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(54) **CERVICAL ERGONOMIC PILLOW**

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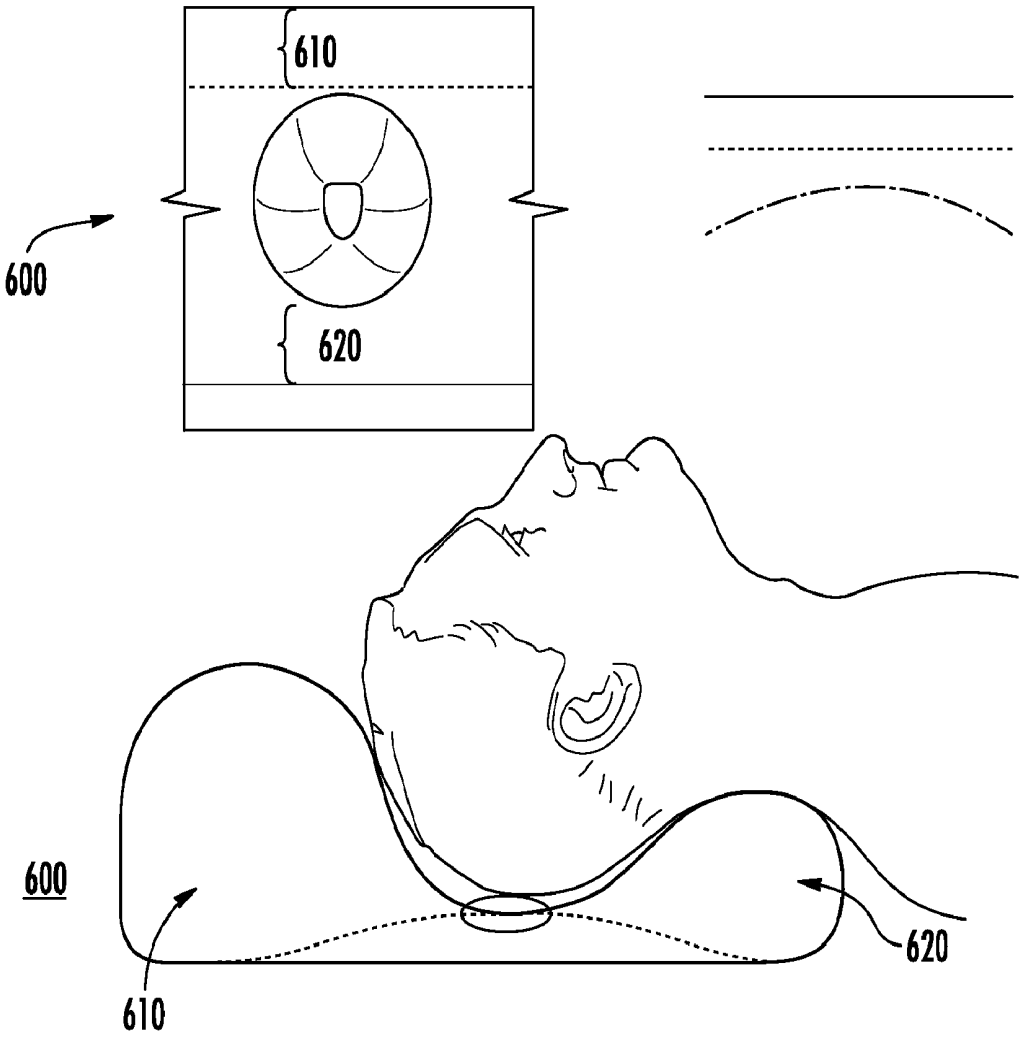
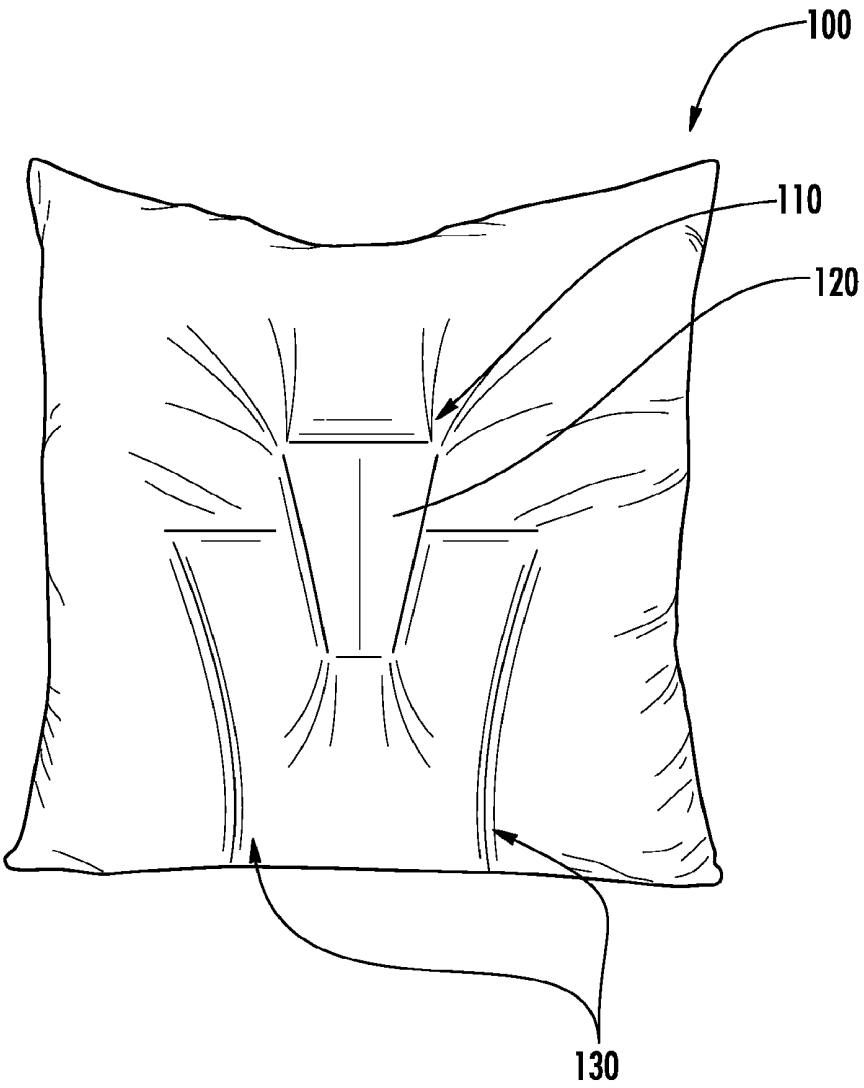
(57) **ABSTRACT**

An ergonomic pillow has a fabric shell with a filler and a central depression that is sewn with a thread at its bottom such that a thickness along a sewing line is only two layers of the fabric and the sewn thread. A corresponding second central depression is sewn and is situated on opposite side of the ergonomic pillow with a central boat shaped region circumscribed by sewn thread attached to the ergonomic pillow. The central depression has ovoid sides that curve gently down to the boat shaped region.





