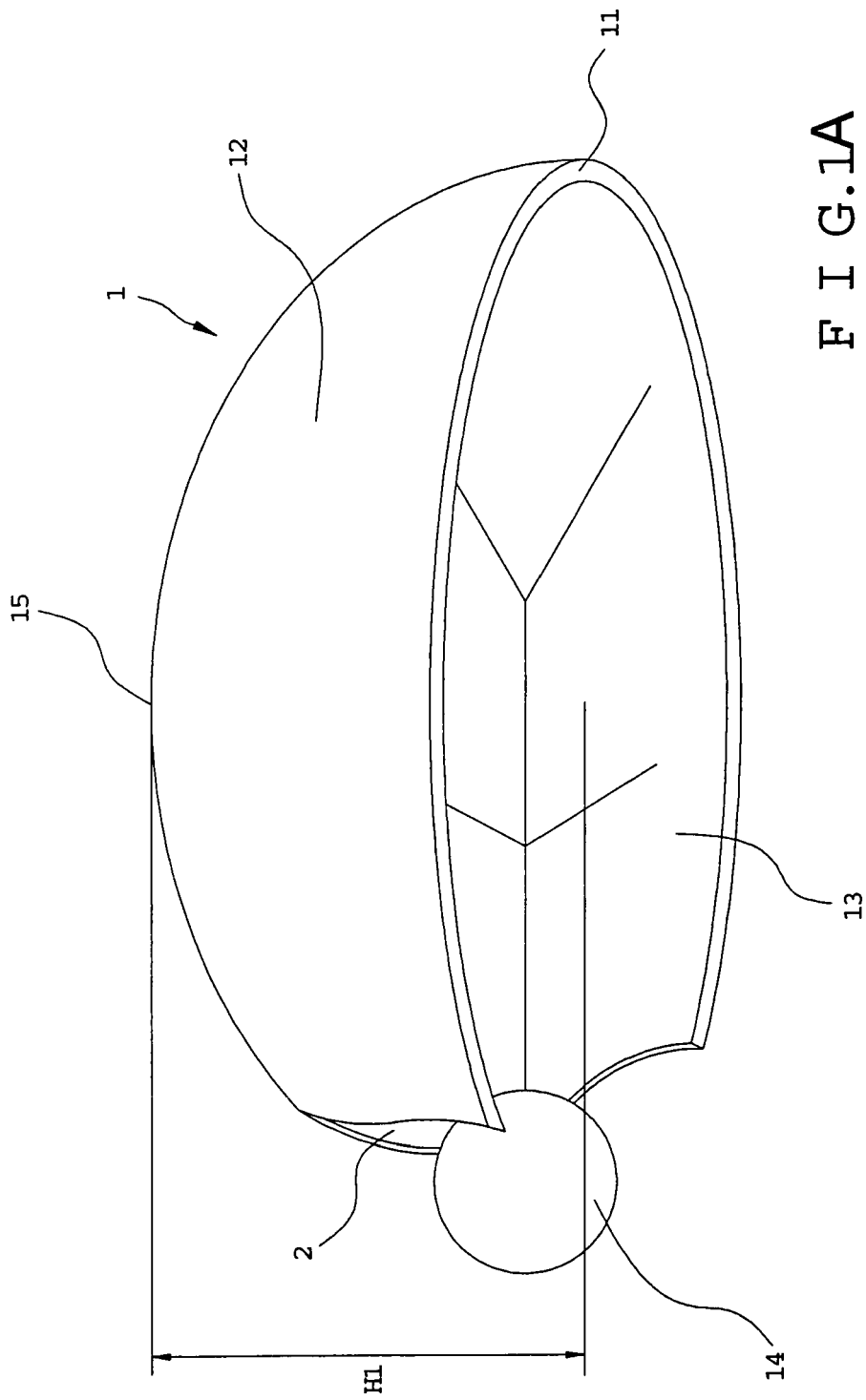


FIG. 1A

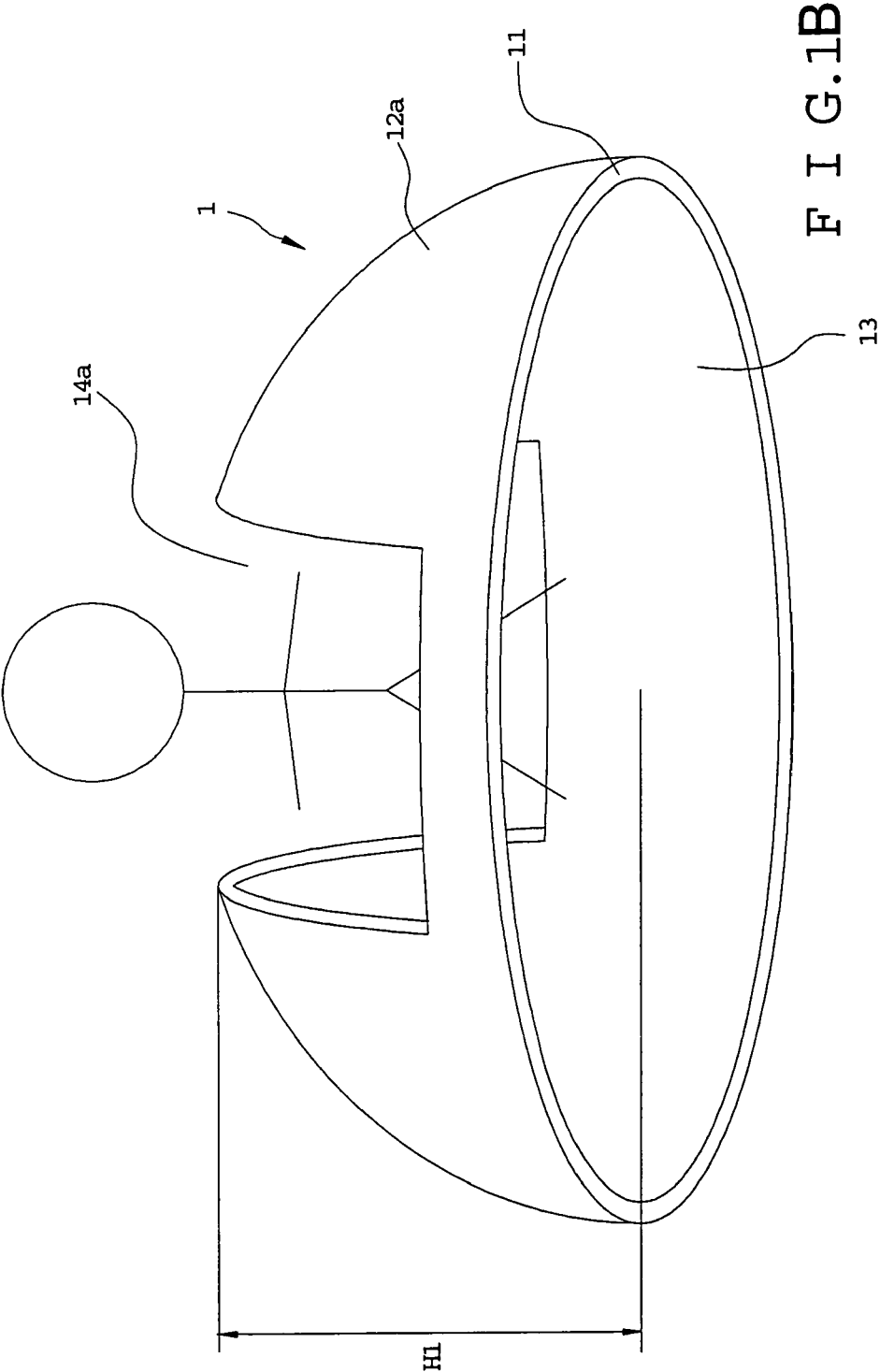


FIG. 1B

