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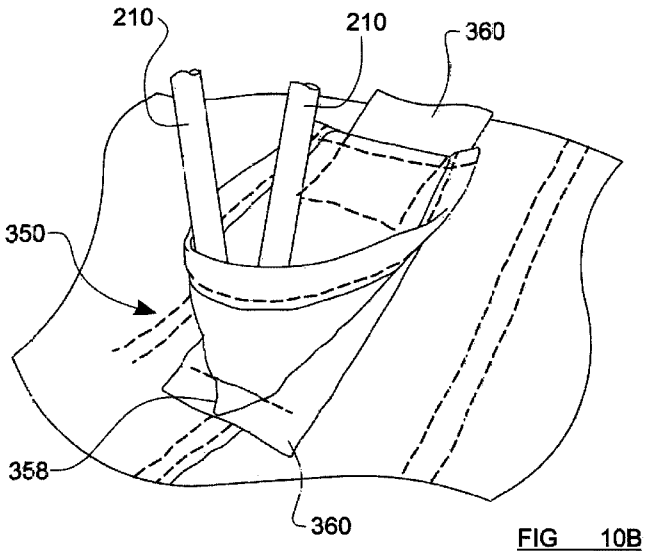

FIG 10B

(57) Abstract: A tent (100) comprising: a ground sheet (220); a canopy sheet (230) adapted to extend over at least part of the ground sheet to form at least a partially enclosed internal space when the tent is assembled; and at least one pair of pocket elements (250,252) each attached either to the ground sheet or the canopy sheet, each pocket element comprising a pocket in which an end of a pole (210) may be received, wherein, the pocket elements (250,252) are secured in spaced apart locations which, when the tent is assembled, are within the enclosed internal space.

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TENT WITH POCKET ELEMENTS

Field of the invention

The invention relates to temporary structures, and in particular to a pocket for securing poles in position when supporting a tent or the like. The invention is suitable for use in light weight tents.

Background to the invention

Tents are typically free standing and self-supporting habitable temporary structures. Often they are light and compact enough to be easily portable. Tents have a number of uses such as recreation, hides, on-location research, disaster relief, expeditions, filming, festivals, eco resorts and military applications.

Flexible tent poles or rods are commonly used to provide a skeletal support structure to tents. The tent poles are typically long and have some flexibility. The poles are usually fixed at a number of points to provide a fame or skeletal support structure for a tent sheet. Typically the poles are fixed at their ends and are under tension so that the pole is curved or arched between the two fixed points. Securing a tent pole between two points that are closer together than the length of the pole ensures that it will maintain a curved shape. The fixing points are typically secured relative to each other by the fabric of the tent. Fixing each pole to the fabric of the tent or another pole at a third point ensures that the support structure is relatively rigid and provides stability to the structure. Several poles used together may provide a geodesic, dome or tunnel shaped tent structure. A tent sheet or canopy and other parts may be suspended from the structure to form walls and ceiling of the tent.

Typically the poles are fixed at their ends by an additional part attached to a tent sheet. Often this is by way of nylon straps with metal eyelets. The straps are secured to the tent sheet and the ends of the poles have a shape which is suitable for securing them in or through the eyelets. Alternatively, a peg or short rod is secured somehow to the tent sheet. The rod is then inserted into the end of a hollow pole. Tent poles therefore

require a unique design for use with a particular tent body so that they are compatible with the tent body.

The main body of the tent may be provided with a series of sleeves on its outer surface through which the poles pass, so that the main body is attached to the poles, along the length of the poles, to suspend the sheet and provide a shelter.

Given the possibility of using several poles and tent sheets it can quickly become a complicated task to successfully assemble a tent so that it provides a stable structure. Each additional part of the tent makes it more complicated to assemble and adds weight to the tent, making it less portable.

One aim of the invention is to provide a lightweight tent that is easy to assemble. Other aims of the invention will become apparent from the following description and claims.

Summary of the invention

Aspects of the invention are set out in the accompanying claims.

An embodiment of the invention relates to a tent comprising: a ground sheet; a canopy sheet adapted to extend over at least part of the ground sheet to form at least a partially enclosed internal space when the tent is assembled; and at least one pair of pocket elements each attached either to the ground sheet or the canopy sheet, each pocket element comprising a pocket in which an end of a pole may be received, wherein, the pocket elements are secured in spaced apart locations which, when the tent is assembled, are within the enclosed internal space.

The invention relates to a method and apparatus for securing tents or poles to form a structure for supporting a tent. Tent poles are inserted in a pair of pocket elements which are attached to a part of the tent such as the ground sheet or the canopy sheet. The canopy sheet extends over at least a part of the ground sheet to form at least a partially enclosed internal space. Poles are used to make an internal structure and are within the limits of the tent when it is assembled. The pockets or elements are designed to be of simple construction and therefore cheap to manufacture. The pocket elements are also light weight to assist with keeping the overall weight of the tent to a minimum.

The pockets or elements are shaped so that it is easy to insert the end of the tent pole into them. This helps to make the tent quick and easy to assemble. Furthermore, the shape of the pocket may be such that it directs the tent pole into the correct position so that it is secured adequately. The tent, and pocket elements, are durable because they have a simple construction. The pocket elements may be made to have a particular depth so that the tent poles are secured in position. Any type of tent pole may be used with a tent. Accordingly, the tent does not require specifically designed poles for use with a particular tent body. Further, the tent does not require additional parts for attaching the poles to the tent.

Respective pole ends may be located in a pair of pocket elements for providing a support structure to the canopy sheet. The sheet between the pocket elements is in tension when a pole is inserted. In practice, a tent will normally comprise at least two pairs of pocket elements and at least two poles. The poles are inserted in respective pairs of pocket elements and an area of the ground sheet between the pocket elements is in tension. This provides the tent with a substantially flat ground sheet which may provide a useful space. The canopy may extend over all or most of the area of the ground sheet that is in tension. The canopy will usually be supported by the support structure provided by the tent poles. The canopy may entirely cover the support structure and thereby provide a completely enclosed space. In this instance, the canopy may be provided with an opening to allow access to the tent. Furthermore, the canopy may extend beyond the support structure and ground sheet. This allows for the outer limit of the tent to have a different shape. Advantageously, the outer limit of the tent may have a streamlined shape. The canopy may optionally comprise a sleeve or loop for receiving a portion of at least one tent pole. This provides the tent pole with an additional fixed point which helps to provide stability to the structure. Furthermore, this helps position the canopy and ensure that it stays in the correct place. It also helps with guiding the tent poles into the correct position when assembling the tent. Where the canopy is directly over the pole structure, the space between the canopy and the poles may be minimal. This ensures that the enclosed space is maximised as there is no lost space between the support structure and the canopy.

The pocket elements may have a wide opening which narrows towards the bottom of the pocket. This allows for more than one tent pole to be received in one pocket. It also helps to position the tent pole easily without the need to insert the pole into a small

opening or accurately position the pole. The pocket elements may be closed at one end opposite the opening. This ensures that the poles stay within the pocket elements. The pocket elements may be sized to receive one or more tent poles. This has the advantage that only one tent pocket element is required where several poles meet at the same point of the frame, this results in increased weight savings, and advantages with regard to the cost and simplicity of manufacturing the tent. Pocket elements may be formed from an elongate piece of material and secured to the ground sheet or canopy sheet. The pocket elements may be cone shaped.

The pocket elements may be located at the extremity of the at least partially enclosed space. This serves to maximise the internal space of the tent and ensure that the tent is completely self-contained with the pole support structure within the outer limits of the tent.

In addition, the tent may be provided with tension straps. These are typically provided along lines of most tension when the tent is assembled and have a pocket element secured at each end, in line with the tension strap. This increases the strength and durability of the tent while keeping the overall weight of the tent to a minimum.

A tension strap for use as part of the tent are secured to a ground sheet or a canopy sheet, the tension strap having a first end and a second end which are shaped to form a pair of pockets in which a first end and a second end of the pole respectively may be received.