(PRIOR ART)

Fig. 1

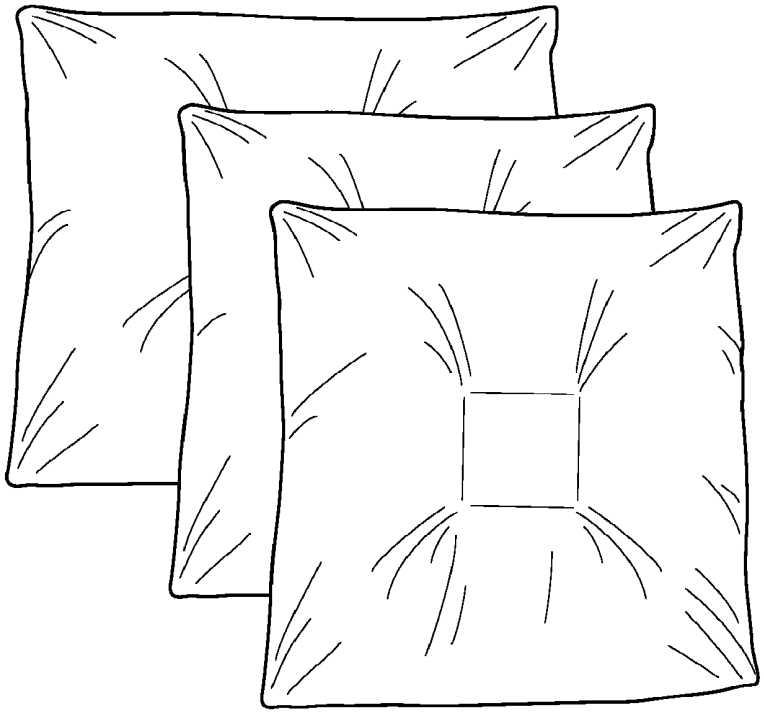


Fig. 2 (PRIOR ART)

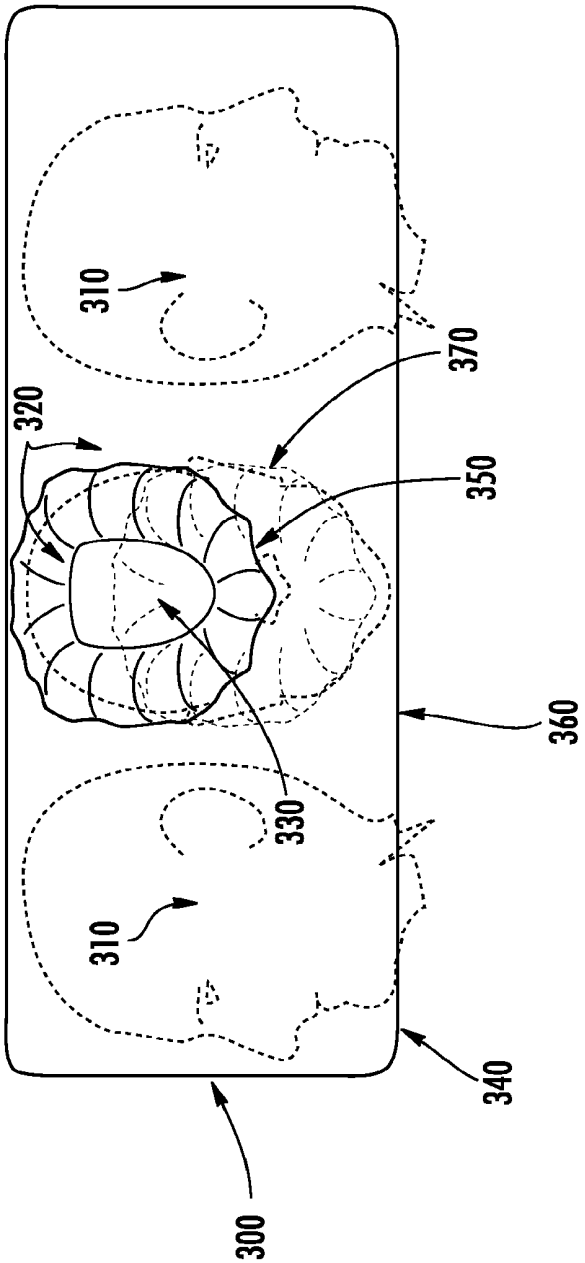


Fig. 3

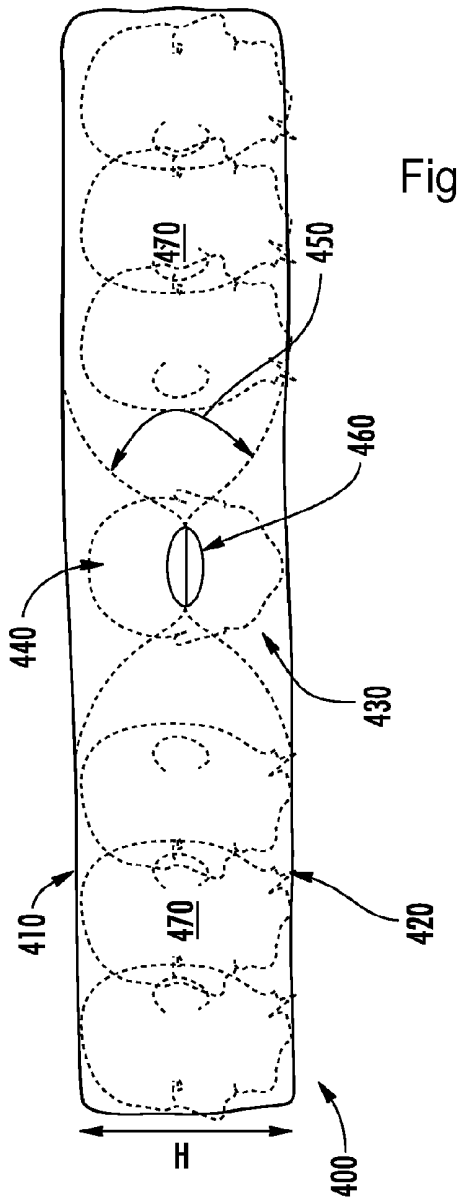
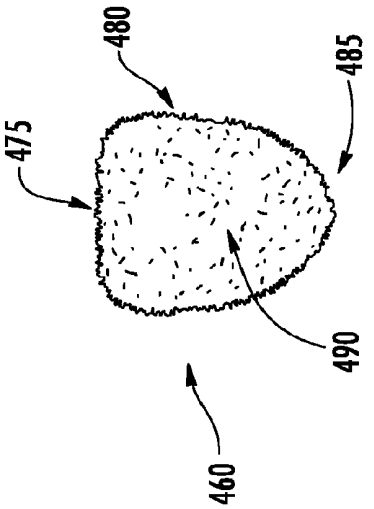


