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(54) **SUPPORT CUSHIONS FOR PROVIDING VENTILATION**

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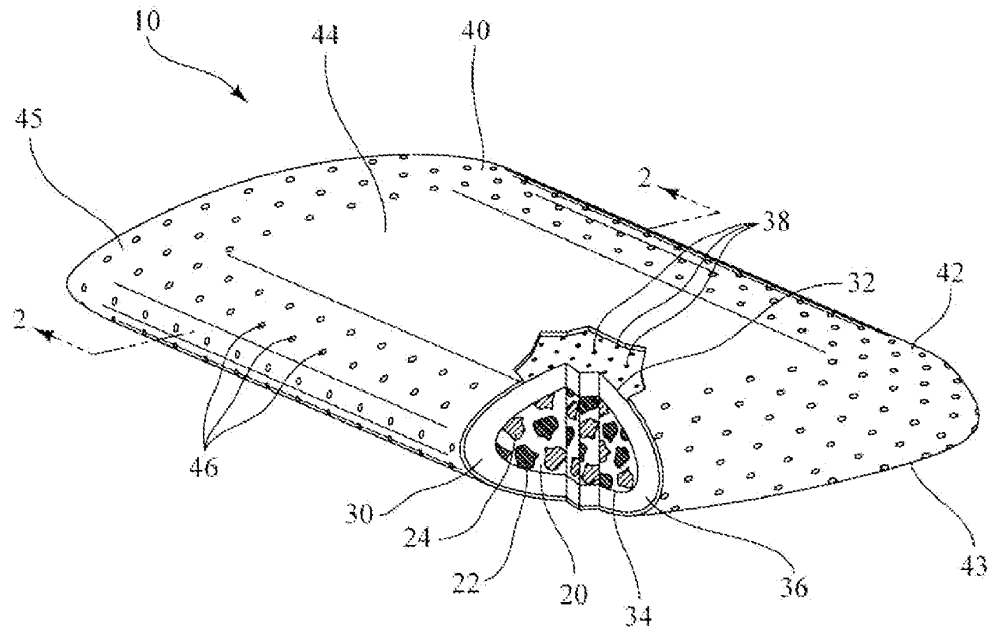
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ABSTRACT

A support cushion is provided that includes a core comprised of a first flexible foam and a second flexible foam. Both the first flexible foam and the second flexible foam include a reticulated cellular structure, with the first flexible foam having a density less than the second flexible foam. A sleeve is also included in the support cushion and encapsulates the core.

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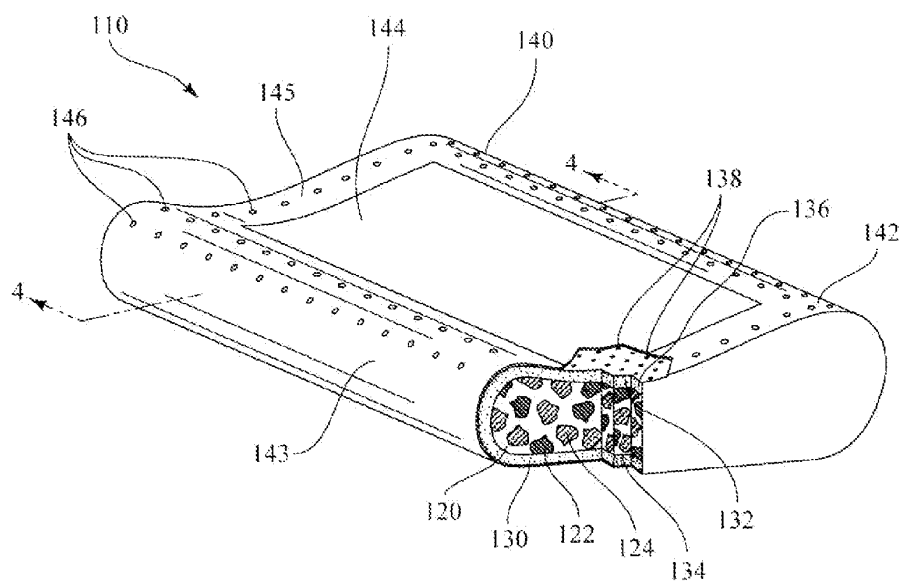


