NECK SUPPORT PILLOW

Technical Field

[001] This invention relates to a pillow generally and more particularly to a pillow with a neck supporting feature.

Background of the Invention

[002] It is a common experience for people to wake up in the morning with neck pain. This pain is often due to the non-anatomical positions in which our necks end up in for hours at a time while sleeping. Many firms have addressed this problem, but they have not come across an entirely satisfactory solution yet.

[003] This invention described below incorporates means to support the neck in its anatomically normal position. Also, by being inflatable, each individual can find the right degree of support.

Summary of the Invention

[004] A neck supporting pillow has a body and a neck support. The neck support is affixed to the body and projects above and at least partially in front of the body. The neck support has a width approximating the width of the curvature of the neck and is formed with an anterior convexity relative to the body of the pillow. The body is formed with one or more inflatable bladders. Each inflatable bladder has a separate inflation tube. Each inflation tube is affixed to the bladder and is extended to fill and retracted in a recess when the body is filled and the tube is sealed. The neck support is also formed with an inflatable bladder. The bladder of the neck support has an inflation fill tube. The inflation fill tube is preferably on an underside of the neck support and is designed to fit in a recess of the neck support and is extended to fill and retracted and pushed into the recess of the neck support when the tube is sealed and the neck support has been filled to the desired level. The body and neck support are preferably covered along the exterior surfaces with a foam elastomeric material. The foam elastomeric material can vary in thickness, however, and should be sufficiently thick to provide a desired comfort level for the user of the pillow. The body has a generally planar or flat exterior bottom surface and an exterior top surface with a central depression for the head to rest. The central head depression extends from adjacent the neck support to an opposite side or edge of the body. The

body preferably has three inflation bladder chambers, one on each side of said body and a central chamber interposed between and forming the head depression. Each chamber extends from a front to a back of the body, generally parallel to the sides of the body.

Brief Description of the Drawings

[005] The invention will be described by way of example and with reference to the accompanying drawings in which:

FIG. 1 is a top view of the neck supporting pillow of the present invention.

FIG. 2 is an end or front view of the neck supporting pillow of figure 1.

FIG. 3 is a cross-sectional view of the neck supporting pillow of figure 1 taken along lines 3-3.

FIG. 4 is a plan side view of the neck supporting pillow of the present invention.

FIG. 5 is a cross-sectional view of the neck supporting pillow of figure 1 taken along lines 5-5.

FIG. 6 is a frontal perspective view of the neck supporting pillow of figure 1.

FIG. 7 is a rearward perspective view of the neck supporting pillow of figure 1.

Detailed Description of the Invention

[006] With reference to figures 1-7, various views of the neck supporting pillow 10 of the present invention are illustrated. With reference to figure 1, a top view of the pillow 10 is shown. As shown, the pillow 10 has a body 12 that extends between sides 14, 16 and has a central head-resting depression 15 aligned between the sides 14, 16 of the pillow body 12. In an anterior portion of the pillow 10 is shown a neck support 20. This neck support 20 lies adjacent the head-resting depression 15 and extends forward and beyond the body 12 of the pillow 10. As shown in figure 1, each side 14, 16 of the body 12 of the pillow 10 has an inflation tube 30 that is shown projecting outwardly. The central rear portion of the pillow 10 also has an inflation tube 30 to fill the central head-resting depression 15. On an undersurface of the neck support 20 further is illustrated with an inflation tube 30. These inflation tubes 30 preferably are made of a flexible material that can be extended in order to fill inflation bladders 44, 45, 46

and 22 within the pillow 10 and then can be closed and sealed and pushed inside and kept flush with the body 12 once the desired inflation has been achieved.

[007] With reference to figure 2, the inflation tube 30 and neck support 20 are more easily visible. Figure 2 shows a front view of the pillow 10 wherein the neck support 20 is shown extending forward of the pillow body 12.

[008] With reference to figure 3, a cross-sectional view of the pillow is shown taken along lines 3-3 of the pillow shown in figure 1. In this view it can be seen that on each side of the pillow there is an inflation bladder 44, 46. These bladders 44 and 46 are independent of each other and can be filled to different rate or to the same rate of inflation depending on the user's desire. Interposed between the two side bladders 44, 46 is a central bladder 45 that helps form the head-resting depression 15. This view is looking along lines 3-3 and towards the front of the pillow 10 where the neck support 20 is shown traversing across the head-resting depression 15.