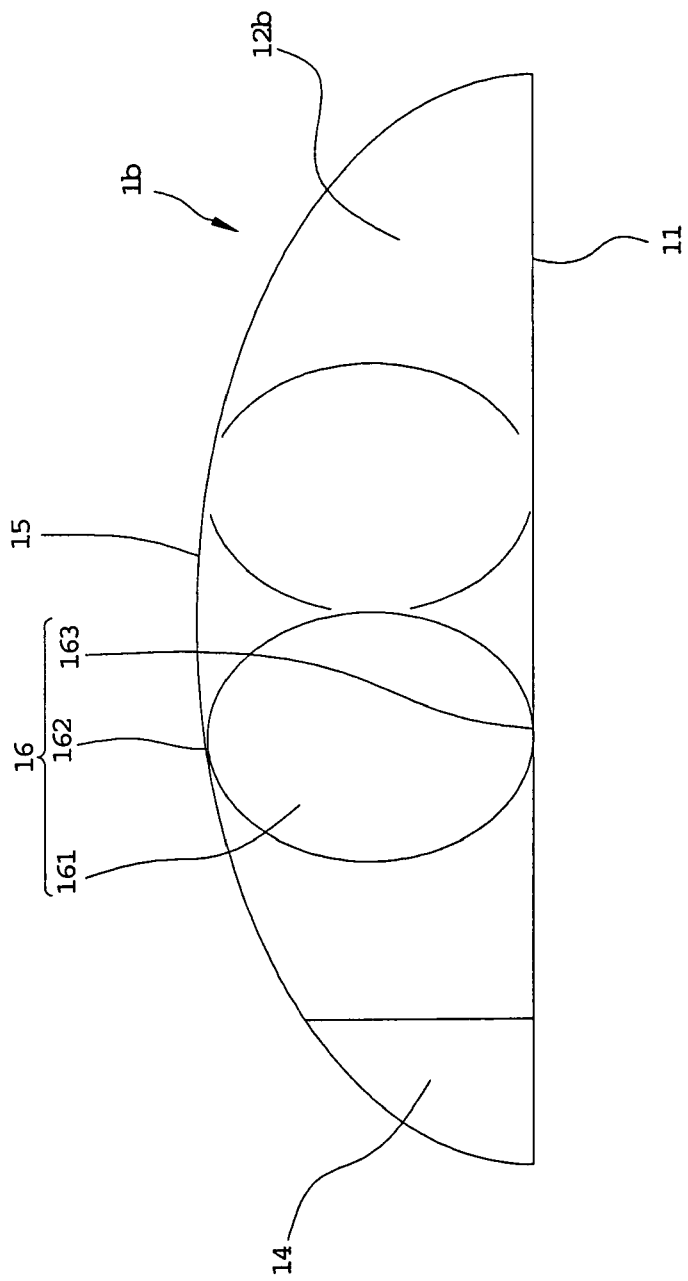
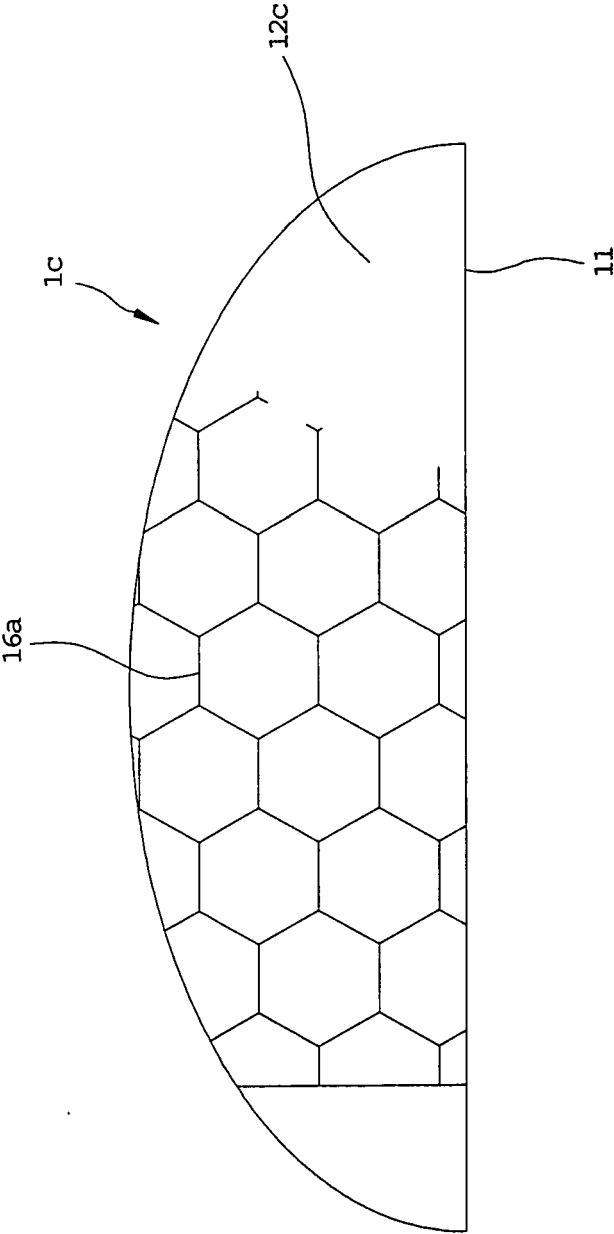
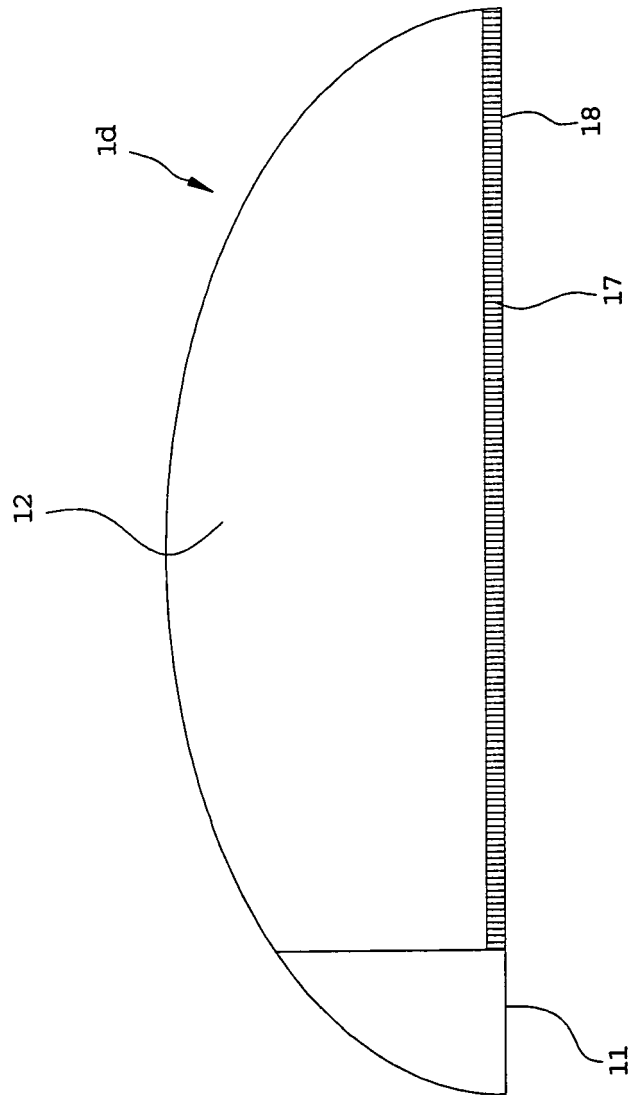