Fig. 4A

Fig. 4B



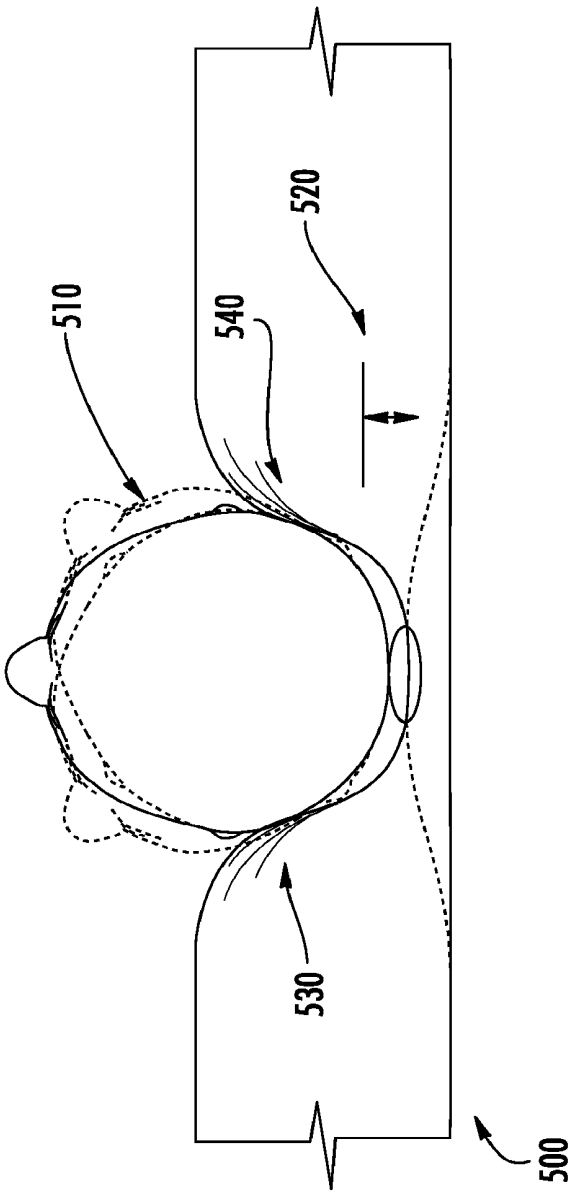


Fig. 5

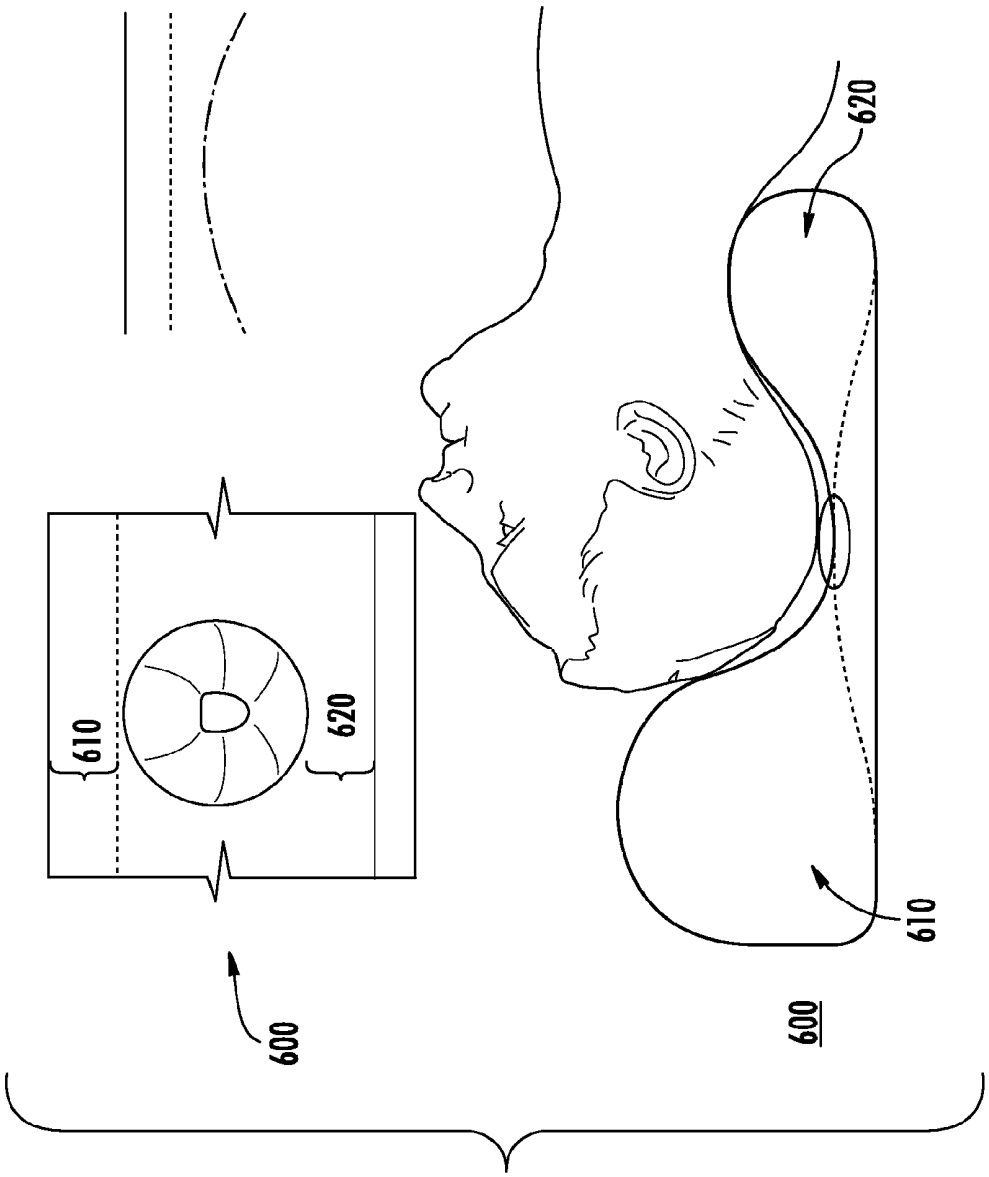


Fig. 6

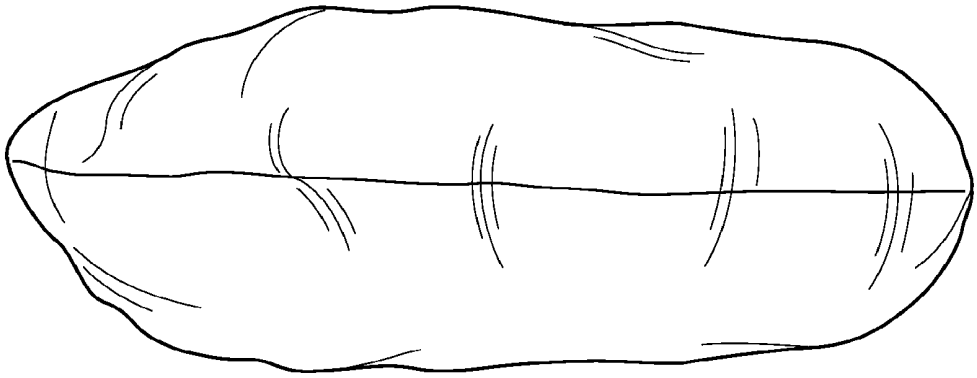


Fig. 7

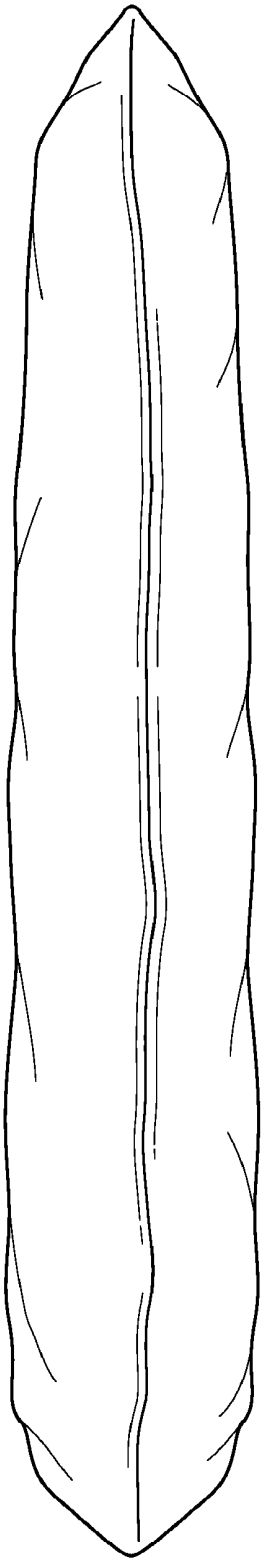


Fig. 8

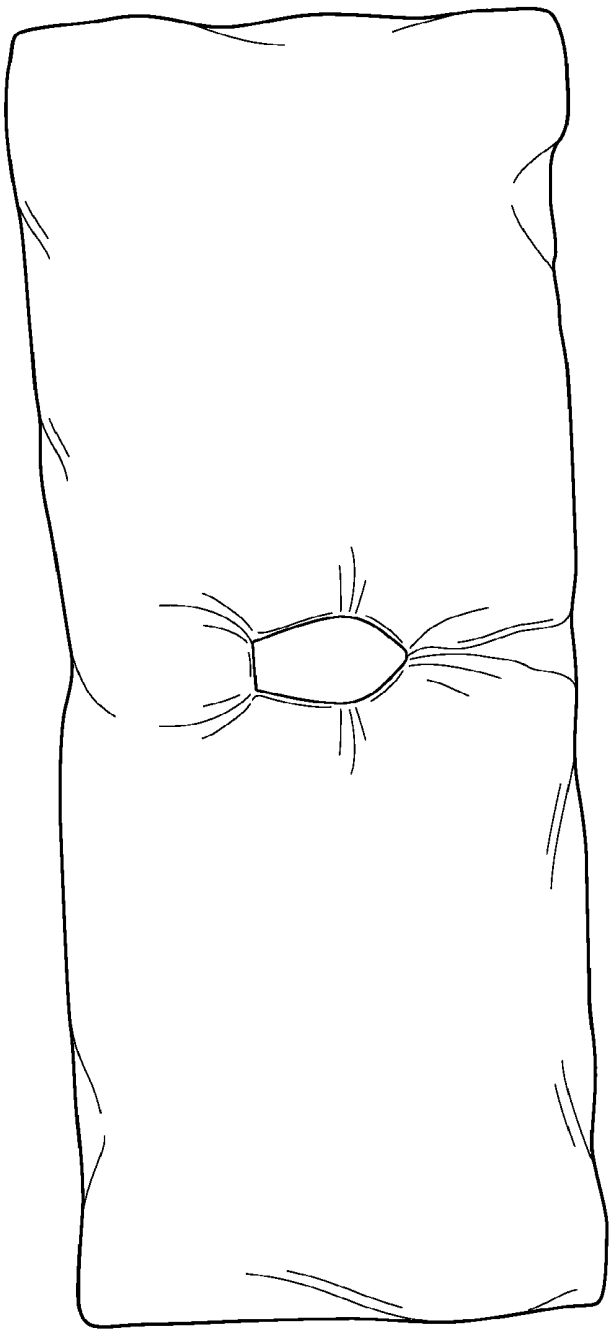


Fig. 9

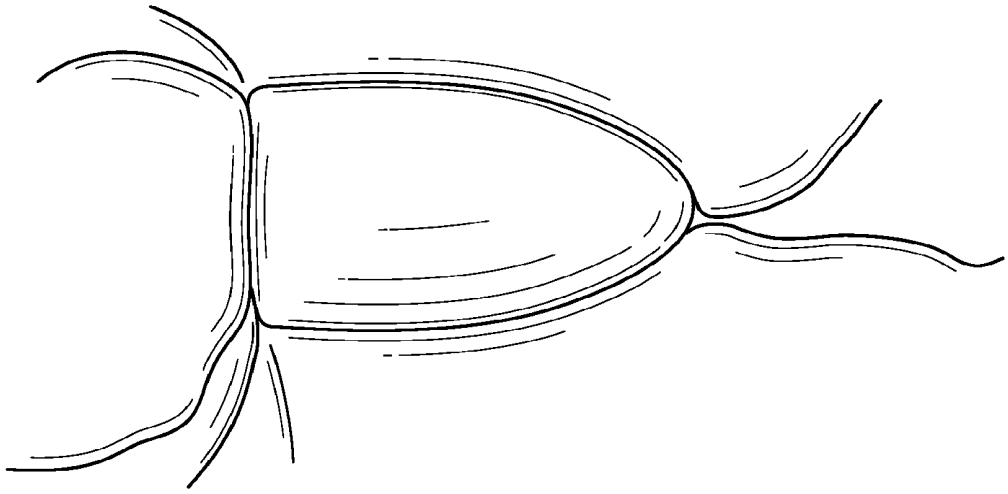


Fig. 10