FIG. 3

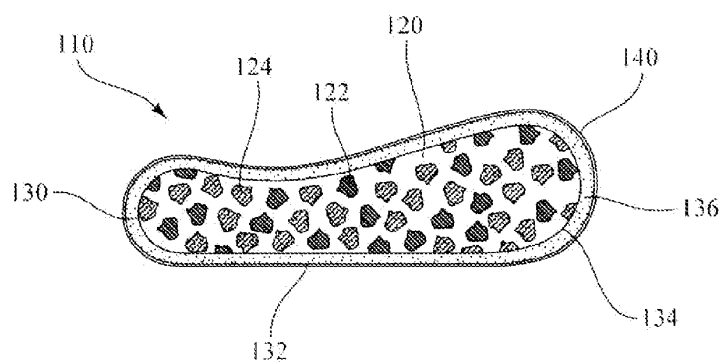


FIG. 4

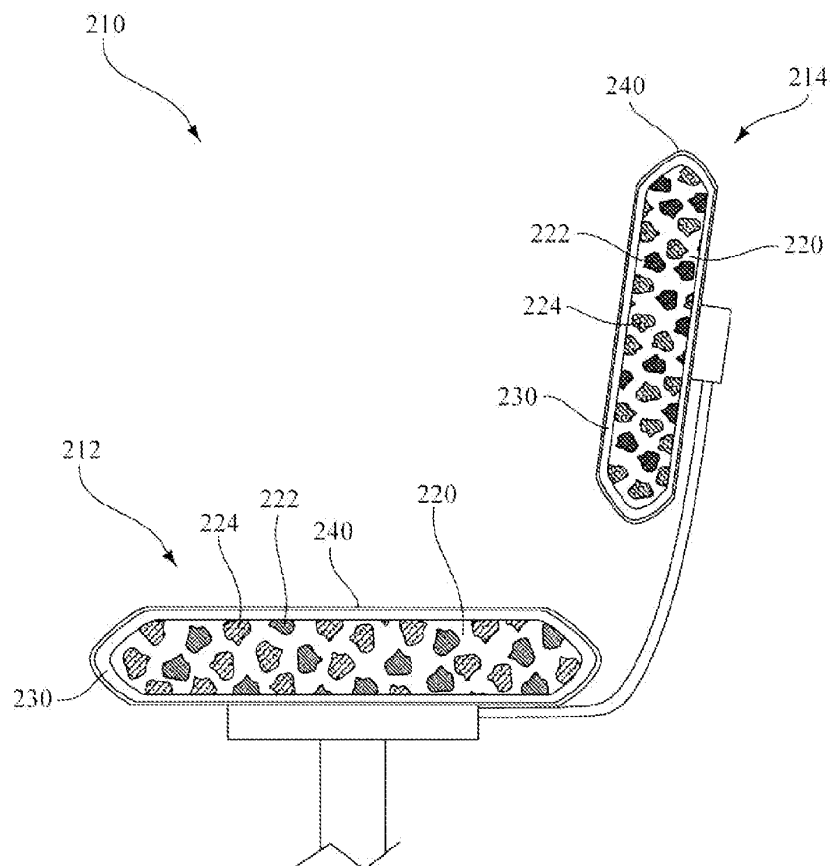


FIG. 5

SUPPORT CUSHIONS FOR PROVIDING VENTILATION

TECHNICAL FIELD

[0001] The present invention relates to support cushions for providing ventilation. In particular, the present invention relates to support cushions, such as pillows, that make use of a core that includes flexible foams having reticulated cellular structures and densities configured to increase the air movement through the support cushions.