FIG. 1C



F I G . 1 D



F I G.1E

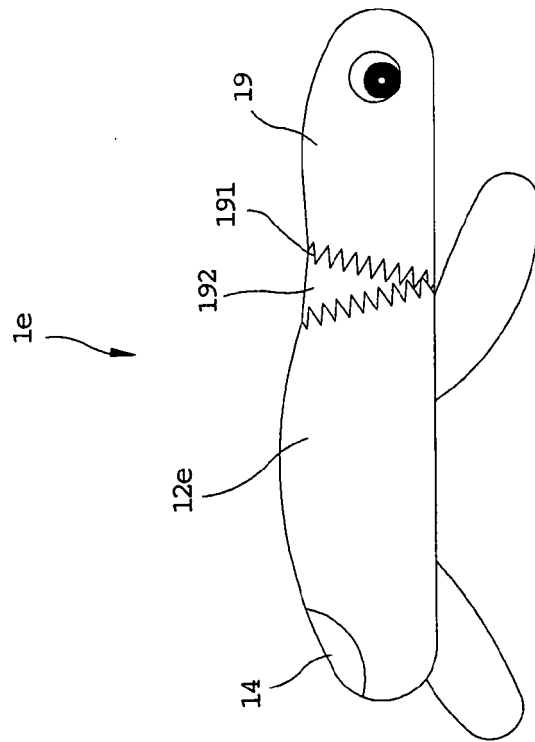


FIG. 1G

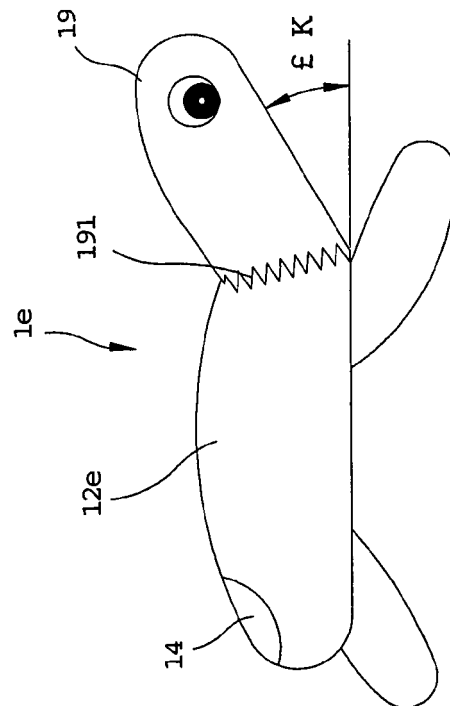


FIG. 1F

