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(54) **INFLATABLE NECK PILLOW**

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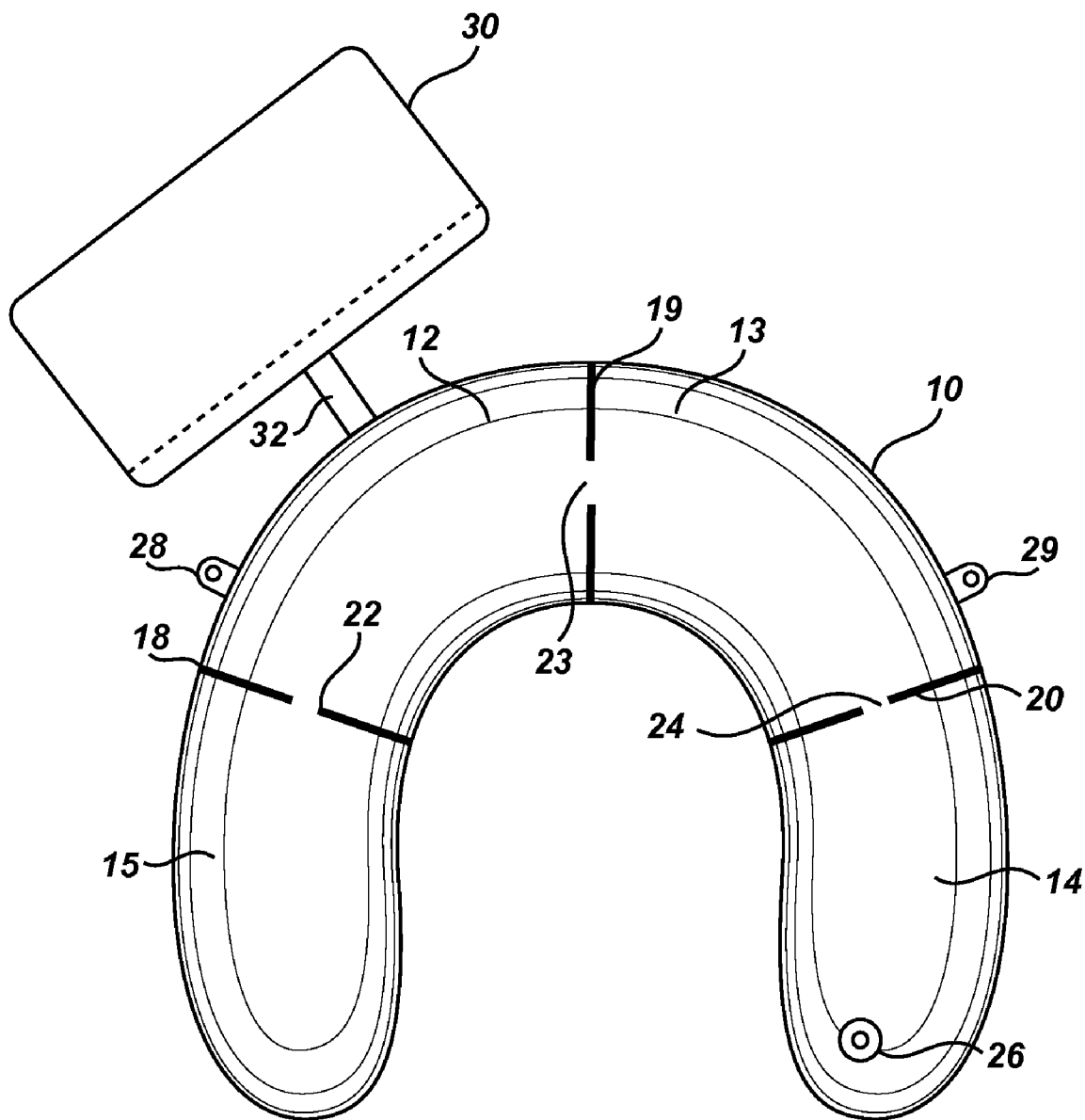
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(57) **ABSTRACT**

Fillable neck pillows are described which are adapted for travel use are described. The pillows are constructed for compact storage and/or for accepting at least two different types of fill media.