In this arrangement separate pocket elements are not required as they are integral with tension straps. Therefore, the tent is cheaper and more simple to manufacture as fewer parts are required.

The tent may further comprise a fly sheet and at least one guy rope. A fly sheet helps to keep insects from the inside of the tent. Guy ropes allow extra tension to be applied to the canopy of the tent and assist in securing the tent to the ground. Further, where the canopy extends beyond the pole structure, guy ropes can be used to achieve different shapes to the exterior of the tent.

Other aspects of the invention and variations and their advantages will become apparent from the following description.

Brief description of the drawings

Further advantages of the invention may become apparent to those skilled in the art with the benefit of the following detailed description of the preferred embodiments and upon reference to the accompanying drawings in which:

Figure 1 is a schematic illustration of a known tent;
Figure 2 is a schematic illustration of a single pole structure;
Figure 3 is a schematic illustration of a dome structure;
Figure 4A is a photo of a top view of a pocket element;
Figure 4B is a schematic illustration of a top view of a pocket element;
Figure 5A is a photo of a bottom view of a pocket element;
Figure 5B is a schematic illustration of a bottom view of a pocket element;
Figure 6A is a photo of a top view of a pocket secured to a tent;
Figure 6B is a schematic illustration of a top view of a pocket secured to a tent;
Figure 7A is a photo of a front-side view of a pocket element secured to a tent;
Figure 7B is a schematic illustration of a front-side view of a pocket element secured to a tent;
Figure 8A is a photo of a back-side view of a pocket element secured to a tent;
Figure 8B is a schematic illustration of a back-side view of a pocket element secured to a tent;
Figure 9A is a photo of a front-side view of a pocket element secured to a tent with two poles inserted;
Figure 9B is a schematic illustration of a front-side view of a pocket element secured to a tent with two poles inserted;
Figure 10A is a photo of a back-side view of a pocket element secured to a tent with two poles inserted; and
Figure 10B is a schematic illustration of a back-side view of a pocket element secured to a tent with two poles inserted.

Detailed description

Referring to the drawings, like reference numerals designate identical or corresponding features throughout the views.

A tent typically comprises a ground sheet and a canopy sheet. A support structure is provided by curved tent poles which are secured to at least one of these sheets so that the tent is self-supporting and has a partially enclosed internal space. As a tent is typically a fabric self-supporting structure, the fixture points for the poles are held in a fixed position by tension of the poles and the material between the fixture points.

A typical known tent 100 is shown in figure 1. In this illustration a geodesic tent with two supporting poles 110 is shown. The ends of the poles 110 are secured in position by straps attached to the outside of a ground sheet of the tent 100. The securing means for a single pole are spaced a suitable distance apart for the length of pole. The tent structure will be in tension between the two ends of the poles 110, usually across the ground sheet. The outer side of a canopy sheet 130 has a series of hooks, loops or sleeves 140 which are used to suspend the sheet 130 from the frame. Thus, the support structure provides a frame from which other parts of the tent 100 are hung and the internal enclosure is spaced apart from the pole 110 structure.

In an embodiment of the invention two pairs of pocket elements (described in more detail below) are positioned at spaced apart locations near the corners of a substantially rectangular ground sheet. The pocket elements each have an opening for receiving the end of a tent pole. Respective pairs of pocket elements are located opposite each other along diagonals bisecting each of the corners of the ground sheet. The openings of each of the pocket elements in each pair face each other.

Figure 2 shows a schematic illustration of a single tent pole 210 used with a pair of pocket elements (not shown). The pocket elements are spaced apart along a tension strap or portion of a ground sheet 220, and the distance between the pocket elements is less than the length of the pole 210. The tent pole 210 forms an arch between the pair of pocket elements. The pole 210 is threaded through a sleeve 240 of the canopy 230.

Figure 3 shows a schematic illustration of a two tent pole structure, used with two pairs of pocket elements 250, 252. The pocket elements 250, 252 are spaced apart near to the extremities of a ground sheet 220, and the pocket elements 250, 252 are paired between diagonally opposite corners. The two tent poles 210 cross each other and therefore form a dome structure. A canopy sheet is not shown in this illustration.

In an embodiment, two tent poles are used to provide a skeletal support structure to the tent. The ends of the first pole are secured in the first pair of pockets and the ends of the second pole are secured in the second pair of pockets. The poles are longer than the distance between a pair of pockets and are curved under tension away from the ground sheet. Thus, together the two poles provide a dome structure. The skeletal structure has sufficient height to provide a shelter in which one or more humans can be accommodated.

Between each pair of pocket elements, the ground sheet is in tension, also. This provides a base to the tent with relatively flat fabric stretched between the corners of the tent. The two poles may be fixed to each other at the point where they cross to provide rigidity and stability to the structure. Alternatively, or in addition, the poles may be fixed to the tent at some other point.

A canopy is provided to form at least a partially enclosed internal space to the tent, i.e. the walls and roof of the tent. The canopy may be secured to the ground sheet along the edges, to the tent poles, or both the ground sheet and the tent poles.

The canopy is stretched or otherwise arranged over the tent poles. The canopy comprises sleeves on the internal side through which the poles may be threaded. The sleeves secure the canopy to the pole structure and provide a third fixed point along the length of the poles to provide the pole structure with some stability.

Thus, when the tent is assembled, the at least one pair of pocket elements and the pole structure are located within the enclosed internal space of the tent. The arrangement of the skeletal support structure within the enclosed internal space enables much more flexibility as to the shape of the canopy. For example, the canopy may have a suitable shage so that it extends beyond the limits of the ground sheet and or pole structure. This provides for a covered area that is not under the pole structure. Where the canopy

extends some distance from the pole structure, it may be provided with guy ropes or points suitable for pegging to the ground in order to provide tension to the canopy and maintain the desired shape.

In some embodiments, the tent may be provided with tension straps. These are strings, ropes, strips, ribbons or belts of material that is stronger than the sheet material when under tension to provide reinforcement to the sheet material. Tension straps may be secured to any part of the tent sheets, and are typically secured along lines which carry the maximum tension. Therefore, in many instances they will be secured between a pair of pocket elements.

The pocket elements will now be described in more detail. In one embodiment, the pocket is made from an elongate piece of flexible material which is arranged in a cone shaped configuration. The pocket is then secured to one of the tent sheets.

Figures 4A, 4B, 5A and 5B show the top and bottom views of a pocket 350 before it has been secured to a tent. The pocket 350 is simple in construction and is made from a flexible material. The flexible material has a first side 351 that becomes the "inside" or front of the pocket 350, and a second side 353 that becomes the "outside" or back and bottom of the pocket 350.

Before the material is formed into the pocket shape it is generally elongate and may have an optional edging material along one edge. The first and second edges 355, 356 are the long edges of the elongate form and are opposite each other. In the embodiment illustrated, the second edge 356 of the formed pocket 350 has edging material 354. The third and fourth edges 357 are the short edges of the elongate form and are opposite each other.

To form the pocket shape, the material is curved around the mid-point of the first edge 355 so that third and fourth edges 357 are overlapping. The shape is similar to a cone, with the mid-point of the first edge 355 forming the apex of the cone 358. In order to fix the shape of the pocket 350, the material is stitched along the first edge 351 on the bottom 353 of the pocket through the overlapping pocket material. Also, the pocket may be stitched along the first edge 355 on the inside 351 of the pocket 350. Both lines of stitching may be seen on the bottom 353 of the pocket 350 in figures 5A and 5B, and a

single line of stitching may be seen on the inside 351 of the pocket 350 in figures 4A and 4B.

Edging material is secured around the edge of the cone to reinforce the edge and prevent fraying. In the embodiment illustrated, the edging material 354 does not extend along the third and fourth edges 357 of the pocket 350. Instead these edges are folded over and secured by stitching.

In a preferred embodiment, at least one pair of pocket elements is secured to the fabric of the tent so that poles may be inserted in the pocket elements and to provide a skeleton support structure. Alternatively, pocket elements may be secured to tension straps, as discussed below.