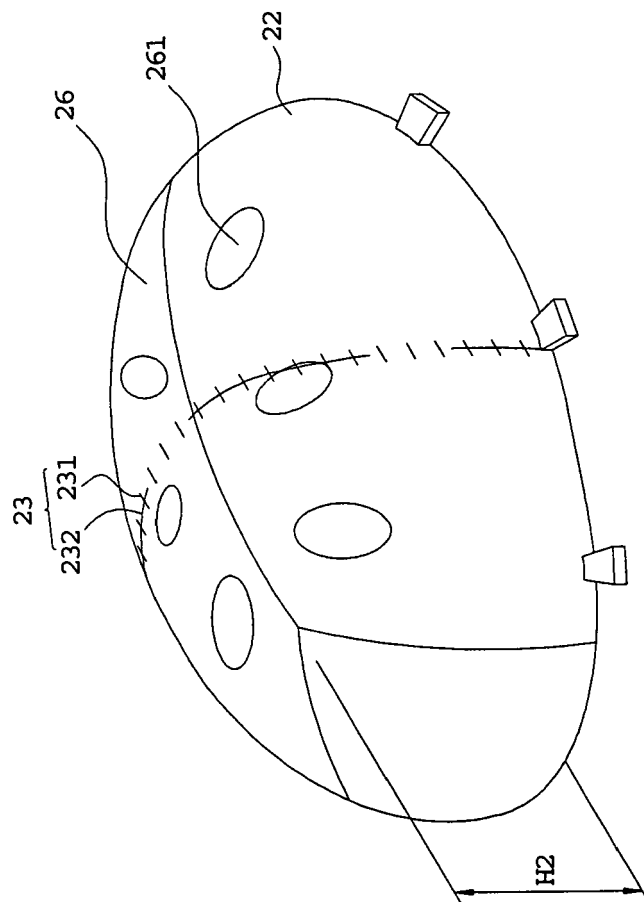


FIG. 2A

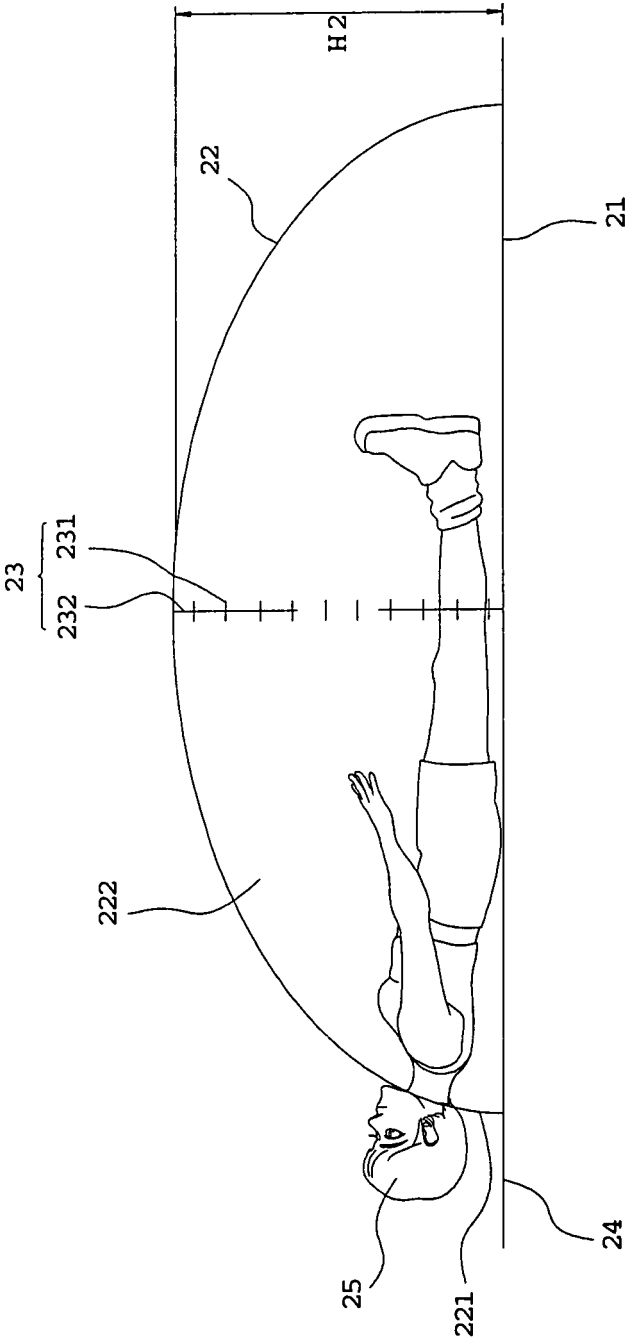
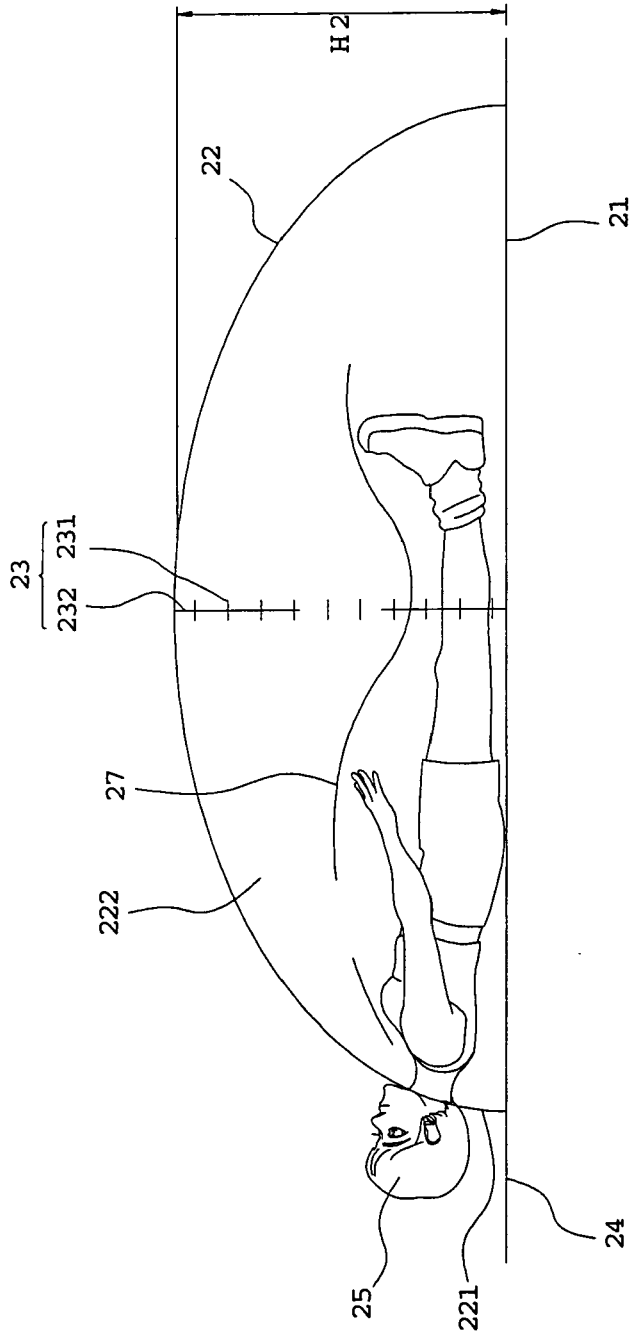
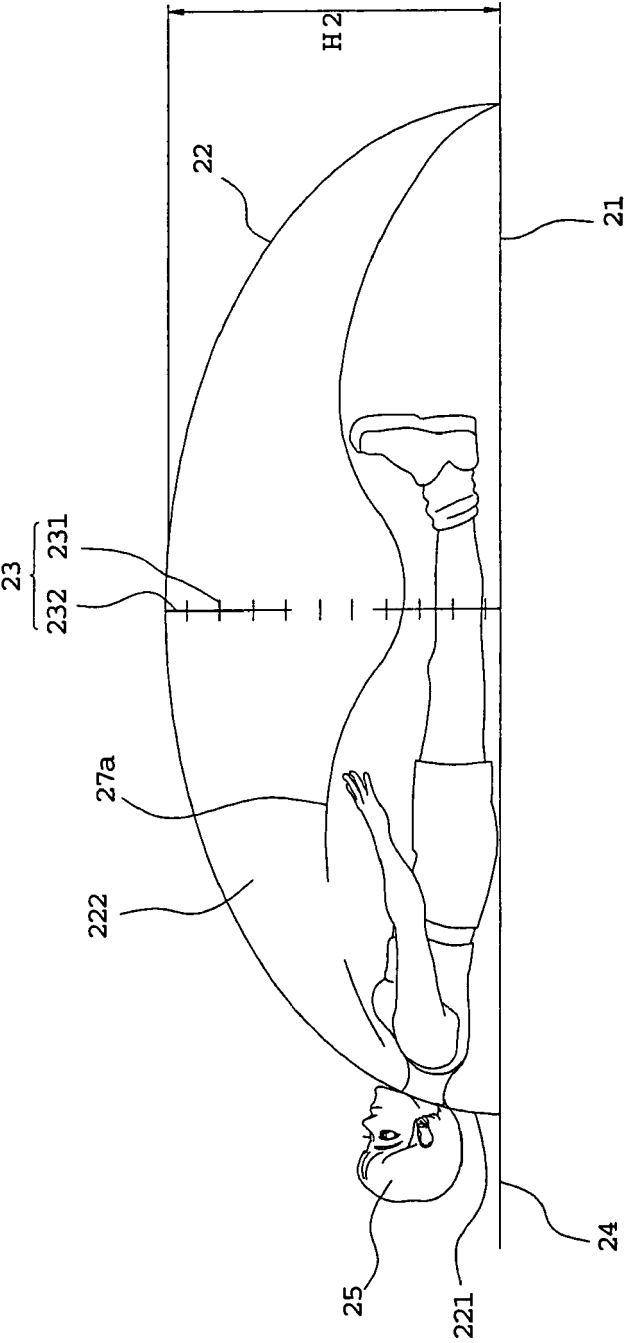