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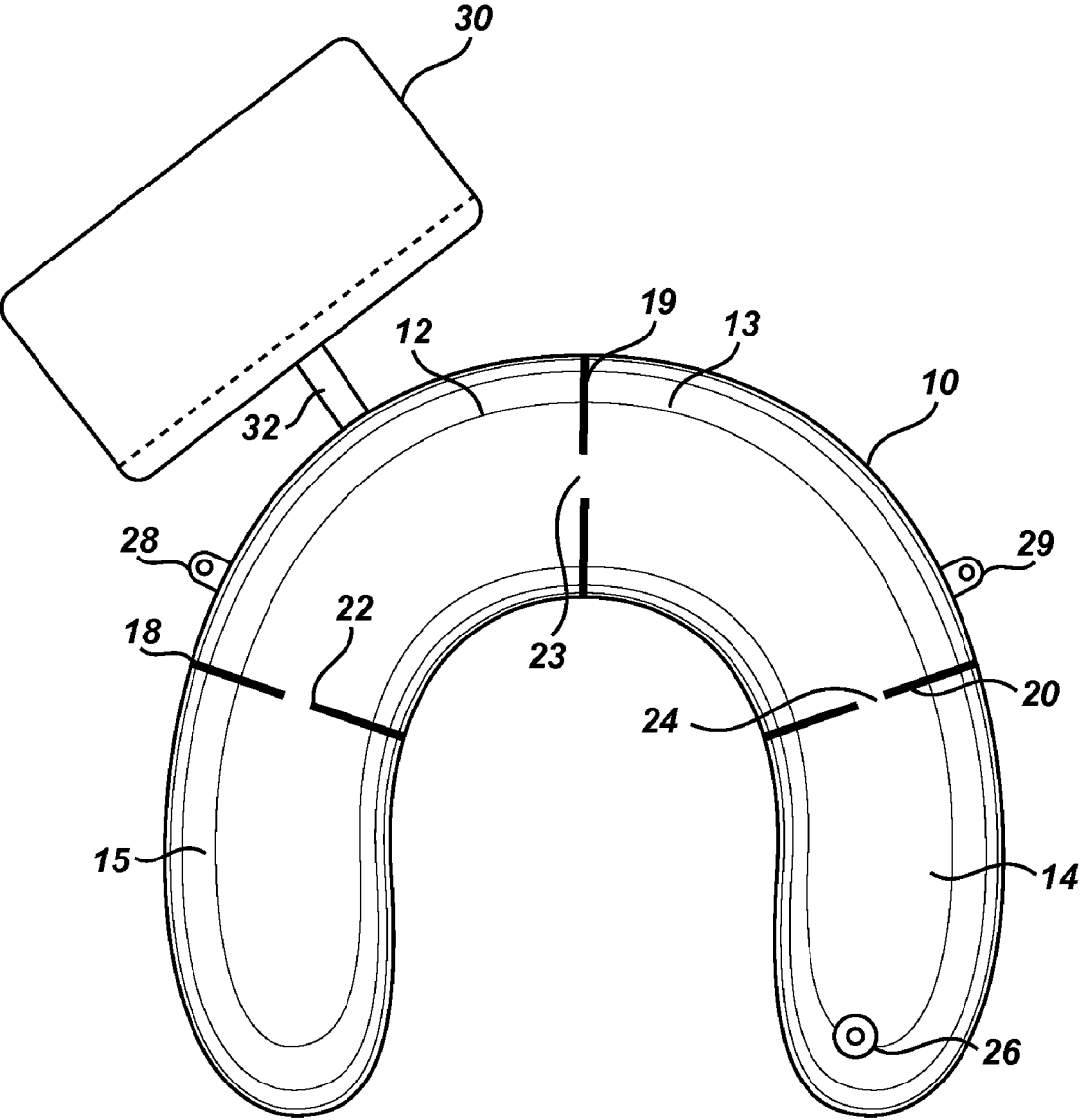