BACKGROUND

[0002] As is generally the case with support cushions and, in particular, with support cushions comprised of flexible foam or other body-conforming materials, the effectiveness of the support cushion in providing support to the body of a user is partly a function of how well the flexible foam responds to the contour of the particular user resting on the cushion. In this regard, support cushions made from temperature-sensitive visco-elastic foam are often particularly desirable as such support cushions are able to change shape based, at least in part, upon the temperature of the supported body part. That conformance of the cushion to the body of a user, however, often causes more of the user's body to be in contact with the body support cushion, and thus, less of the body of the user is exposed to the ambient air around the cushion. The reduction in the amount of the body of the user exposed to ambient air, in turn, causes many users to find support cushions comprised of visco-elastic foam to "sleep hot" and, occasionally, such users will choose other types of support cushions, notwithstanding the supportive benefits associated with visco-elastic foam and similar types of body-conforming materials.

[0003] In an effort to remedy users' concerns of "sleeping hot" as a result of the body-conforming qualities of their support cushions, many support cushion manufacturers have incorporated so-called "cooling" technologies into their products. For example, many body-conforming support cushions now incorporate latent heat storage units, such as phase change material, that absorb heat and provide a cooling sensation when in contact with the body of a user. Despite the inclusion of phase change material in such support cushions, however, those support cushions still often fail to sufficiently address the heat and humidity that becomes trapped within the support cushions as a result of the lack of ventilation through the support cushions.

SUMMARY

[0004] The present invention includes support cushions for providing ventilation. In particular, the present invention includes support cushions, such as pillows, that make use of a core that includes flexible foams having reticulated cellular structures and densities configured to increase the air movement through the support cushions. Thus, the support cushions of the present invention allow a user to obtain the supportive benefits of a support cushion comprised of flexible foam, but without the increases in heat and humidity that may occur as a result of the body of a user, or a portion thereof, resting on the support cushion.

[0005] In one exemplary embodiment of the present invention, a support cushion is provided in the form of a pillow and includes a sleeve encapsulating a core comprised of a first flexible foam and a second flexible foam. Both the first flex-

ible foam and the second flexible foam include a reticulated cellular structure, with the first flexible foam having a density less than that of the second flexible foam, such that the pillow is configured to increase the air flow through the pillow and reduce the heat and humidity that may be present in the pillow as a result of a user resting on the pillow.

[0006] The core of the support cushion generally has a shape suitable for accommodating the body of a user. Further, the first flexible foam and the second flexible foam comprising the core of the support cushion are generally comprised of a flexible foam that is capable of suitably distributing the pressure from a user's body or portion thereof across the support cushions. In some embodiments, the first flexible foam and the second flexible foam are both comprised of a reticulated visco-elastic foam that has a desired density and hardness and allows pressure to be distributed uniformly across the support cushion, while still allowing for increased air movement through the core. In this regard, in some embodiments, the first flexible foam has a hardness of about 30 N to about 60 N and the second flexible foam has a hardness of about 60 N to about 90 N. In some embodiments, the first flexible foam has a density of about 45 kg/m³ to about 65 kg/m³ and the second flexible foam has a density of about 85 kg/m³, such that the core provides a sufficiently soft and supportive cushion, while also including less dense material within the core of the support cushion to increase the air flow through the support cushion.

[0007] With further respect to the visco-elastic foam included in the core of the support cushion, the visco-elastic foam comprising the core can also have a structure configured to improve the air movement through the support cushion. For example, in some embodiments, the visco-elastic foam included in the core comprises a plurality of visco-elastic foam fragments, such that the core is not comprised of a single continuous piece of a first flexible foam and a single continuous piece of a second visco-elastic foam, but is instead comprised of a number of different fragments of visco-elastic foam that allow air to more readily travel through the core and, consequently, allow more heat and humidity to be removed from the core and provide cooling to a user resting on the support cushion. In some embodiments, to also take advantage of and enhance the cooling capabilities of the support cushion, the first flexible foam, the second flexible foam, the sleeve, or a combination thereof can include an amount of phase change material.