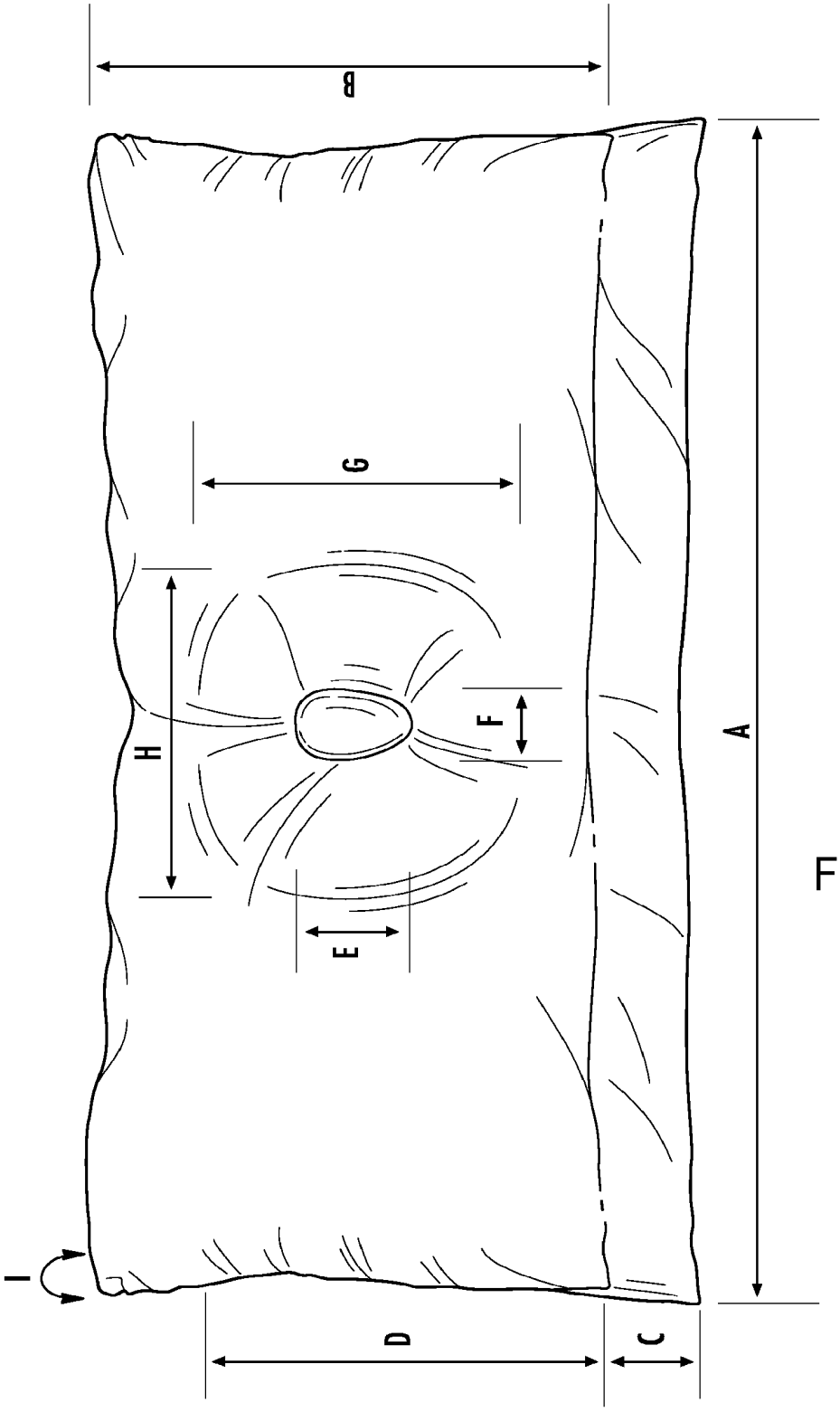


Fig. 11

CERVICAL ERGONOMIC PILLOW

CROSS REFERENCE TO RELATED APPLICATIONS

[0001] This Application Claims The Benefit Of U.S. Provisional Application No. 61647491 Filed May 15, 2012.

STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT

N/A

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BACKGROUND

Field of the Invention

[0003] Relating to improvements in devices providing support for the head and neck. More particularly, relating to pillows that cushion, support and position the head and neck in such a fashion to drastically reduce aches and pains resulting from the motion of the head and neck.