Fig. 1

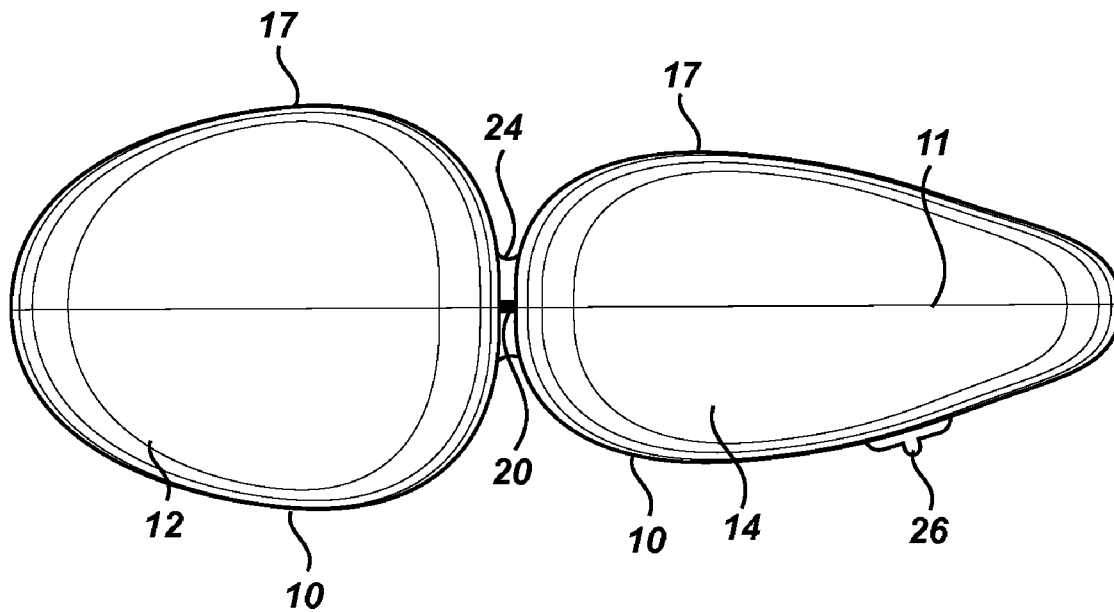


Fig. 2

INFLATABLE NECK PILLOW

RELATED APPLICATIONS

[0001] NOT APPLICABLE.

FIELD OF THE INVENTION

[0002] The present invention relates to neck pillows which can be converted into a compact configuration and/or which are adapted for multiple applications.

BACKGROUND OF THE INVENTION

[0003] The following discussion is provided solely to assist the understanding of the reader, and does not constitute an admission that any of the information discussed or references cited constitute prior art to the present invention. Each of the cited references is incorporated herein by reference in its entirety.

[0004] A number of neck pillows have been described, including pillows which are filled with conforming solid materials such as foam, small beads, and the like. In addition, a number of neck pillows have been described which can be inflated with air.

[0005] El-Asir, U.S. Des. 322,380 describes an inflatable neck pillow with a generally U-shaped design.

[0006] Futagami, U.S. Pat. No. 6,487,737 B1 (also Futagami, U.S. D445,624 S) describes an inflatable air pillow formed of "a flexible material, such as vinyl chloride sheet" which has "at least one gusset in a head rest area of the pillow."

[0007] The Obus Forme Air Travel Pillow™ is described as an inflatable travel pillow. The pillow is a generally U-shaped design with a reduced thickness in the head rest area for which it is stated that it "vertically supports your head." It is further stated that the pillow "deflates in seconds for compact storage in its own pouch."