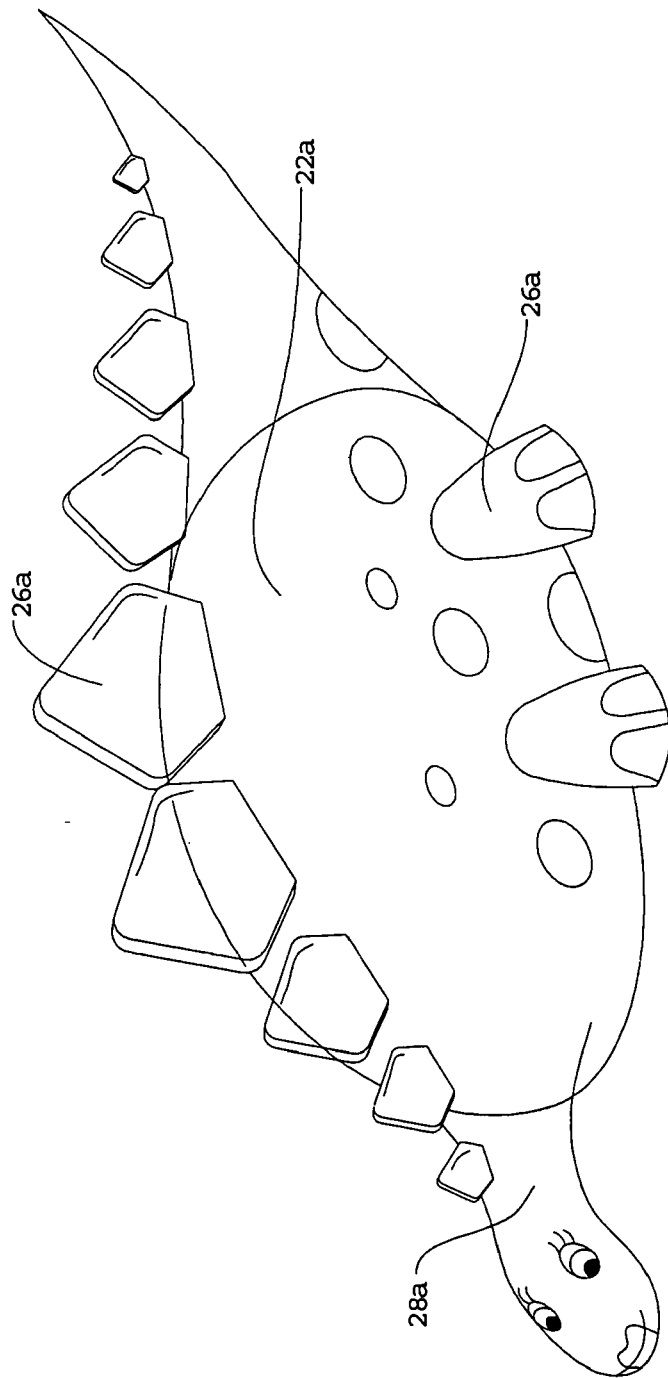
FIG. 2B



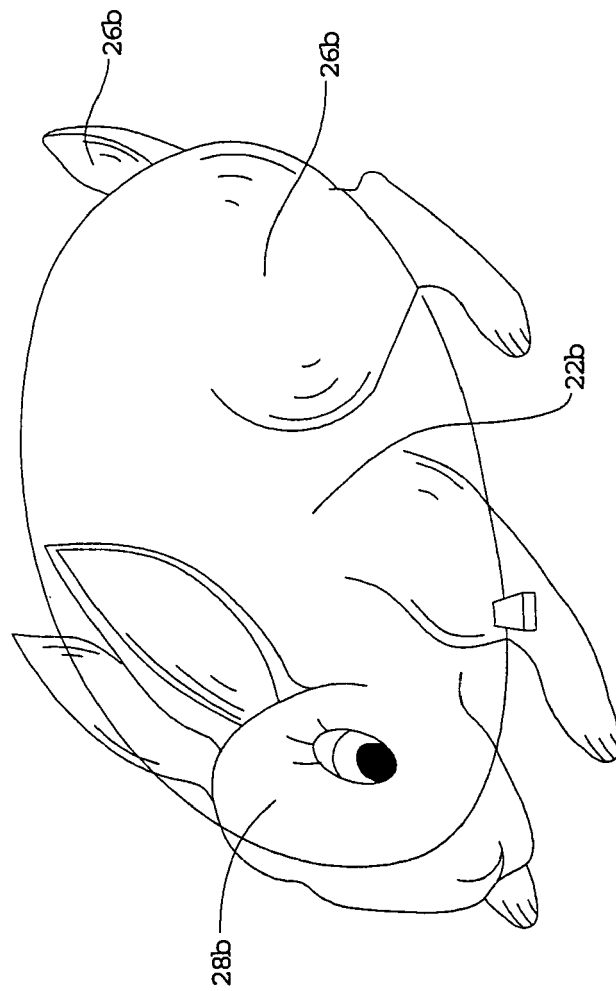
F I G.2C