[0004] Pillows are utilized to avoid discomfort to the human head and neck. A standard pillow is a square or rectangular device having an external shell or case enclosing a filler. The filler is surrounded with a cover or shell made of cloth (cotton, polyester, linen, et cetera) or silk et cetera. Typical fillers are made from foam, synthetic fills, feathers, down, viscoelastic foam and or latex. The choice of pillow is determined by various factors unique to the user. For example, a pillow used by a child would not be the same type of pillow for an adult with a sleep disorder. For this kind of user orthopedic pillows have been developed to correct incorrect postures during sleep. Amongst these are pillows designed to help chronic side sleeping, back sleeping and stomach sleeping problems and thereby provide a preventive measure to avoid aches and pains caused by these types of sleep related behaviors. As medicine has improved so has the understanding of the causes of these disorders and more and more attempts to effectively counter these has led other devices such as the following.

[0005] In particular, the Arc4life.com website describes two different types of pillows providing varying degrees of support and relief from aches and pains to the human body. A Traction 'V' pillow **100** shown in FIG. **1** provides for the positioning of a head inside of a vertical slit **120** that has been cut out in the center of a triangular or 'V' shaped shallow depression **110**. In this fashion the human head is supposed to sit down within this slit **120** and apparently sink to the appropriate height. There are multiple problems with this approach as is readily appreciated. In fact, there is a tendency to hang above the slit **120** without actually falling through since the slit **120** is a linear cut in the material of the 'V' shaped depression **110** and as such is not shaped appropriately for a user's head. Worse then this defect is even if the linear slit **120** is large enough to accommodate it, the head enters therein and the material making up the adjacent surfaces has the tendency to grab the back of the head and could end up causing personal discomfort. Of course this negates the original intention of relieving aches and pains. Further, it should be appreciated that the recessed portion 'V' section **110** as taught by the Arc4life.com site is clearly not sufficient to comfortably accept the back of the human head. Finally, the device has two soft wedges **130** formed adjacent to a portion of the two angled legs of the 'V;' these seem to create a soft traction that forces the head away from the shoulders. Thus, a user is treated to an unnatural and undesirable stretching of the neck during his rest. For these and other reasons that are to become apparent within this disclosure, solutions to overcome these many deficiencies are necessary.

[0006] In addition to the above mentioned website, various other pillows exist but none appropriately handles the head and neck of an individual to avoid the aches and pains of nighttime sleeping or occasional rest. On another site, neckpainsupport.com there are various other pillows shown. For example, FIG. **2** illustrates another typical type of pillow having a central large square shallow depression. Clearly a human head and neck are not formed like a square and thus the device lacks an understanding of the most basic needs of the cranial structure in order to provide preventive measures that reduce or otherwise totally eliminate aches and pains of the neck and head when reclining on a pillow. Thus, there needs to be some solutions to overcome the aforementioned deficiencies.

BRIEF SUMMARY OF THE INVENTION

[0007] An ergonomic pillow has a shell made of fabric and a filler enclosed therein and a central depression that is sewn with a thread at its bottom such that a thickness along a sewing line is only two layers of the fabric and the sewn thread. A second central depression that is sewn with a thread at its bottom such that a thickness along a sewing line is only two layers of the fabric and the sewn thread wherein the second central depression is situated on the opposite side of the ergonomic pillow. A region circumscribed by sewn thread attached to the ergonomic pillow and is located at the center of the depressions and shaped as a boat that extends out the cavity of the depressions on either side of the pillow. The corresponding depressions are formed in gently curved shapes.

[0008] An ergonomic pillow has a shell made of fabric having a filler enclosed therein. Also, a central depression that is sewn with a thread at its bottom such that a thickness along a sewing line is only two layers of the fabric and the sewn thread has a corresponding second central depression that is sewn with a thread at its bottom such that a thickness along a sewing line is only two layers of the fabric and the sewn thread wherein the second central depression is situated on the opposite side of the ergonomic pillow. There is a region circumscribed by sewn thread attached to the ergonomic pillow wherein the region circumscribed by sewn thread is located at the center of the depression and shaped like a boat. The central depressions are lightly curved shapes that move from the top and bottom surface of the pillow to the sewing line of the central region.

[0009] An ergonomic pillow has a shell made of fabric having a filler enclosed therein and a central depression that is sewn with a thread at its bottom such that a thickness along a sewing line is only two layers of the fabric and the sewn thread. The central depression further has a boat shaped

region circumscribed by sewn thread attached to the ergonomic pillow. There is a second central depression that is sewn with a thread at its bottom such that a thickness along a sewing line is only two layers of the fabric and the sewn thread wherein the second central depression is situated on the opposite side of the ergonomic pillow. The ergonomic pillow has a boat shaped region circumscribed by sewn thread attached to the ergonomic pillow and is also shaped in a boat shape from the perspective of the second central depression such that the boat shape extends into both depressions. Also, both of the central depressions are formed in curved shapes.

BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWINGS

[0010] FIG. **1** illustrates a Traction 'V' pillow found in the prior art having a central shallow triangular depression with a linear cut out slit for reception and passage of the back of the human had therethrough. Wedges are also shown that cause a traction effect during sleep to move the head away from the shoulders.

[0011] FIG. **2** illustrates several sizes of pillows with a shallow square depression intended to assist in nighttime sleep.

[0012] FIG. **3** illustrates a perspective view of a Cervical Ergonomic Pillow as taught in the preferred embodiment.

[0013] FIG. **4**A illustrates a view of a Cervical Ergonomic Pillow being used by an individual to sleep on the right and left side of the pillow in an embodiment; FIG. **4**B shows a boat shape with a top that is cut off utilized in an embodiment.

[0014] FIG. **5** illustrates an operational view of the Cervical Ergonomic Pillow as taught in the preferred embodiment from the top of the user's head with the user's head oriented to the top of the boat shape (that has a top cut off) and the chin and neck oriented to the point of the boat shape.

[0015] FIG. **6** illustrates an operational view of the Cervical Ergonomic Pillow as taught in the preferred embodiment from the side of the user's head with the user's head oriented to the top of the boat shape (boat shape cut off at the top) and the chin and neck oriented to the point of the boat shape.

[0016] FIG. **7** represents a width side view of the ergonomic pillow.

[0017] FIG. **8** represent a longitudinal side view of the ergonomic pillow.

[0018] FIG. **9** represents a top view of the ergonomic pillow.

[0019] FIG. **10** represents a close up view of the central region boat shape.

[0020] FIG. **11** represents various measurement views of the preferred embodiment showing how the dimensions of the device were taken.