Figures 6A, 6B, 7A, 7B, 8A and 8B show various views of a pocket 350 fixed to the fabric of the tent. The pocket 350 is located at the end of a tension strap 360. In order to fix the pocket 350 to the fabric it is stitched along the third and fourth edges 357. The third and fourth edges 357 are orientated so that they are perpendicular to the extended direction of the tension strap 360. The pocket 350 is also fixed at the apex 358 by stitching across the apex 358 of the cone. Again, the direction of stitching is generally perpendicular to the extended direction of the tension strap 360. Thus, when the pocket 350 is attached to the tent fabric it has the shape of a truncated cone. The opening of the cone is generally in the same direction as the tension strap 360.

When the end of a pole is inserted in the opening of the pocket and put under tension it will be directed towards the closed end of the pocket, due to the shape of the pocket and the direction of the applied force. The back of the pocket will extend a small distance up the pole, and the sides of the pocket will be in tension.

The pocket elements are suitably sized so that one or more tent pole ends may be inserted in each pocket. In some cases, the pocket elements are sized to review two or more tent pole ends. The pocket may have internal compartments, to divide the pocket into sections, one for each pole.

Figures 9A, 9B, 10A and 10B show two views of the pocket 350 with two tent poles 210 inserted. The end of each pole 210 is inserted in the front of the pocket 350 and

directed towards the apex of the cone 358. The poles 210 do not need to be accurately positioned, as the shape of the pocket 350 will direct the pole to the correct position. When the pole 210 is in tension the end of the pole 210 is positioned close to the apex 358 of the cone and will be in line with the tension strap 360. The back top edge 256 of the pocket 350 extends up the poles, and the sides of the pocket 350 are under tension. The depth of the pocket 350 ensures that the poles 210 are secured in position without the need to insert the pole 210 through a small opening or accurately position the pole 210.

It is not necessary for the direction of the pole to exactly match the direction of the tension strap. Therefore, even where it is intended for two poles to be fixed in position by the same pocket and directed in diverging directions from the pocket, it is not essential that there are two tension straps.

Furthermore, pocket elements may be integrated into the straps. For example, by folding over a portion of the strap near an end and securing it to itself so that it forms a cone or similar shape.

In another arrangement the pocket elements may be formed from a simple strap section which is folded round and secured to make a stirrup. In securing the stirrup, the end would be enclosed for securing a pole within. Alternatively, the pocket elements may be made by securing an extra piece of material to the ground sheet or canopy sheet, in the same place as the sheet, along two sides thereby providing a flap under which the end of a pole may be inserted. In another arrangement, the pocket may be formed from a moulded plastic with holes included in the mould for securing to the tent. The examples given herein are not the only ways of how to form a pocket element and are not considered to be limiting. The advantages, as discussed herein, may be achieved by any number of different arrangements of forming pocket elements.

It is not essential that the pocket is positioned on a tension strap and it is not necessary for a tension strap to be present at all. The tension strap is provided as reinforcement along certain lines of the tent fabric. If the tent fabric is strong enough in the direction of tension when the tent is assembled, then additional reinforcement is not required.

Parts for a tent have been described above. The skilled person will be aware of the various materials and the type of construction commonly used to make each part. The invention is not limited to use of any particular material. Each part may be constructed from materials which have suitable properties for the use of the part.

In use, where the pocket elements are located on the ground sheet of a tent and tension straps are provided between each of the pocket elements within a respective pair, a first end of a pole is inserted in the first pocket of a pair of pocket elements. The pole is forced to flex by the user in order to insert the second end of the pole in the second pocket of the pair of pocket elements, as the pocket elements are spaced apart at a distance less than the length of the pole. Additional poles are inserted in additional pairs of pocket elements until the poles form the complete skeletal support structure.

While it is not required that any particular pole is used with a particular pocket element pair, some lengths of pole will be more suitable for a particular pair of pocket elements than others. For example, if the poles are too short then a lower than desirable structure will be formed. Alternatively, if the poles are too long then a higher than desired structure will be formed, or it will not be possible to flex the poles so that they will fit between a pair of pocket elements.

As the tent is assembled and the poles are inserted in the pocket elements, the ground sheet will be in tension. Initially, when only one pole is inserted, the ground sheet will only be in tension between the two ends of the pole. As more poles are inserted, this will extend to an area of the ground sheet.

Once all of the poles are inserted, a canopy sheet is positioned over the structure and is supported by the structure. In an alternative arrangement, the canopy sheet may comprise sleeves, or loops on the interior service. In this case, the poles are threaded through the sleeves or loops before the pole ends are inserted in the pocket elements. The sleeves or loops assist in locating the canopy sheet in the correct position relative to the support structure and ground sheet, and to ensure that the canopy stays in the correct position during use of the tent once it is fully assembled. In an embodiment, instead of sleeves or loops, the internal surface of the canopy sheet may comprise clips which may be attached to the poles after the skeletal structure is assembled.

In any event, the canopy sheet is positioned over the structure and is at least loosely secured to the skeletal pole structure. Thus, the poles and pocket elements are within an at least partially enclosed internal space. The edges of the canopy may be secured either to the ground sheet or to the ends of the poles near to the ground sheet so that the support structure is entirely covered. In this case an opening in one side of the canopy would be provided to allow access to the tent.

In some embodiments, the canopy may extend beyond the limits of the ground sheet or pole structure. The internal pole structure allows more flexibility to the external canopy than for conventional tents where the shape is substantially determined by the exo-skeleton of the external poles. In some embodiments, the pocket elements will be positioned near to the extremity of the ground sheet. Where the canopy extends beyond the limits of the ground sheet or pole structure, the pocket elements may be located elsewhere. Furthermore, the ground sheet and or canopy may be secured to the ground with pegs. The tent may further comprise guy ropes on the outer surface, which may be pegged also in order to provide the tent with additional tension and greater stability. Still further, additionally the tent may include a fly sheet or both inner and outer layers.

In some embodiments, pocket elements may be attached to the canopy or fly sheet of the tent instead of or in addition to the ground sheet. This will normally be where additional poles are provided in order to achieve more complex skeletal structure.

In another embodiment, the ground sheet and canopy may be permanently secured together by stitching the canopy to the ground sheet around the edges of the ground sheet. In such an arrangement the canopy would be provided with at least one opening for inserting the tent poles when assembling the tent and for entering the enclosed internal space when the tent is assembled.

While the tents described herein have been described as both rigid and stable, the skilled person will realise that an assembled tent has a certain amount of movement. As noted in the background section of the application, tent poles are typically flexible and they may bend when a force, external to the tent, is applied. For example, there may be some movement in the tent structure in high wind. However, the tent will

remain assembled due to the balance of tension provided throughout the tent and the tolerance of the securing points of the skeletal structure.

While embodiments of the invention have been illustrated and described, it is not intended that these embodiments illustrate all possible forms of the invention. It is understood that various changes may be made without departing from the scope of the invention. Those of ordinary skill in the art will appreciate that any arrangement, which is calculated to achieve the same purpose, may be substituted for the specific embodiments shown and that the invention has other applications in other environments. This application is intended to cover any adaptations or variations of the present invention. The following claims are in no way intended to limit the scope of the invention to the specific embodiments described herein.

When used in this specification and claims, the terms "comprises" and "comprising" and variations thereof mean that the specified features, steps or integers are included. The terms are not to be interpreted to exclude the presence of other features, steps or components.

The features disclosed in the foregoing description, or the following claims, or the accompanying drawings, expressed in their specific forms or in terms of a means for performing the disclosed function, or a method or process for attaining the disclosed result, as appropriate, may, separately, or in any combination of such features, be utilised for realising the invention in diverse forms thereof.

Claims:

1. A tent comprising:

a ground sheet;

a canopy sheet adapted to extend over at least part of the ground sheet to form at least a partially enclosed internal space when the tent is assembled; and

at least one pair of pocket elements each attached either to the ground sheet or the canopy sheet, each pocket element comprising a pocket in which an end of a pole may be received, wherein,

the pocket elements are secured in spaced apart locations which, when the tent is assembled, are within the enclosed internal space.