[009] With reference to figure 4, a side view of the pillow 10 is illustrated. In this view, the fill tubes 30 can easily be seen. As shown in figure 4, it extends slightly above the top surface 18 of the pillow 10 and extends along the front 19 of the pillow 10 projecting forward of the pillow body 12 slightly. The sides 14, 16 of the pillow 10 can have a slightly rounded feature, but it is important to note that the neck support 20 feature projects forward significantly from the main body structure or body 12. This is considered important when one considers how the neck of the user needs to be supported in order to keep the main body 12 of the pillow 10 from interfering with this proper neck support for the desired comfort of the person using the pillow 10.

[0010] With reference to figure 5, a cross-sectional view is shown taken along lines 5-5 of figure 1. In this cross-sectional view, the central bladder 45 forming the head-resting depression 15 is illustrated and the concavity formed in that depression is easily illustrated. In addition, the neck support 20 is shown as a rounded or cylindrical structure that projects outward from the main body and upward of the main body 12. This provides a significant amount of space to provide a proper neck support. On the exterior surfaces 17, 18 of the pillow 10 as shown in figures 3 and 5, a foam 50 is applied that provides a soft cushioning material on which the head can rest. This is important in that the inflation bladders 44, 45, 46 and 22 for the pillow 10 are air-impermeable and provide little comfort for one using the pillow 10 in the absence of some type of soft somewhat open-celled skin covering the entire pillow 10. It is

important to note, in use, the entire pillow 10 can be slipped in a pillow case (not shown), the conforming shapes of the pillow 10 will work very satisfactorily when positioned inside a pillow case. This is true because the pillow case will simply conform to the shape of the pillow 10 when the user is attempting to sleep using this pillow 10 with the neck support feature.

[0011] With reference to figures 6 and 7, perspective views of the pillow 10 are shown wherein the inflation tubes 30 are all shown in the recessed position and the pillow 10 is preferably inflated. As illustrated in figure 6, the neck support 20 juts or projects forward of the main body 12 of the pillow 10 and curves upwardly creating a convexity upon which the neck can be supported along the top surface 18. The width of this neck support 20 is sufficient to extend between the shoulder and the head, thereby providing sufficient support for the entire neck. This is important in that the neck has a curvature that ideally should be fully supported between the head and the shoulders. In most prior art devices a simple neck support is provided across the top surface of a pillow and as a result the pillow body often interferes with the ability of the user to properly and comfortable position the pillow relative to the neck. In the current invention, the neck support 20 is provided with a curvature on each side that extends in a slight truncated "U" shaped 21 allowing for the head to fit in the head-resting depression 15 comfortably and allows the chin to extend slightly above or ahead of the neck support 20. In this way, the user can roll from side to side or lay on his back and his neck will be fully supported. This is possible because the pillow 10 neck support 20 has a sufficient width that corresponds nicely to the length of the neck; also, due to the fact that the neck support has a curvature projecting out from the front side 19 it comfortably supports the neck in the region next to the shoulder blades. This provides a superior comfort fitting neck support that heretofore has not been provided.

[0012] Prior art devices simply have considered the concept of a depression for the head, but have not considered the possibility that the pillow itself can interfere with proper comfort even if an elevated portion is provided on the top surface. It is therefore important that the neck support 20 have an anterior convexity that accomplishes proper neck support. An advantage of the present invention is that by having independently inflatable chambers 44, 45, 46, the sides 14 and 16 of the pillow 10 can be set at different inflations wherein the user can set them to the desired comfort levels. The central head-resting depression 15 similarly having a separately inflatable bladder 45 can be adjusted independently as well. What is most important, however, is that the neck support 20 being totally independent of the body 12 in regards to its inflation