SUMMARY OF THE INVENTION

[0008] The present invention concerns neck pillows which provide particular advantages for travel purposes by being adapted for compact storage due to the inclusion of localized fold lines across the width of the pillow. Such compact storage prevents the pillow from taking up significant space in the user's purse or travel bag. When stored, it is also advantageous to be able to hold the pillow in the folded configuration so that it does not interfere with other articles. This can be accomplished by using a closure and/or a pouch. In addition, the invention concerns multi-fill pillows, which are adapted to accept at least two different types of fills, such as air, water, and/or particulate fill.

[0009] Thus, a first aspect of the invention concerns a fillable neck pillow which includes a flexible, gas barrier. The gas is substantially impervious to gases such as air. The gas barrier includes a top layer and a bottom layer, where the top layer and bottom layer together define a fillable volume between them. The pillow includes a central head rest portion and two spaced-apart lateral lobe portions, and a fill port in the top layer or the bottom layer, and at least one fold line extending across the pillow. For example, the pillow can include two fold lines, with one such line between the head rest portion and each of the lobe portions, or with three fold lines with one in the head rest portion and one in each of the lobe portions, but other fold line locations can also be used.

[0010] In particular embodiments, the head rest portion is reduced in depth as compared to portions laterally adjacent thereto; the pillow also includes a closure which retains the pillow in a folded configuration, e.g., at least one snap, clip, hook and loop fastener, and/or storage pouch (e.g., an attached storage pouch).

[0011] In certain embodiments, the top layer and bottom layer are separate sheets joined at their peripheral edges (e.g., by heat or solvent welding); the top layer and bottom layer are formed of vinyl chloride, polyethylene, or polypropylene sheeting; the upper layer or bottom layer or both are externally covered with a soft fibrous layer.

[0012] A related aspect concerns a multi-fill pillow which includes a flexible, gas and liquid barrier which has a top layer and a bottom layer. The top layer and said bottom layer together define a fillable volume and the pillow includes a central head rest portion and two spaced-apart lateral lobe portions. The pillow also includes at least one fill port in the top layer or the bottom layer, wherein such fill port includes a fill port for air inflation and a fill port for a liquid or a particulate fill or both.

[0013] In certain embodiments, two separate fill ports are included, where one of the separate fill ports is an air fill port and the other is a liquid fill port. In other embodiments, the fill port is a single, dual medium fill port.

[0014] In particular embodiments, the pillow is as described for the preceding aspect or an embodiment thereof.

[0015] A related aspect concerns a method of using a fillable pillow as described above. The method involves filling the pillow with a desired fill medium, and placing the pillow in position for use behind a person, e.g., behind a person's head and/or neck. The method can also involve emptying the fill medium and folding the pillow into a compact configuration, and may be retained in such compact configuration by use of the closure as indicated above. The pillow may be used in many different contexts, e.g., for travel, such as in an airplane, train, or automobile, and for minor medical treatment.

[0016] In certain embodiments, the pillow is filled with cold water or other cold liquid and is positioned for use against a person who has or is expected to have swelling at or near the location where the pillow is positioned. Similarly, in certain embodiments, the pillow is filled with hot water or other hot liquid, and is positioned against a person in a location which will or is expected to medically benefit from exposure to warmth such as by increasing blood flow in the treated area, e.g., a bruised area approximately 24-48 hours post injury.

[0017] In the context of the present pillows, the term "fill port" refers to a sealable aperture through which a fill medium can be introduced and removed without damage to the pillow. Highly preferably, an air fill port allows inflating and deflating without the use of any mechanical tools or equipment.

[0018] Additional embodiments will be apparent from the Detailed Description and from the claims.

BRIEF DESCRIPTION OF THE DRAWINGS

[0019] FIG. 1 shows a plan view of an exemplary neck pillow.

[0020] FIG. 2 shows a side view of the exemplary neck pillow of FIG. 1.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

[0021] As described in the Summary above, the present invention concerns fillable pillows, and in particular, inflatable pillows. The present pillows are particularly advantageous for travel purposes, but can also be useful in other contexts.