2. A tent according to claim 1, wherein, the pocket elements are located at the extremity of the at least partially enclosed space.

3. A tent according to any of claims 1 or 2, further comprising at least one pole, wherein, respective pole ends may be located in a pair of pocket elements for providing a support structure to the canopy sheet.

4. A tent according to any of claims 1 to 3, wherein when the tent is assembled, the sheet between the pocket elements is in tension.

5. A tent according to any of claims 1 to 4, further comprising at least two pairs of pocket elements and at least two poles, wherein when the poles are inserted in respective pairs of pocket elements an area of the ground sheet between the pocket elements is in tension.

6. A tent according to any of claims 1 to 5, wherein when the tent is assembled, the canopy sheet extends over the area of the ground sheet that is in tension.

7. A tent according to any of claims 3, or 4 to 6 when dependent on claim 3, wherein, when the tent is assembled, the canopy sheet is supported by the support structure.

8. A tent according to any of claims 3, or 4 to 7 when dependent on claim 3, wherein, when the tent is assembled, the canopy sheet covers the support structure.

9. A tent according to any of claims 1 to 8 wherein the canopy extends beyond the other parts of the tent.

10. A tent according to any of claims 1 to 9, wherein the canopy sheet comprises at least one sleeve or loop for receiving a portion of at least one pole.

11. A tent according to any of claims 1 to 10, wherein the pocket elements have a wide opening which narrows towards the bottom of the pocket.

12. A tent according to any of claims 1 to 11, wherein the pocket elements have closed at one end opposite the opening.

13. A tent according to any of claims 1 to 12, wherein the pocket elements are sized to receive at least one pole end.

14. A tent according to any of claims 1 to 13, wherein the pocket elements are sized to receive two or more pole ends.

15. A tent according to any of claims 1 to 14, wherein the pocket elements are formed from an elongate flexible material and secured to the ground sheet or canopy sheet.

16. A tent according to any of claims 1 to 15, wherein the ground sheet or the canopy sheet further comprise at least one tension strap and at least one pocket element is secured in line with the tension strap.

17. A tent according to claim 16, wherein the opening of the pocket elements are in line with the tension strap.

18. A tent according to any of claims 1 to 17, wherein the pocket elements are cone shaped.

19. A tent according to any of claims 1 to 18, further comprising a fly sheet.

20. A tent according to any of claims 1 to 19, further comprising at least one guy rope arrangement.

21. A tension strap for use as part of a tent secured to a ground sheet or a canopy sheet, the tension sheet having a first end and a second end which are shaped to form a pair of pockets in which a first end and a second end of a pole respectively may be received.