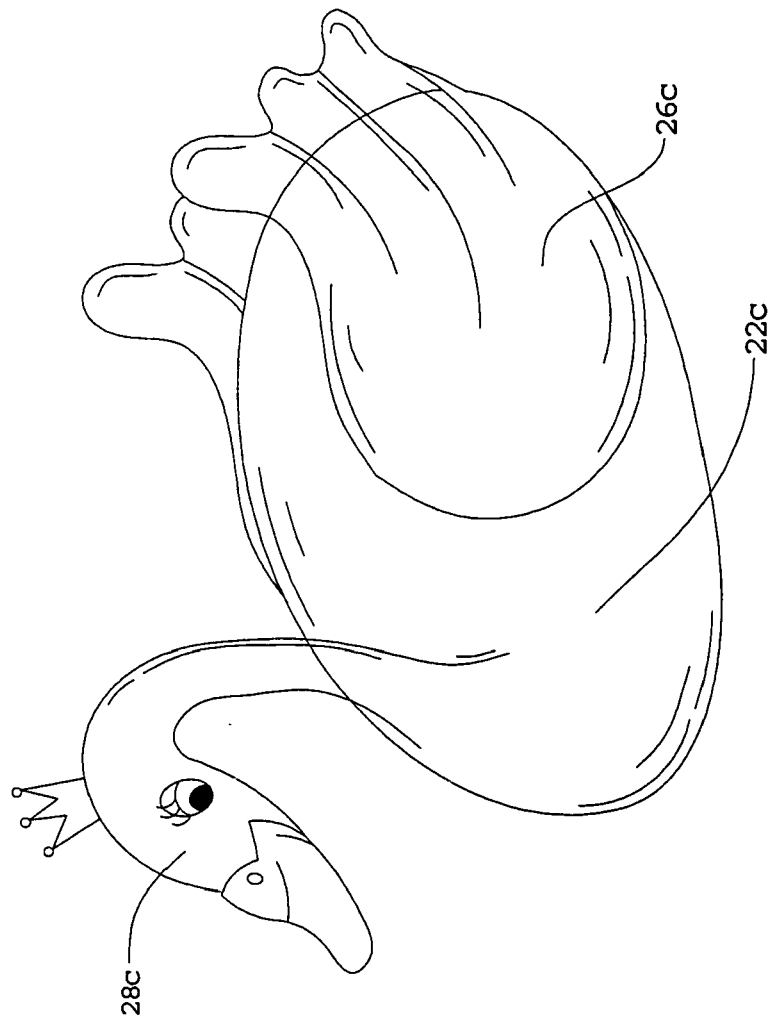
F I G.2D



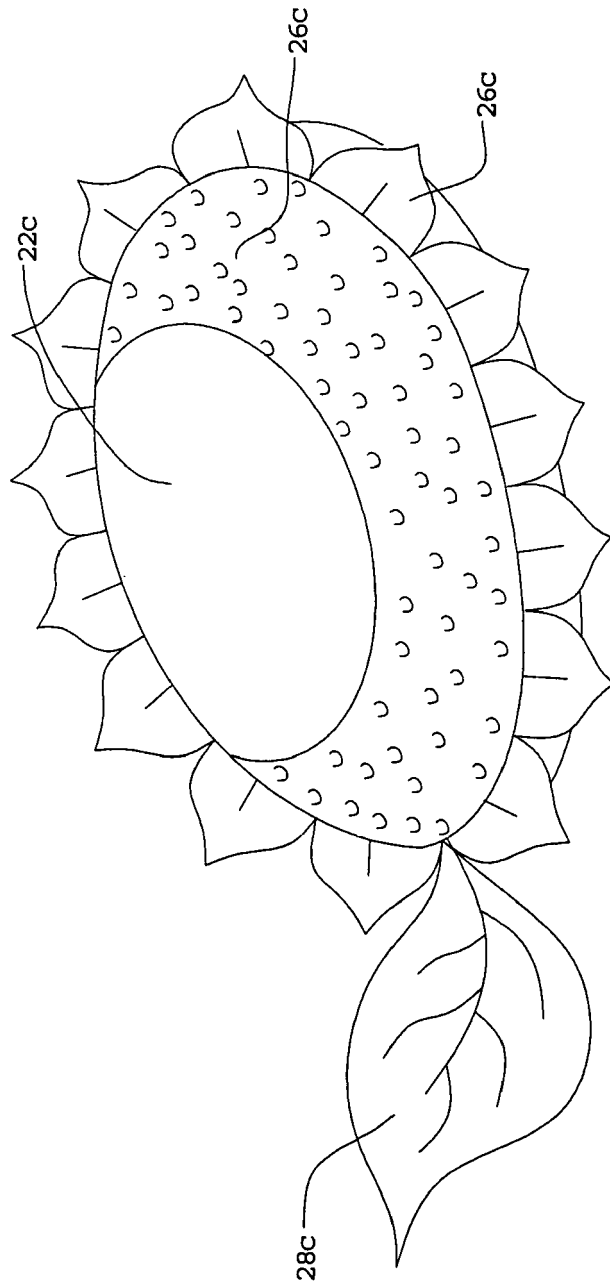
F I G. 3A



F I G. 3B



F I G. 3C



F I G. 3D