[0022] As is generally understood, inflatable pillows can be constructed of a variety of different impervious, flexible, sheet materials. Commonly, inflatable pillows, mattresses, floats, and the like are made of flexible vinyl chloride, but other flexible materials can also be used (e.g., flexible polypropylene or polyethylene). Typically, the material is a flexible plastic or a sealed fabric (e.g., woven fibrous material sealed on or in a flexible plastic sheet. Additionally, a soft fibrous material can be adhered on the surface of such flexible to provide a more comfortable contact surface.

[0023] Such inflatable pillows can be constructed using conventional techniques. One common method is to join separate sheets, together with a fill port fitted in one of the sheets or at the junction of the sheets to form an inflatable volume. The joining is commonly accomplished by heating. However, the pillows can also be formed using other methods known in the art, such as blow molding.

[0024] The present pillows, in most cases, have a generally U-shape. Depending on the particular shape and sizing, such pillows are typically used in one of two ways. For pillows which have an appropriately-sized space between the side lobes of the pillow, a person using the pillow can place the pillow around their neck such that the side lobes are around the neck and the central, or head rest, portion is behind the head. Alternatively, for smaller pillows, the entire pillow is placed behind the user, with the central portion behind the head, and the lobe portions extending down along the sides of the neck. The pillows can also be placed such that the central portion of the pillow is placed behind the user's neck, and the lobes extend forward around the sides of the person's neck.

[0025] In order to fill (e.g., inflate) the pillow, a fill port is provided in the flexible material. For air inflation, the fill port usually is configured to allow inflating by mouth and deflating by pressing the pillow flat (manipulation of a valve at the fill port may also be needed depending on the particular design). Such fill ports for inflation are commonly used for inflatable objects which can suitably be used for the present pillows. In many cases, other fill methods can also be used, e.g., hand air pumps, etc.

[0026] In addition, the present pillows can be constructed such that they are multi-fill pillows (either with or without the fold lines). That is, a person may select which fill medium is preferred, e.g., air, water (or other such liquid), and/or dry particulates (e.g., small foam beads and the like). In such cases, either one fill port is used which is adapted to accept filling and emptying two or more different media, or multiple fill ports are used for different media. For example, for air inflation, a fill port having a relatively small inside aperture is usually used. However, for dry particulate media (and often for liquid media) a larger aperture is more convenient or even necessary in order to allow practical filling and emptying. For such other media, suitable fill port designs are known and can be used in the present pillows.

[0027] The ability to utilize liquid fill media provides the option of using the present pillows for therapeutic applications. For example, use of cold liquid (e.g., cold water) fill can be useful for reducing swelling, for cooling a person's head and/or neck (e.g., for hot weather sports and other exercise), as well as for other such conditions in which a cold pack is useful. Likewise, use of a warm or hot fill can be useful for increasing blood flow, either alone or in alternation with use of a cold pack. In such applications, the material from which the fillable pillow is constructed should be selected to tolerate the fill liquid and the anticipated temperatures without damage.

[0028] In certain advantageous pillow designs, the pillow is particularly configured for compact storage. Such compact storage allows a person to conveniently carry the pillow in a very small space without damage or interference with other objects, and to re-use the pillow whenever desired.

[0029] To facilitate the compact storage, the pillow can be constructed with a closure which holds the pillow in the compact configuration. Any of a variety of different closures can be used, separately or in combination. For example, one or more snaps can be used (e.g., plastic or metal snaps) which hold the pillow in the folded configuration. Preferably, such snaps are on the outer periphery and/or on the outer surface of the lower layer so that they do not poke against the user during normal use. Similarly, other types of clips can be used in substantially the same manner. Likewise, the closure can utilize hook and loop fasteners. In such case, it is preferable that neither the hook nor loop portion bear against the user during normal use.

[0030] Another type of closure, which can be used separately or in combination with other types of closures, is a storage pouch. As indicated in the Background, separate storage pouches have been provided for inflatable pillows. The difficulty with such separate storage pouches is that often the pouch will become separated from the pillow and lost. Thus, to overcome this difficulty, the present pillows can include an attached storage pouch. In most case the pouch will attach at one edge of the pillow. The pouch can, for example, attach along an edge such that the folded pillow can be folded over and into the pouch. In alternate designs, the pouch is attached to the body of the pillow via a strap or line such that the folded pillow can be inserted into the pouch. This design has the advantage that even improperly folded pillows can be inserted into the pouch.