22. A tent or tension strap, substantially as described herein with reference to the illustrative drawings.

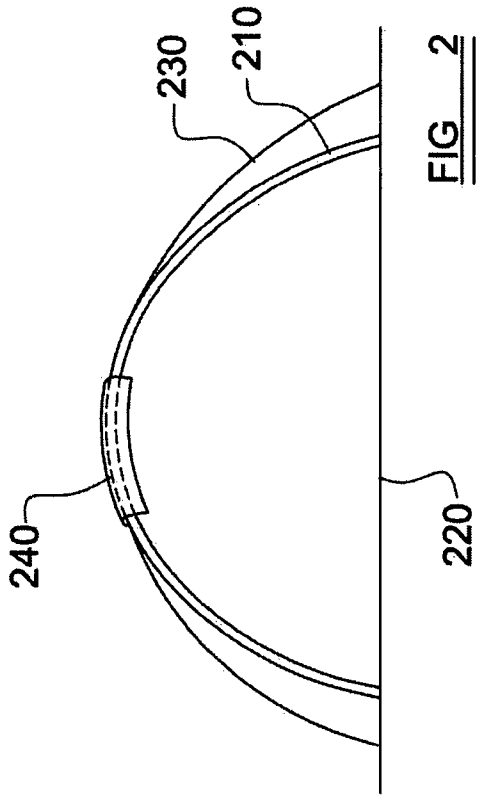

FIG 2

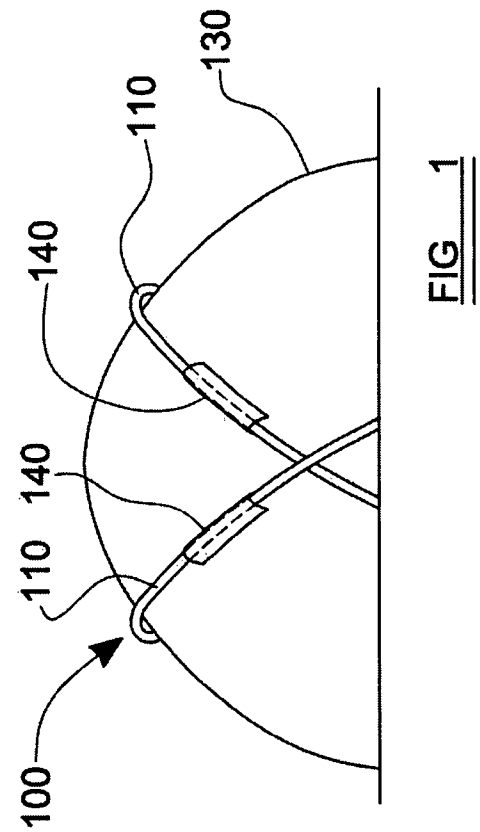

FIG 1

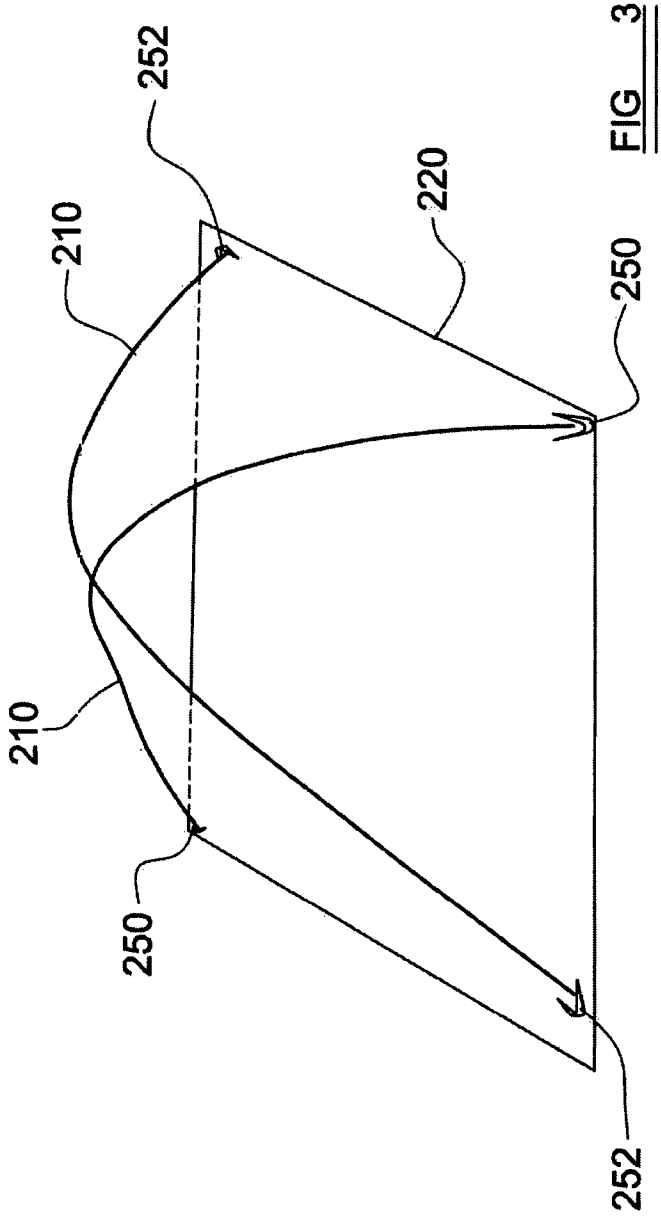

FIG 3

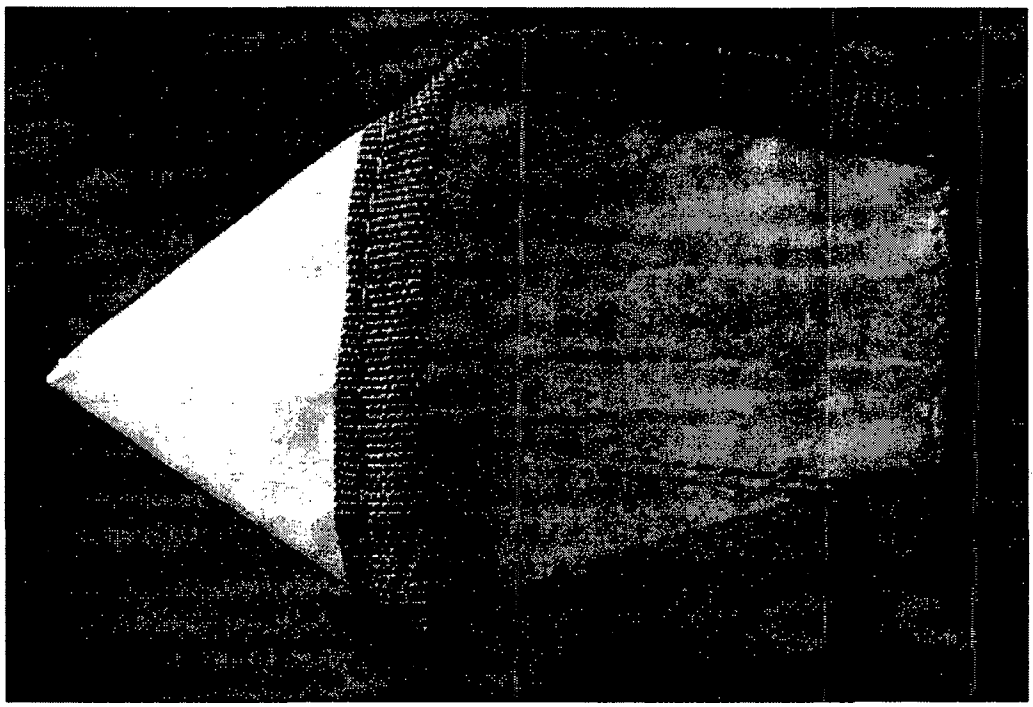

FIG 4A

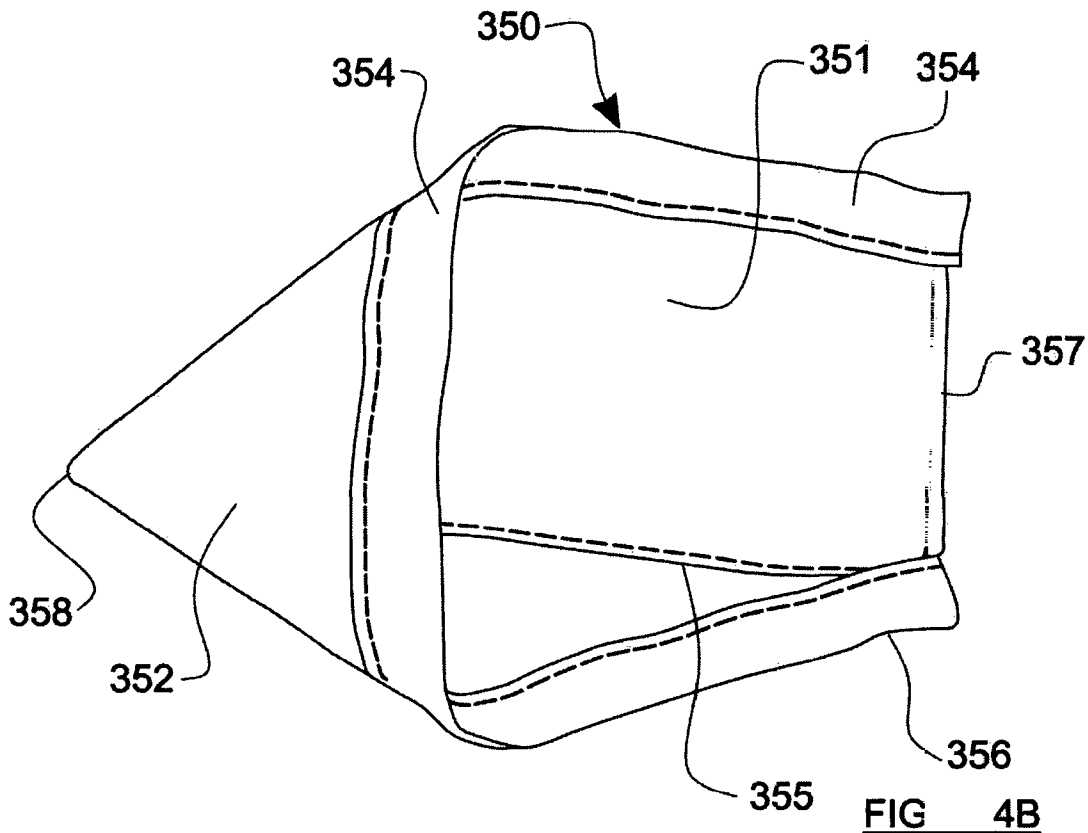

FIG 4B

FIG 5A

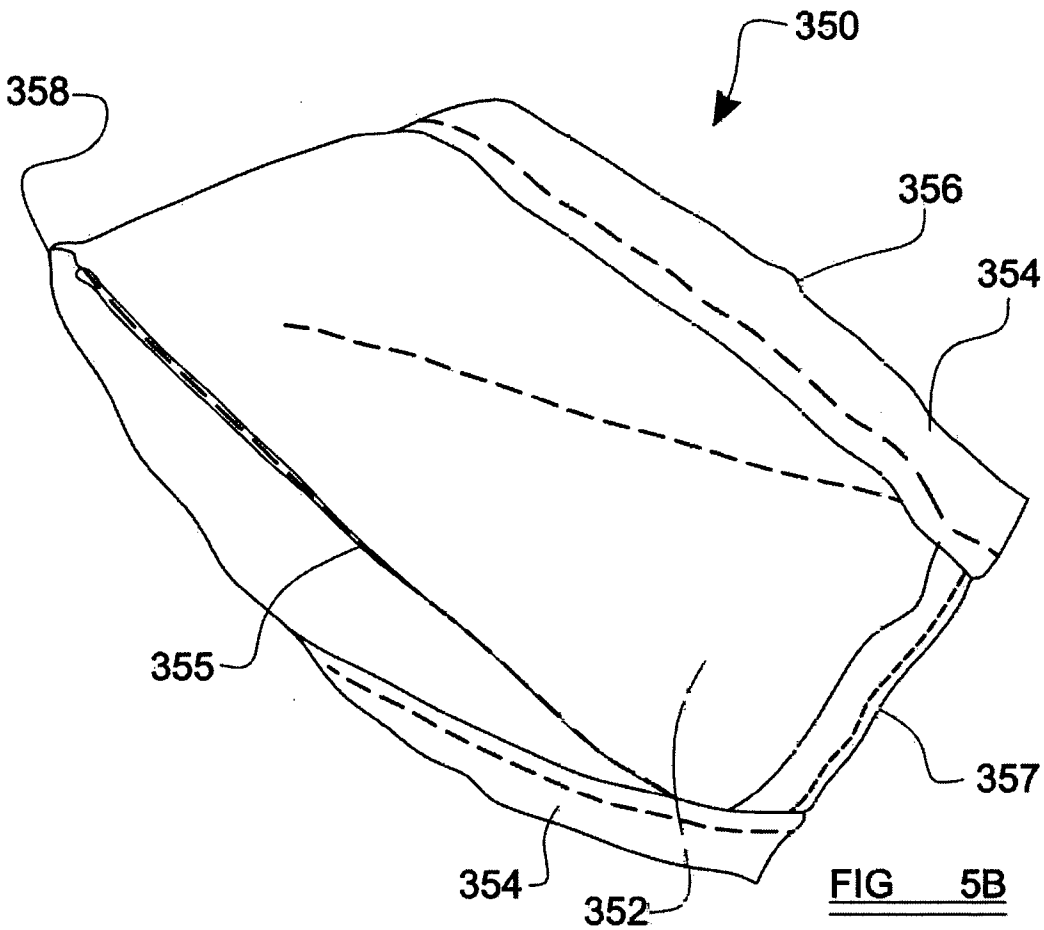

FIG 5B

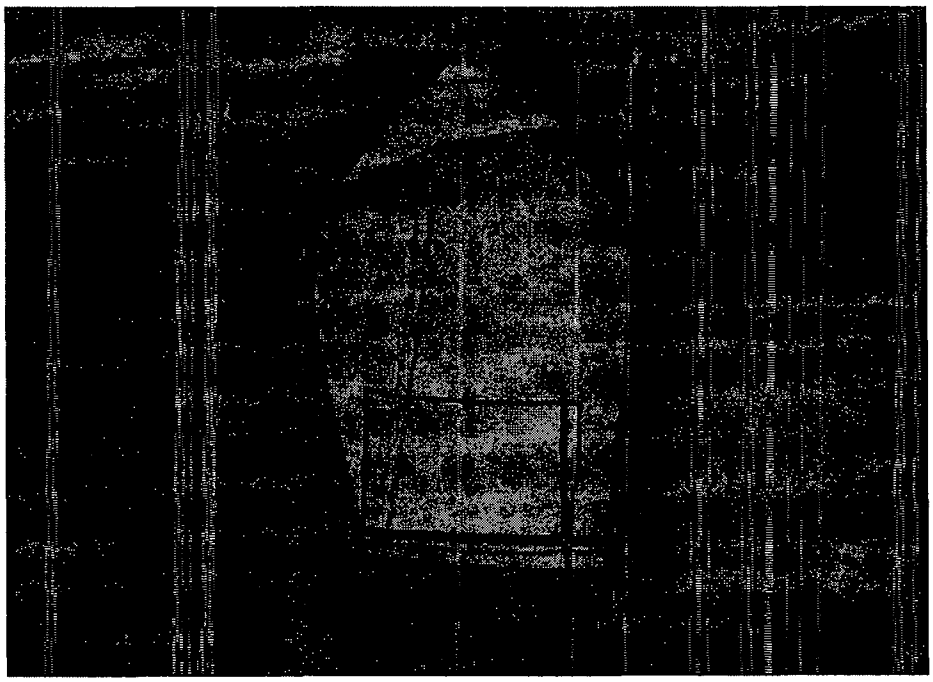

FIG 6A

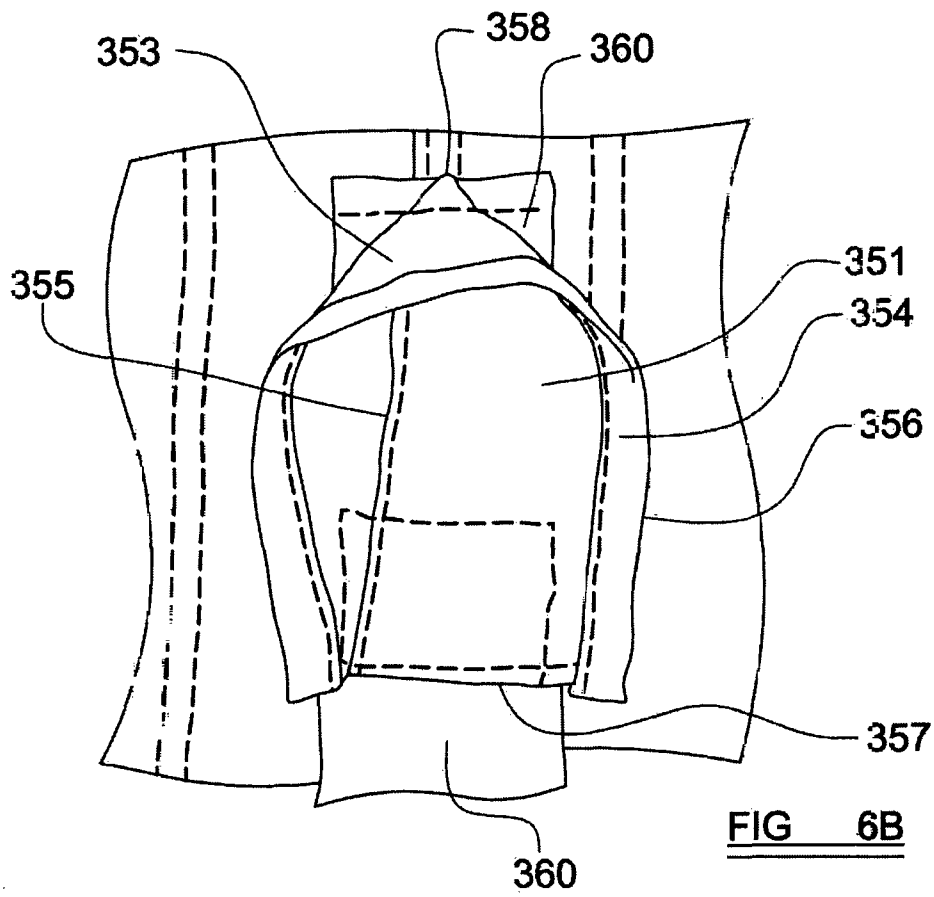

FIG 6B

FIG 7A

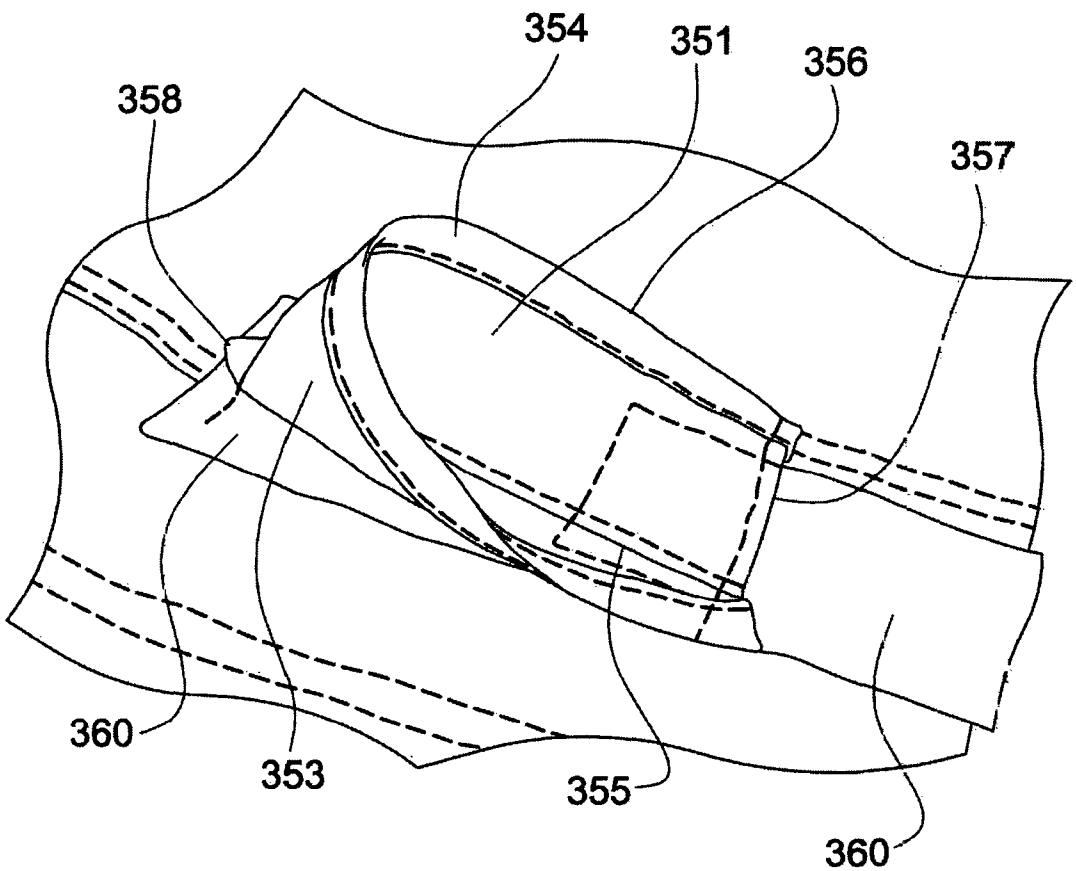

FIG 7B

FIG 8A

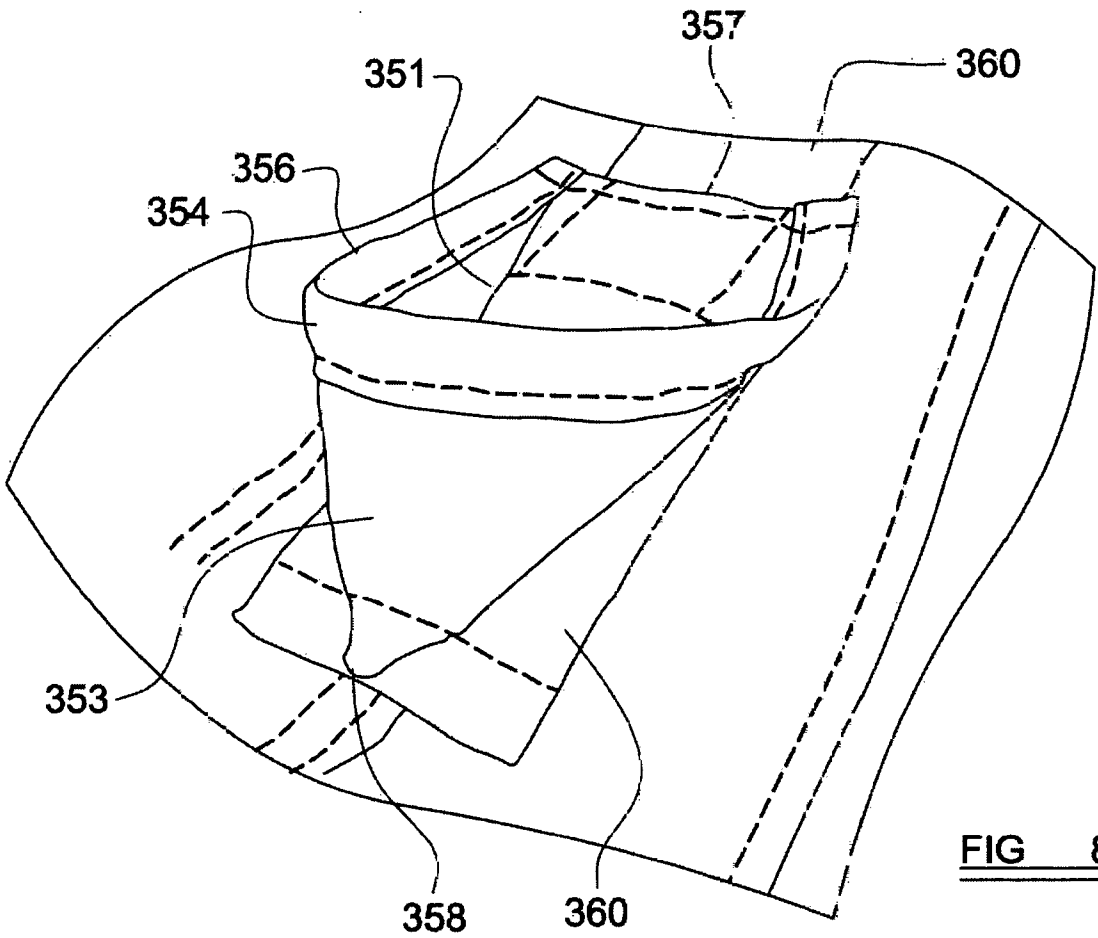

FIG 8B

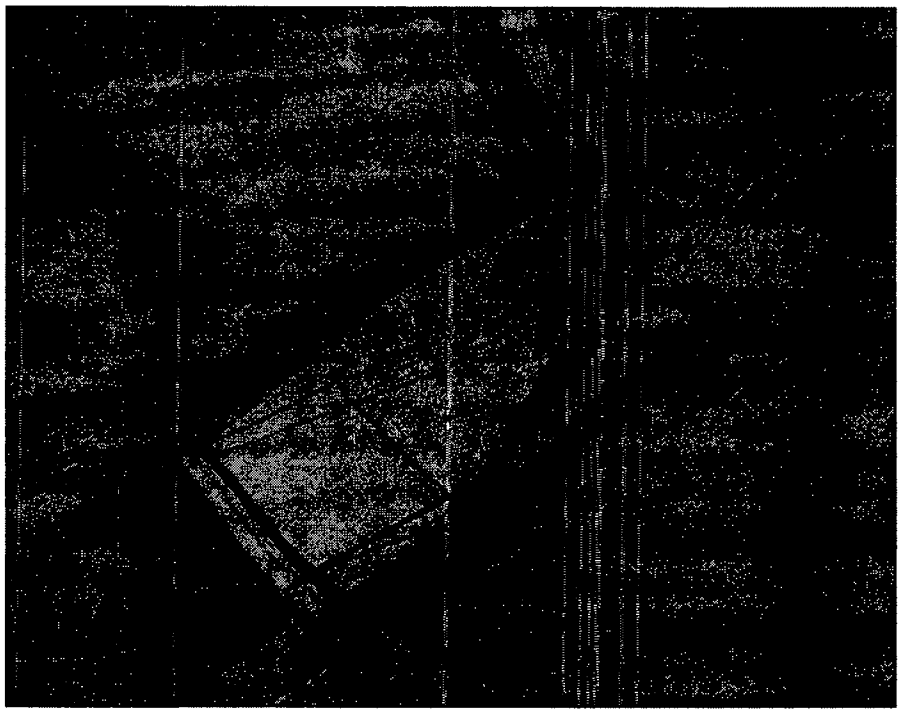

FIG 9A

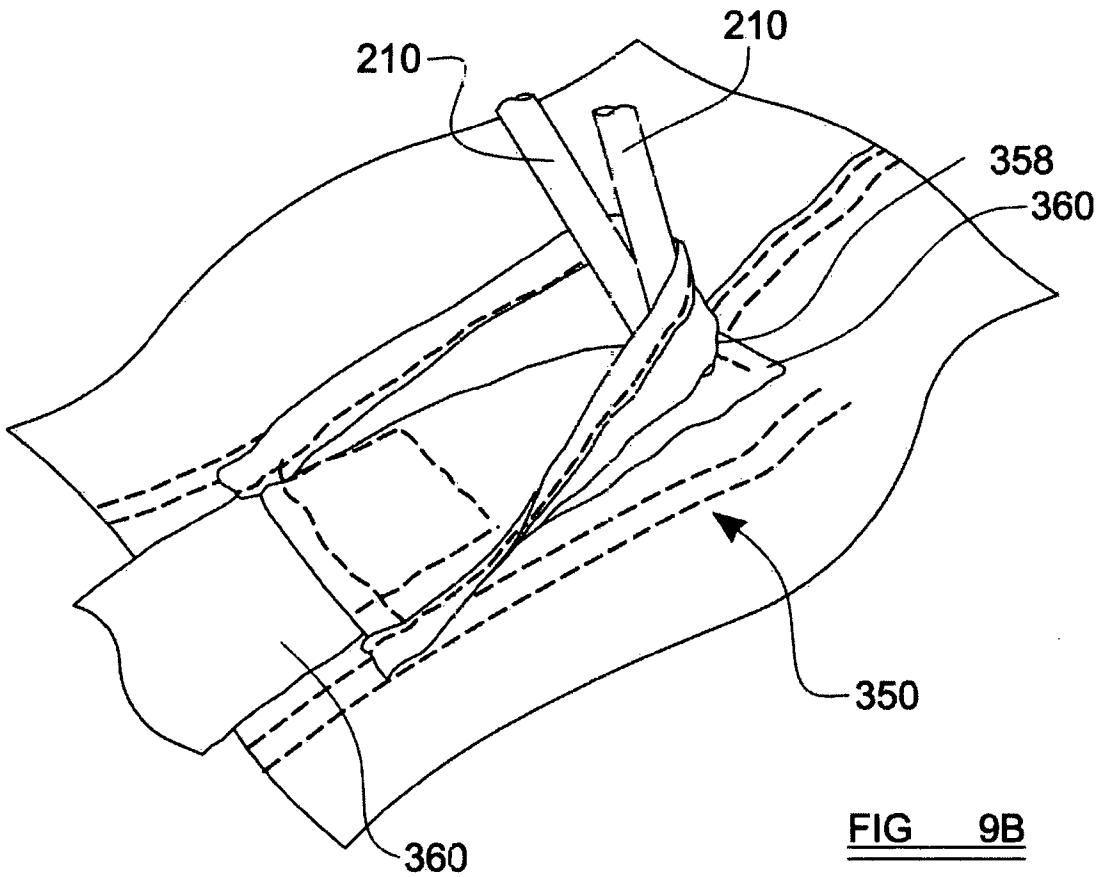