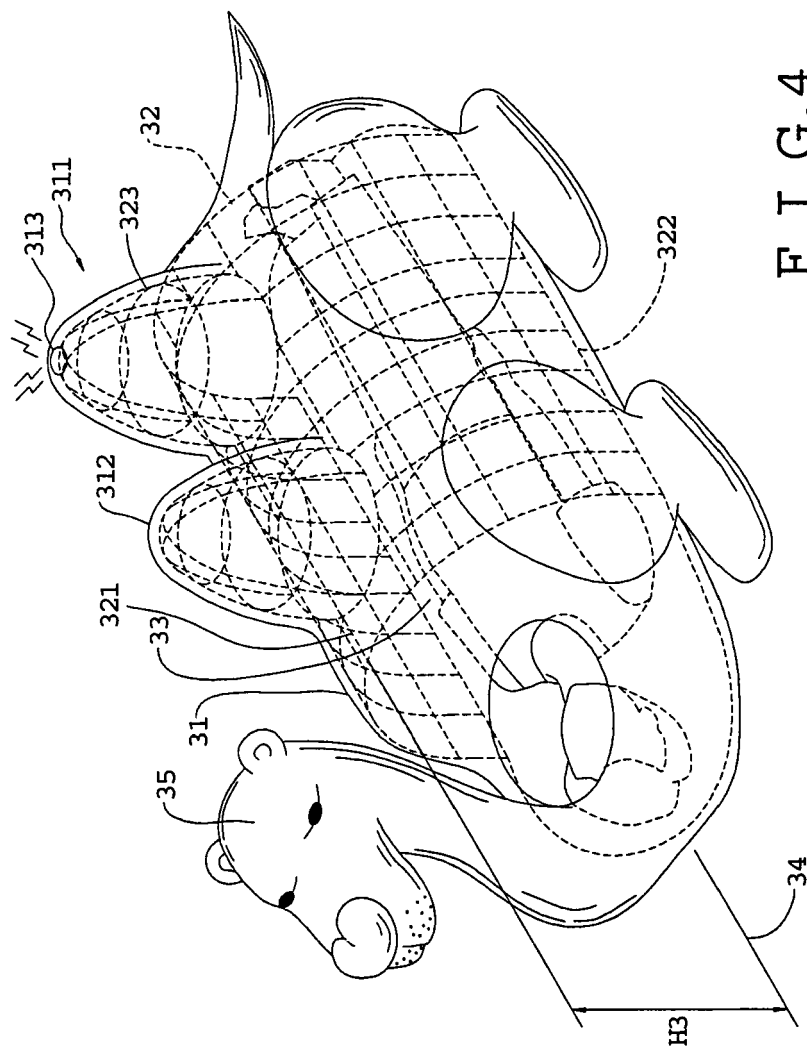
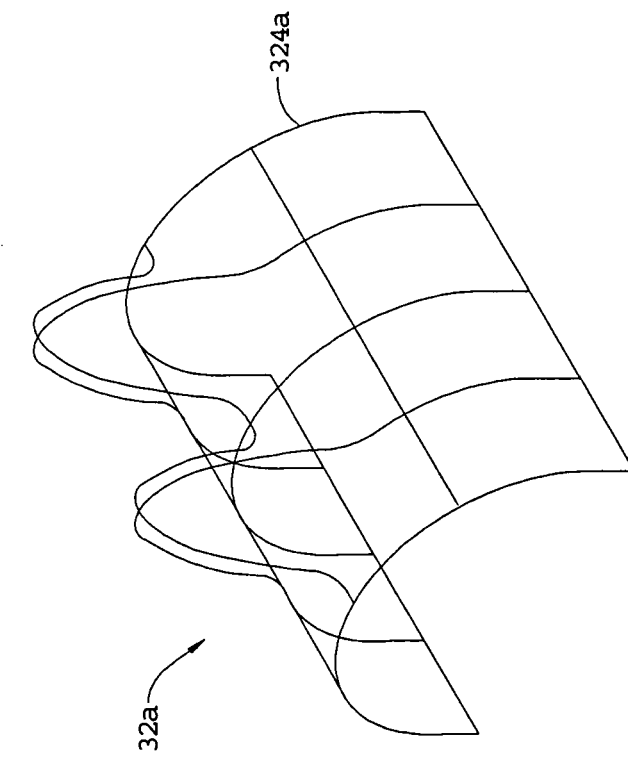
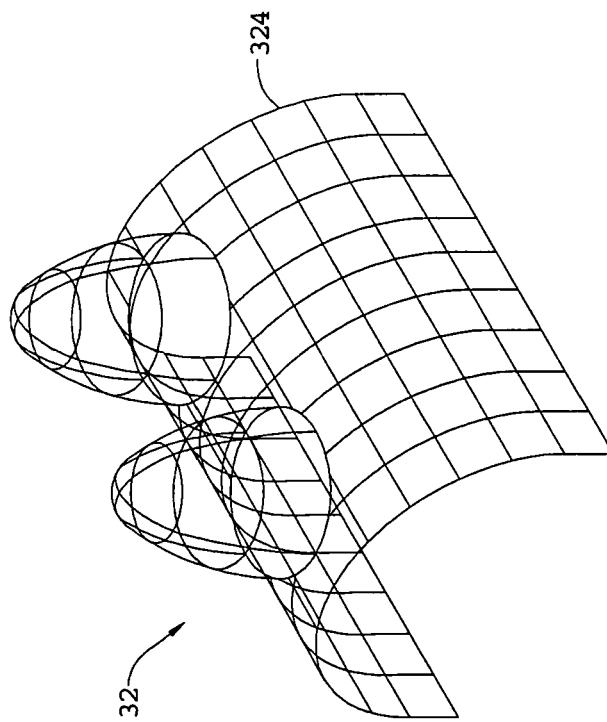