[0031] Alternatively or in addition, the pillow can be constructed with one or more specific fold lines (e.g., 1, 2, 3, or 4 fold lines) which extend across (or substantially across) the width of the pillow. The fold lines are located such that folding the pillow along those lines results in the pillow folding on itself into a substantially more compact configuration. For example, fold lines can be provided at the junctions between the central head rest portion and the lateral lobe portions, such that the lobes fold onto the head rest portion resulting in a configuration which is approximately $\frac{1}{3}$ the area of the un-folded pillow. If desired, the pillow can be further folded to further reduce the area, which may be along additional fold lines.

[0032] For inflatable and/or liquid fillable pillows, the top and bottom layers of the pillow are usually joined or partially joined at the fold lines. In most cases, partial joining is more convenient because it allows the use of a single fill port to fill the entire pillow because partial joining leaves one or more passages through the fill line which

allows the air or liquid to pass from one fill volume into the adjacent fill volume (e.g., from the head rest portion into the adjacent lobe portions).

[0033] While the present pillows can be configured in many different ways, an exemplary neck pillow is illustrated in FIGS. 1 and 2. FIG. 1 shows a plan view of the bottom of the pillow. The top is substantially the same except that no fill port is present in the top layer. As shown in FIG. 1, the pillow has a lower or bottom layer 10, with a bottom layer beneath it such that a fillable volume is defined. The pillow has two central, head rest portions 12 and 13, joined with two lateral lobe portions 14 and 15. In this exemplary design, the junctions between the head rest portion and the lobe portions are fold lines 18, 19, and 20. The fold lines are lines of a selected width in which the top layer and the bottom layer are partially joined (e.g., partially sealed together). The fold line may be created by a single joining line of a selected width, or may incorporate two or even more joining lines relatively close together. The partial joining leaves at least one channel 22, 23, and 24 through each fold line to allow fluid (e.g., air) to move between adjacent fill volumes. In many cases it will be desirable to have the channels of sufficient size that the additional fill volumes will fill quickly and easily with only a person blowing through the fill port (and will also deflate quickly and easily with light pressure after the fill port is opened). After folding, the pillow is held in the folded position with the male 28 and female 29 snap members. Of course, those snap members may be replaced by other types of closures, e.g., as described above. In other embodiments, the fold lines are absent and the pillow is held in the folded configuration by the closure(s).

[0034] An optional attached storage pouch 30 is also shown, attached to the body of the pillow with retention strap 32 and with the insertion opening 34 shown by the dashed line. The size of the pouch can be varied as desired such that the folded pillow will fit within it. The storage pouch may be used as the sole closure, or in combination with another closure, such as the snap closure indicated above.

[0035] FIG. 2 shows the exemplary pillow of FIG. 1 inflated in side view, with the top layer 10 and the bottom layer 12 joined at seam 11. One of the fold lines 20 is shown with the channel 24. The fill port 26 is mounted in the bottom layer 12.

[0036] Alternatively, the fold lines can be fully joined. In this case, a fill port will be provided for each separate fill volume. This design is not presently preferred due to the lesser convenience of use and/or the greater cost.

[0037] Clearly, many other configurations can be provided, e.g., with different locations and numbers of fold lines, various types of fill ports, different closures, etc. Such variations are also within the scope of this invention.

[0038] All patents and other references cited in the specification are indicative of the level of skill of those skilled in the art to which the invention pertains, and are incorporated by reference in their entireties, including any tables and figures, to the same extent as if each reference had been incorporated by reference in its entirety individually.