DETAILED DESCRIPTION OF THE INVENTION

[0021] The following is a detailed description of an Ergonomic Cervical Pillow that overcomes the deficiencies found in the prior art. In particular, the Ergonomic Cervical Pillow taught herein disallows all six vectors of motion that cause discomfort for the cervical spine. Thus, in using the unique teachings of the preferred embodiment the motions of extension, flexion, bilateral (right, left) rotation and bilateral (right, left) lateral flexion are disallowed and thereby prevented from causing a user of the pillow any aches and pains. FIG. **3** illustrates a Cervical Ergonomic Pillow as taught in the preferred embodiment. The pillow is made from two wings **310** of pillow filler and shell **300** forming essentially two integral large pillows with a central deep depression **320** at the center of the two wings. The central depression starts out from the top horizontal surface **340** of the two wings **310** as an ovoid (oval) bowl shape **350** and proceeds gradually downwards into a boat shaped region **330** that is to be discussed further below. The other side of the pillow also follows this same pattern and another center depression **320** between the two wings **310** starts out from the bottom of the filler shell **360** in a circular bowl shape **370** and ends at a boat shaped region **330** that is to be discussed further below.

[0022] FIG. **4***a* illustrates a side view of a Cervical Ergonomic Pillow as taught in the preferred embodiment. In this drawing a pillow shell **400** of fabric is filled with sufficient material filler **470** to hold a head and neck of an individual in proper orientation inside of the bowl shaped cavity **430** or **440** on either side of the pillow shell **400**; as a result, two ovoid (oval) bowl surfaces are defined including a lower and an upper bowl **450**. As shown previously, the pillow shell **400** has a top portion **410** and a bottom portion **420** that are to be sewn together along the longitudinal borders and at the border between the two widths. Additionally, the central sewn connection is formed in a boat shape **460**. FIG. **4***b* describes a boat shape that is located centrally to the pillow and is suspended midway between the top **410** and bottom **420** of the pillow shell fabric material **400**. The boat shape **460** has a flat top portion **475** and two curved sides **480** that gently curve and meet each other at a forward point **485**. In operation the top of a person's head is oriented towards the flat top portion **475** and the person's neck is oriented towards the forward point **485**. It should be appreciated from the previous discussion that the boat shape **460** is formed from sewing the top portion **410** and the bottom portion **420** of the shell **400** together along a sewing line indicated by the edge of the boat at the center of the pillow shell **410**. NO FILLER material is inserted in the boat shapes.

[0023] FIG. **5** illustrates an operational view of the Cervical Ergonomic Pillow as taught in the preferred embodiment from the top of the user's head with the user's head oriented to the top of the boat shape and the chin and neck oriented to the point of the boat shape. During normal usage the ergonomic pillow **500** flexes to permit a good rest for an individual **510**. He or she places his head in the central location defined by the bowl previously described and the device flexes downwards. It should be appreciated that either the top or bottom bowl shaped cavity and surface is suitable for sleeping since the user can turn the pillow **500** over and easily use the other side. Once situated therein the person's head sits suspended about an inch to an inch and a half in the air as shown in **520**. Further, bilateral (right, left) rotation and bilateral (right, left) lateral flexion motions are resisted by the shape so far described since the surface of the oval bowl that has been stretched down into the pillow restricts these motions; when any of these motions happen during rest, the lower head and neck are lightly bumped back into position by the ovoid surface resisting the motion about his or her back of the head, upper neck, lower sides of the head, to the ear and upwards to the cheeks. When a user moves these portions of the human body impact the side walls of the bowl surface **530**, **540**. Since they are resting at night he or she will not struggle much to 'get out' of the bowl so to speak but feel only a soothing surface of the filled pillow and therefore maintain a good head and neck position to avoid the aches and pains associated with incorrect orientation of the same. In particular, this view

shows how the instant preferred embodiment helps avoid bilateral rotation and bilateral lateral flexion during resting periods. In summary, the surface of the ovoid (oval) bowl **530**, **540** gently slides the user back into proper positioning to avoid the aforementioned motions during resting periods.

[0024] FIG. **6** illustrates an operational view of the Cervical Ergonomic Pillow as taught in the preferred embodiment from the side of the user's head with the user's head oriented to the top of the boat shape and the chin and neck oriented to the point of the boat shape. In this fashion, a neck bolster portion **620** operates to support the neck in proper location and orientation and helps prevent improper flexion motion that might lead to discomfort. Most importantly this portion **620** of the pillow shell **600** and filler helps maintain proper lordosis of the neck so as to avoid pains caused by improper curvature or straightening. This neck bolster portion **620** flexes downwards to receive the neck and also forms a part of the bowl shaped surface and cavity that receives the lower part of the user's head. Additionally, the extension preventing bolster portion of the pillow shell and filler is shown as item **610**. This zone helps prevent a sleeper from extending his or head head away from his torso during resting times.

[0025] Manufacturing Technique:

[0026] In order to create the Ergonomic Cervical Pillow of the instant invention a manufacturer uses the following simple steps:

[0027] 1—Two pieces of fabric (typically cotton, polyester, linen, et cetera) are cut out of a given larger piece of material to form the shell **300**. In this exemplary discussion two pieces of fabric that are 37 in×19 in were utilized.

[0028] 2—The two pieces are sewn on the borders longitudinally and along one side width forming the basic shape of the shell **300**.

[0029] 3—Fold the material so far created inside out so as to create a bag with one opening that is used to insert filler material **310**.

[0030] 4—On the top piece of material that formed one of the two original two pieces of fabric sew a boat shape to the bottom piece of material that formed the other of the two original pieces of material. Then finishing the sewing of the boat shape between the top and bottom of the two original pieces of material. Thus, both sides of the ergonomic pillow now have a central boat **330** shaped sewn and the bottom **360** and top **340** of the shell **300**. It is this shape **310** that causes a cavity or depression to be formed for reception of the back of the head. The appropriate amount of filler needed to structure the device is dependent upon the filler type utilized and is determined by routine experimentation. Once the filler **310** is inserted in the bag in step five below the contact point (boat shape sewn piece) hangs half way between the top surface **410** and the bottom surface **420** as shown in FIG. **4**.

[0031] 5—Load the pillow with sufficient filler **310** (polyester, foam, synthetic fills, feathers, down, viscoelastic foam and or latex) so as to accentuate the bowl shaped cavities on either side of the pillow. NO FILLER MATERIAL is inserted in the boat shapes.