FIG. 4



F I G. 5B



F I G. 5A

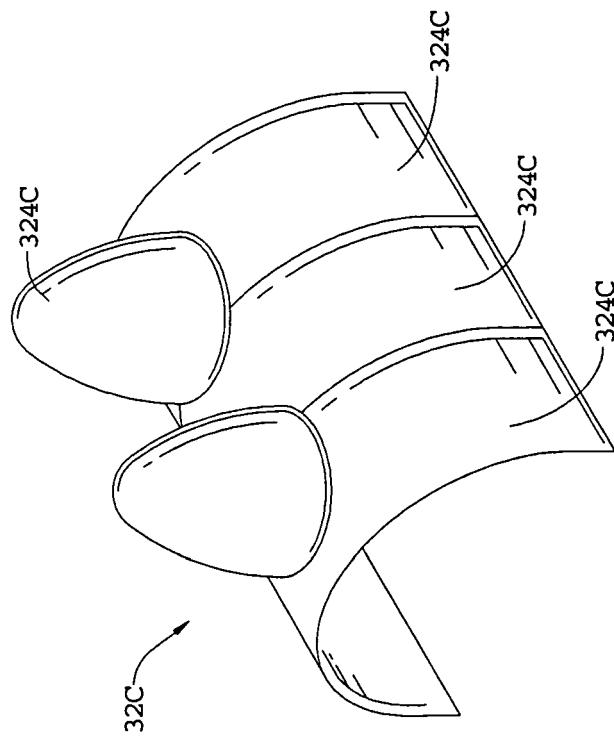


FIG. 5D

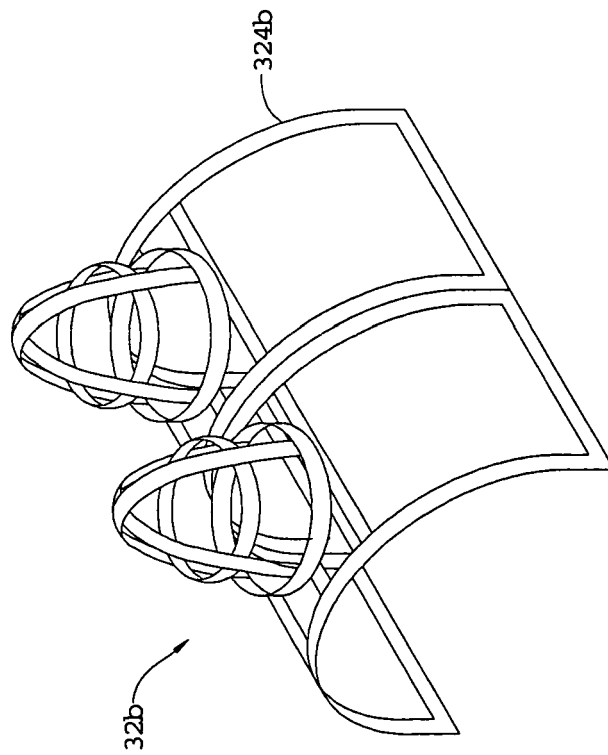


FIG. 5C



FIG. 5E

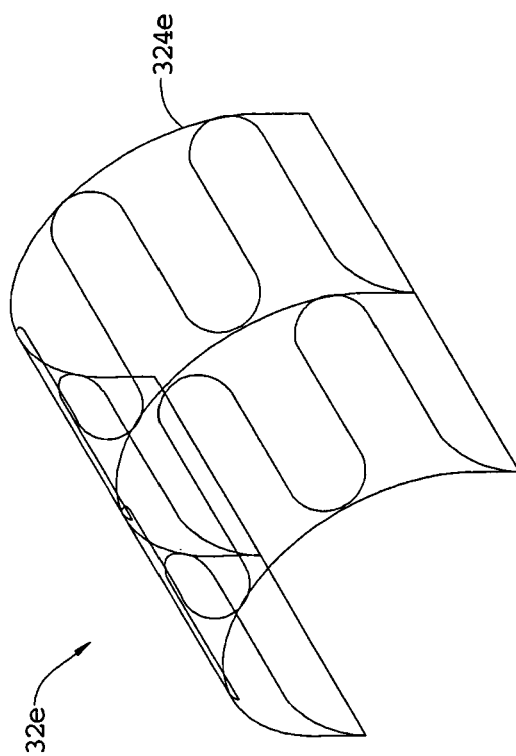
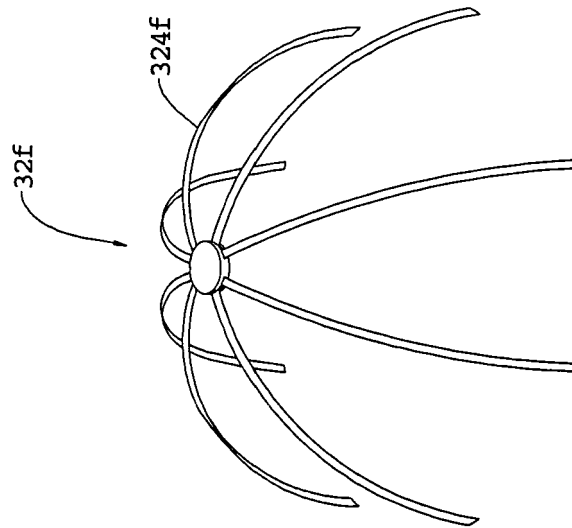


FIG. 5F



F I G. 5G



European Patent
Office

EUROPEAN SEARCH REPORT

Application Number
EP 06 25 0086

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	US 6 311 709 B1 (LOUIE WAI HANG ET AL) 6 November 2001 (2001-11-06) * the whole document *	1,3-6,8, 10	A47G9/02
X	US 6 328 050 B1 (MCCONNELL THOMAS E) 11 December 2001 (2001-12-11) * the whole document *	1,3-6,8, 10	
X	US 5 487 400 A (DAWKINS KATHERINE J) 30 January 1996 (1996-01-30) * the whole document *	1,2,6	
A	US 2005/102752 A1 (ABRAHAM JEFFREY J ET AL) 19 May 2005 (2005-05-19) * the whole document *	9	
A	US 5 093 947 A (HENEGAR JAMES R ET AL) 10 March 1992 (1992-03-10) * the whole document *	7	
			TECHNICAL FIELDS SEARCHED (IPC)
			A47G E04H
The present search report has been drawn up for all claims			
Place of search Munich		Date of completion of the search 7 March 2006	Examiner Reichhardt, O
<p>CATEGORY OF CITED DOCUMENTS</p> <p>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</p> <p>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</p>			

2
EPO FORM 1503 03.82 (P04C01)

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 06 25 0086

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

07-03-2006

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 6311709	B1	06-11-2001	NONE	
US 6328050	B1	11-12-2001	NONE	
US 5487400	A	30-01-1996	NONE	
US 2005102752	A1	19-05-2005	NONE	
US 5093947	A	10-03-1992	NONE	