[0039] One skilled in the art would readily appreciate that the present invention is well adapted to obtain the ends and advantages mentioned, as well as those inherent therein. The methods, variances, and compositions described herein as presently representative of preferred embodiments are

exemplary and are not intended as limitations on the scope of the invention. Changes therein and other uses will occur to those skilled in the art, which are encompassed within the spirit of the invention, are defined by the scope of the claims.

[0040] It will be readily apparent to one skilled in the art that varying substitutions and modifications may be made to the invention disclosed herein without departing from the scope and spirit of the invention. For example, variations can be made to the construction materials and the particular shape. Thus, such additional embodiments are within the scope of the present invention and the following claims.

[0041] The invention illustratively described herein suitably may be practiced in the absence of any element or elements, limitation or limitations which is not specifically disclosed herein. Thus, for example, in each instance herein any of the terms "comprising", "consisting essentially of" and "consisting of" may be replaced with either of the other two terms. The terms and expressions which have been employed are used as terms of description and not of limitation, and there is no intention that in the use of such terms and expressions of excluding any equivalents of the features shown and described or portions thereof, but it is recognized that various modifications are possible within the scope of the invention claimed. Thus, it should be understood that although the present invention has been specifically disclosed by preferred embodiments and optional features, modification and variation of the concepts herein disclosed may be resorted to by those skilled in the art, and that such modifications and variations are considered to be within the scope of this invention as defined by the appended claims.

[0042] In addition, where features or aspects of the invention are described in terms of Markush groups or other grouping of alternatives, those skilled in the art will recognize that the invention is also thereby described in terms of any individual member or subgroup of members of the Markush group or other group.

[0043] Also, unless indicated to the contrary, where various numerical values or value range endpoints are provided for embodiments, additional embodiments are described by taking any 2 different values as the endpoints of a range or by taking two different range endpoints from specified ranges as the endpoints of an additional range. Such ranges are also within the scope of the described invention.

[0044] Thus, additional embodiments are within the scope of the invention and within the following claims.

What is claimed:

1. A fillable neck pillow, comprising
 - a flexible, gas barrier comprising a top layer and a bottom layer, wherein said top layer and said bottom layer together define a fillable volume and comprising a central head rest portion and two spaced-apart lateral lobe portions;
 - a fill port in said top layer or said bottom layer; and
 - fold lines extending across said pillow between said head rest portion and each of said lobe portions.
2. The fillable neck pillow of claim 1, wherein said head rest portion is reduced in depth as compared to portions laterally adjacent thereto.
3. The fillable neck pillow of claim 1, wherein said pillow further comprises a closure which retains said pillow in a folded configuration.
4. The fillable neck pillow of claim 3, wherein said closure comprises a snap.

5. The fillable neck pillow of claim 3, wherein said closure comprises a hook and loop fastener.

6. The fillable neck pillow of claim 1, further comprising an attached storage pouch.

7. The fillable neck pillow of claim 1, wherein said top layer and said bottom layer are separate sheets joined at their peripheral edges.

8. The fillable neck pillow of claim 1, wherein said top layer and said bottom layer are formed of vinyl chloride sheeting.

9. The fillable neck pillow of claim 1, wherein said top layer and said bottom layer are formed of polyethylene sheeting.

10. The fillable neck pillow of claim 1, wherein said top layer and said bottom layer are formed of polypropylene sheeting.

11. The fillable neck pillow of claim 1, wherein said upper layer or said bottom layer or both are externally covered with a soft fibrous layer.

12. A fillable pillow, comprising

a flexible, gas barrier comprising a top layer and a bottom layer, wherein said top layer and said bottom layer together define a fillable volume and comprising a central head rest portion and two spaced-apart lateral lobe portions;

at least one fill port in said top layer or said bottom layer, wherein said fill port comprises a fill port for air inflation and a fill port for a liquid or a particulate fill or both.

13. The fillable pillow of claim 7, wherein said at least one fill port includes two separate fill ports, wherein one of said separate fill ports is an air fill port and the other of said separate fill ports is a liquid fill port.

14. The fillable pillow of claim 7, wherein said at least one fill port is a single dual medium fill port.

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