chamber 22, can be adjusted such that the inflation can be raised or lowered to provide several optimal features, the first being the comfort so that the unit is not too hard or too soft, but more importantly it also enables the user to adjust the height slightly. This can be accomplished by increasing the pressure on the neck support so that the neck support 20 projects in either a fully extended condition and softening the underlying chamber 45 of the head-resting depression 15 such that the entire assembly can then flex and float more gently against the neck while the neck is still providing sufficient support. This feature enables the user to custom fit this pillow 10 to his or her desired comfort level. As shown, the neck support 20 extends sufficiently above the concavity of the head depression 15. This amount of height is needed to support the neck comfortably. It can be varied by reducing the inflation pressure and can be lowered slightly if so desired. Additionally, the upper surfaces 18 of the sides 14 and 16 of the pillow 10 along each side reaches a level close to, but slightly below the ends 24, 26 of the neck support 20. This is best shown in figure 7 wherein the ends 24, 26 are slightly above the sides 14, 16, however, not as pronounced as wherein the head-resting depression 15 is located. The user can easily rotate from side to side without any interference of the neck support 20. Ideally, the user can make any necessary adjustments he or she needs to optimize the performance of the pillow 10. It is possible that the inflatable portions of the main body be replaced with non-inflatable pillows, however, it is believed essential that the neck support 20 be inflatable in that it needs to be adjustable. It is further believed that the combination of inflatable chambers or bladders 44, 45, 46 inside the pillow body 12 are advantageous in adjusting the comfort level; however, it is within the scope of the invention to provide the pillow with only the neck support 20 having an inflatable feature or bladder 22. This alternative construction would mean that the main pillow body 12 could be shaped with a foam material in the absence of any inflation capability. If the neck support is not adjustable, it would be difficult for the user to properly achieve a desired comfort level. As shown, the main body can be formed with a suitable material and is heat sealed to form the different chambers or can be any elastomeric material that is air impermeable. The inflation tubes 30 are of a well-known design and are usually a flexible elastomer that can be extended for inflation and retracted in a recess once the chambers are filled so that they do not interfere or project into the person using them. These inflation tubes 30 are well-known in the art and are used in pool toys and other inflatable devices. The foam covering 50 as shown should be provided in at least a half an inch thickness or greater at least on the upper surfaces. This is because it is believed more comfortable for the person using the

pillow to have this soft cushioning effect even though the pillow may be positioned inside a pillow case (the pillow case not illustrated).

[0013] Variations in the present invention are possible in light of the description of it provided herein. While certain representative embodiments and details have been shown for the purpose of illustrating the subject invention, it will be apparent to those skilled in this art that various changes and modifications can be made therein without departing from the scope of the subject invention. It is, therefore, to be understood that changes can be made in the particular embodiments described, which will be within the full intended scope of the invention as defined by the following appended claims.

CLAIMS

What is claimed is:

1. A neck supporting pillow comprising:

a body; and

a neck support, the neck support affixed to said body projecting above and at least partially in front of said body and having a width approximating the width of the curvature of the neck and formed with an anterior convexity relative to the body.

2. The neck supporting pillow of claim 1 wherein said body is formed with one or more inflatable bladders.

3. The neck supporting pillow of claim 2 wherein each inflatable bladder of said body has a separate inflation tube.

4. The neck supporting pillow of claim 3 wherein each inflation tube is affixed to a recess in each bladder and extended to fill and retract in the recess in said body when sealed.

5. The neck supporting pillow of claim 1 wherein said neck support is formed with an inflatable bladder.

6. The neck supporting pillow of claim 1 wherein the bladder of the neck support has an inflation fill tube.

7. The neck supporting pillow of claim 6 wherein each inflation tube is affixed to a recess in each bladder and extended to fill and retract in the recess in said body when sealed.

8. The neck supporting pillow of claim 1 wherein said body is covered in a foam filled exterior.

9. The neck supporting pillow of claim 1 wherein said neck support is covered in a foam filled exterior surface.

10. The neck supporting pillow of claim 1 wherein said body has a generally planar or flat exterior bottom surface and an exterior top surface with a central head depression for the head to rest.

11. The neck supporting pillow of claim 10 wherein the central head depression extends from adjacent the neck support toward an opposite side or edge of the body.

12. The neck supporting pillow of claim 2 wherein the body has three inflatable bladder chambers one on each side of said body and a central chamber interposed between and forming the head depression, each chamber extending from a front to a back of the body generally parallel to said sides.

Abstract of the Disclosure

NECK SUPPORTING PILLOW

The neck supporting pillow with some special features: inflatable, this will give complete control over firmness, soft sponge-like material on the outside, to make the contact points soft, neck-support part is like a ridge, approximate width of the curvature of the neck. Anterior convexity of this neck supporting ridge is the most important feature. When the user lies on his or her back, back of the head will slide into a center head rest recess. This completes the anatomical-specific features. On either side of the head-rest recess is a slightly raised area to rest face on lying-on the right or left side.