FIG 9B

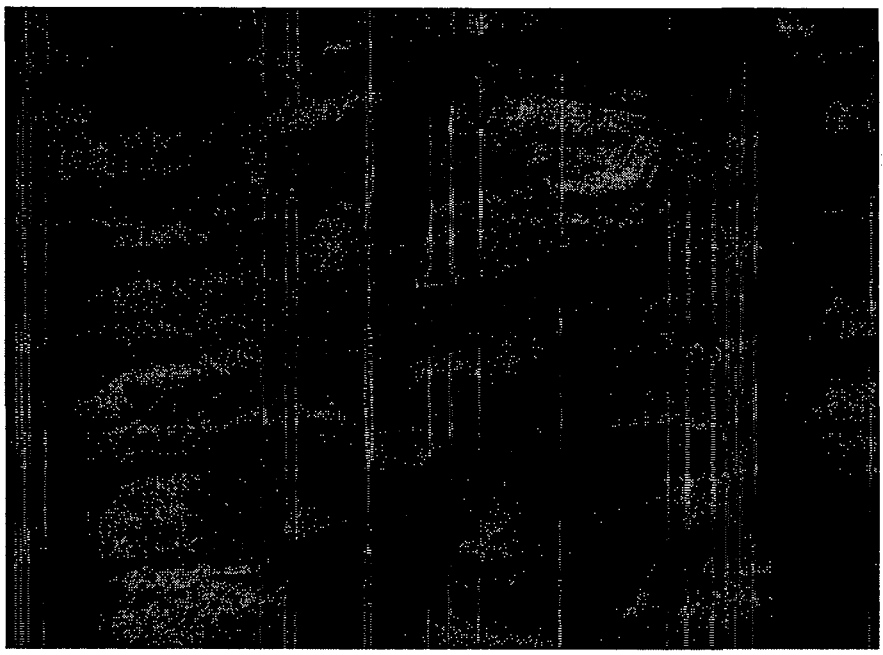

FIG 10A

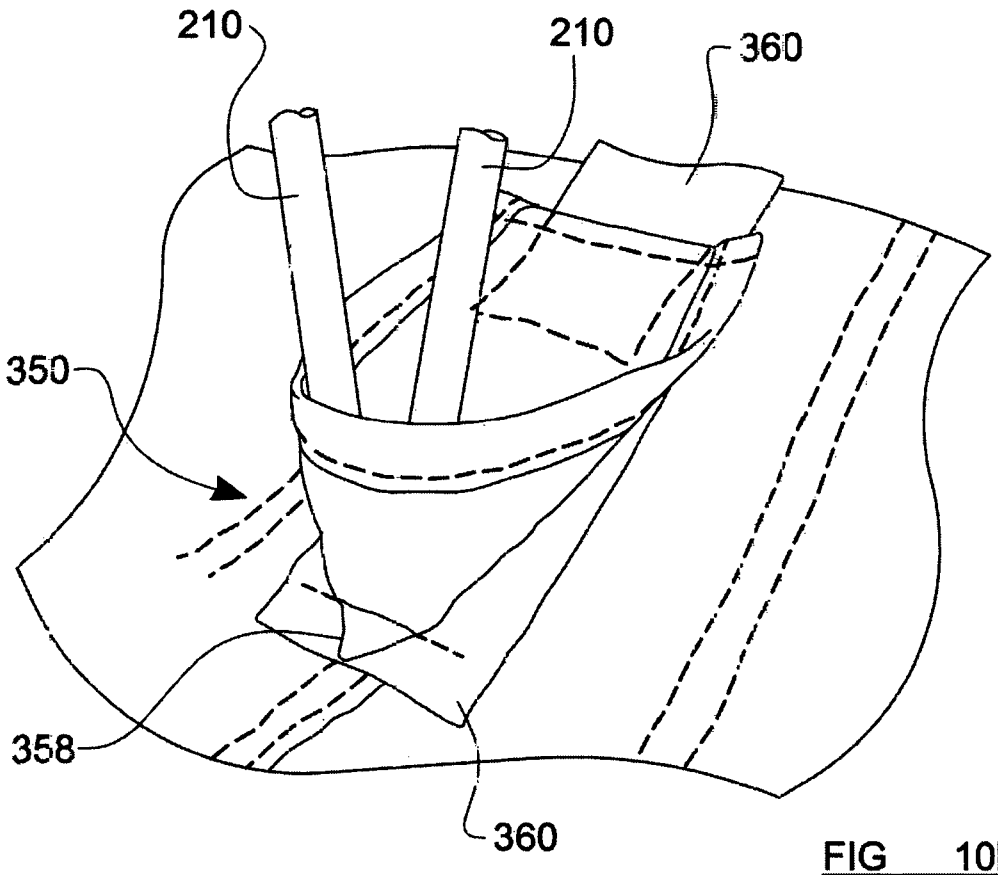

FIG 10B

INTERNATIONAL SEARCH REPORT

International application No
PCT/GB2015/052275

A. CLASSIFICATION OF SUBJECT MATTER
INV. E04H15/36
ADD.

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
E04H

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	GB 813 749 A (SILVER AND EDGINGTON LTD; CHARLES HYDE) 21 May 1959 (1959-05-21) claim 1; figures 6,7	1-4,6-18
X	NL 8 602 419 A (ALBERT SEBE SCHMIDT HANDELENDE) 18 April 1988 (1988-04-18) the whole document	1-10, 12-15,20
X	DE 42 29 281 A1 (BARCELLONA ELEONORA [IT]) 18 March 1993 (1993-03-18) column 1, line 47 - column 2, line 8; figures 1,4	1-10, 12-15,20
A	CN 201 261 962 Y (NORTHPOLE CHINA LTD [CN]) 24 June 2009 (2009-06-24) figures 1,4	11,18

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[X] Further documents are listed in the continuation of Box C.

[X] See patent family annex.

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"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

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"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
6 October 2015	14/10/2015

Name and mailing address of the ISA/	Authorized officer
European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Fax: (+31-70) 340-3016	Rosborough, John

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INTERNATIONAL SEARCH REPORT

International application No
PCT/GB2015/052275

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
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A	figures 1,2	16,17

X	GB 2 497 599 A (SEAMAN JOHN [GB]) 19 June 2013 (2013-06-19)	21
A	page 2, lines 28-34; figure 5	16,17,20

A	US 4 858 635 A (EPPENBACH LAWRENCE C [US]) 22 August 1989 (1989-08-22) column 5, lines 6-21; figures 1,4	19

1

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No
PCT/GB2015/052275

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		IT RM910665 A1	05-03-1993
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		EP 0867322 A2	30-09-1998
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US 4858635 A	22-08-1989	NONE	