[0032] 6—Finally, sew together the remaining side width of the pillow to form the completed device.

[0033] Dimensions of an Exemplary Implementation:

[0034] Pillow length: 33 inches±0.75 in

[0035] Pillow width: 18 inches±0.75 in

[0036] Pillow height: 6.5 to 7.5 inches

[0037] Head Cradle Lower Length: (Long Length of Pillow) 2.5 inches±0.75 in

[0038] Head Cradle Lower Width: 3.5 inches±0.75 in

[0039] Head Cradle Upper Length (long length of pillow): 9 inches±0.75 in

[0040] Head cradle Upper Width: 7 inches±0.75 in

[0041] Length of Side Sleeping Area (right and left): 10 inches±0.75 in

[0042] Circumference of Cervical Bolster: 15 inches±0.75 in

[0043] Depth of Depressions: 3.25 in

[0044] Note: It should be understood that as different values for the pillow height range of 6.5 to 7.5 are used then different values are used for the Central region height and the Depth of the Depressions that are reduced or increased accordingly in a proportional manner.

[0045] Back sleeping position: The Ergonomic Cervical Pillow of the instant embodiment uses two primary structures as well as an extension bolster portion to prevent aches and pains from developing in the neck and head region of a user. These two structures are namely, a 'head cradle' form and a 'neck bolster' form. In particular, since the head is positioned in the center of the pillow in a deep depression a head 'cradling' effect is created that maintains the head in a neutral position. This localization comfortably maintains the head by disallowing for cervical and upper thoracic lateral flexion or rotation. A critical component of the cradle effect is the deep depth of the cavity or depression formed in the pillow that forbids the aforementioned painful motions. The thickness of the pillow permits all of this as it is much wider then the ordinary pillow being 6.5 in to 7.5 inches. The same bowl shaped depression that serves to cradle the head also serves to have a neck bolster structure as discussed previously. Thus, a sleep can maintain cervical lordorsis and sleep without improperly straightening or bowing of the spine in an incorrect fashion.

[0046] FIG. **7** represents a width side view of the ergonomic pillow.

[0047] FIG. **8** represent a longitudinal side view of the ergonomic pillow.

[0048] FIG. **9** represents a top view of the ergonomic pillow.

[0049] FIG. **10** represents a close up view of the central region boat shape.

[0050] FIG. **11** represents various measurement views of the preferred embodiment showing how the dimensions of the device were taken.

[0051] Conclusion

[0052] Because of the novel teachings of the Ergonomic Cervical Pillow taught herein a user can expect to have little or no aches and pains as a result of improper positioning of the neck and head. This because the improvements taught herein disallow all six vectors of motion that cause discomfort for the cervical spine. Thus, in using the unique teachings of the preferred embodiment the motions of extension, flexion, bilateral rotation and bilateral lateral flexion are disallowed and thereby prevented from causing a user of the pillow any aches and pains.

[0053] The invention has thus been described in such clear and precise terms as to enable one of ordinary skill in the art to make and use the invention. Further, while there has been shown and described the preferred embodiment of the instant invention it is to be appreciated that the invention may be embodied otherwise than is herein specifically shown and described and that, within said embodiment, certain changes

may be made in the form without departing from the underlying ideas or principles of this invention as set forth in the Claims appended herewith.

I claim:

1. An ergonomic pillow comprising:

a shell made of fabric having

a filler enclosed therein and

a central depression that is sewn with a thread at its bottom such that a thickness along a sewing line is only two layers of the fabric and the sewn thread.

2. The ergonomic pillow of claim **1** further comprising:

a second central depression that is sewn with a thread at its bottom such that a thickness along a sewing line is only two layers of the fabric and the sewn thread wherein the second central depression is situated on the opposite side of the ergonomic pillow.

3. The ergonomic pillow of claim **1** further comprising:

a region circumscribed by sewn thread attached to the ergonomic pillow.

4. The ergonomic pillow of claim **3** wherein the boat region circumscribed by sewn thread is located at the center of the depression.

5. The ergonomic pillow of claim **3** wherein the region is formed in the shape of a boat.

6. The ergonomic pillow of claim **2** further comprising:

a region circumscribed by sewn thread attached to the ergonomic pillow.

7. The ergonomic pillow of claim **6** wherein the region circumscribed by sewn thread is located at the center of the depression.

8. The ergonomic pillow of claim **6** wherein the region is formed in the shape of a boat.

9. The ergonomic pillow of claim **1** such that the central depression is formed in a curved shape.

10. The ergonomic pillow of claim **2** such that the second central depression is formed in a curved shape.

11. An ergonomic pillow comprising:

a shell made of fabric having

a filler enclosed therein

a central depression that is sewn with a thread at its bottom such that a thickness along a sewing line is only two layers of the fabric and the sewn thread and

a second central depression that is sewn with a thread at its bottom such that a thickness along a sewing line is only two layers of the fabric and the sewn thread wherein the second central depression is situated on the opposite side of the ergonomic pillow.

12. The ergonomic pillow of claim **11** further comprising:

a region circumscribed by sewn thread attached to the ergonomic pillow.

13. The ergonomic pillow of claim **8** wherein the region circumscribed by sewn thread is located at the center of the depression.

14. The ergonomic pillow of claim **11** wherein the region is formed in the shape of a boat.

15. The ergonomic pillow of claim **11** such that the central depression is formed in a curved shape.

16. The ergonomic pillow of claim **11** such that the second central depression is formed in a curved shape.

17. An ergonomic pillow comprising:

a shell made of fabric having

a filler enclosed therein

a central depression that is sewn with a thread at its bottom such that a thickness along a sewing line is only two layers of the fabric and the sewn thread and

a boat shaped region circumscribed by sewn thread attached to the ergonomic pillow.

18. The ergonomic pillow of claim **17**, further comprising:

a second central depression that is sewn with a thread at its bottom such that a thickness along a sewing line is only two layers of the fabric and the sewn thread wherein the second central depression is situated on the opposite side of the ergonomic pillow.

19. The ergonomic pillow of claim **18**, wherein the region is circumscribed by sewn thread attached to the ergonomic pillow is also shaped in a boat shape from the perspective of the second central depression and extends into both depression cavities.

20. The ergonomic pillow of claim **19**, such that the central depressions are formed in curved shapes.

* * * * *