[0008] To further enhance the air movement through the support cushion of the present invention, the sleeve encapsulating the core is generally comprised of a three-dimensional spacer material having an outer surface, an inner surface, and a middle spacer layer. The middle spacer layer of the sleeve separates the outer surface from the inner surface and allows the sleeve to have a high air permeability that serves to further enhance the heat and humidity removal from the support cushion. In some embodiments, to also enhance the flow of air and the removal of heat and humidity from the support cushion and, more particularly, through the sleeve of the support cushion, the outer surface of the sleeve defines a plurality of vents.

[0009] In addition to including a sleeve that provides the support cushions of the present invention with enhanced air flow, the support cushion can, in certain embodiments, include an outer cover that surrounds the sleeve and is also configured to provide enhanced air flow. For instance, in some embodiments, an outer cover is included that has a first sur-

face and a second surface opposite the first surface, where at least one of the first surface or second surface includes a central panel surrounded by a border defining a plurality of openings to further allow air and any associated heat and humidity to travel through and be removed from the support cushion (i.e., through the core and sleeve and out of the openings in the border). Such outer covers are typically comprised of one or more textiles having a sufficient amount of durability to protect the underlying sleeve and core of the support cushion, but are also sufficiently breathable to allow air to flow not only through the openings in the border, but also through the central panels. For example, in some embodiments, the central panel is comprised of cotton, and the border is comprised of polyester.

[0010] Further features and advantages of the present invention will become evident to those of ordinary skill in the art after a study of the description, figures, and non-limiting examples in this document.

BRIEF DESCRIPTION OF THE DRAWINGS

[0011] FIG. 1 is a perspective view of an exemplary support cushion, in the form of a pillow, made in accordance with the present invention and with a portion of the pillow removed to show the core and the sleeve of the pillow;

[0012] FIG. 2 is a cross-sectional view of the exemplary support cushion of FIG. 1 taken along line 2-2 of FIG. 1;

[0013] FIG. 3 is a perspective view of another exemplary support cushion, in the form of a pillow, made in accordance with the present invention and with a portion of the pillow removed to show the core and the sleeve of the pillow;

[0014] FIG. 4 is a cross-sectional view of the exemplary support cushion of FIG. 3 taken along line 4-4 of FIG. 3;

[0015] FIG. 5 is a cross-sectional view of exemplary support cushions for use in a chair and made in accordance with the present invention.

DESCRIPTION OF EXEMPLARY EMBODIMENTS

[0016] The present invention includes support cushions for providing ventilation. In particular, the present invention includes support cushions, such as pillows, that make use of a core that includes flexible foams having reticulated cellular structures and densities configured to increase the air movement through the support cushions. Thus, the support cushions of the present invention allow a user to obtain the supportive benefits of a support cushion comprised of flexible foam, but without the increases in heat and humidity that may occur as a result of a user resting on the support cushion.

[0017] Referring first to FIGS. 1 and 2, in one exemplary embodiment of the present invention, a support cushion is provided in the form of a pillow 10 that includes an outer cover 40 and a sleeve 30 that encapsulates a core 20 comprised of a first flexible foam 22 and a second flexible foam 24. In the pillow 10, although the first flexible foam 22 and the second flexible foam 24 are shown in FIGS. 1-2 as separate from one another for purposes of clarity, the first flexible foam 22 and the second flexible foam 24 are typically included in the pillow 10 as a loose filling that allows air to readily move through the pillow 10. Additionally, the first flexible foam 22 typically has a density less than that of the second flexible foam 24, such that the pillow 10 is further configured to increase the air flow through the pillow 10 and to reduce the heat and humidity that may be present in the pillow 10 as a

result of the body of a user, or a portion thereof, resting on the pillow 10, as described in further detail below.

[0018] Both the first flexible foam 22 and the second flexible foam 24 included in the core 20 of the pillow 10 are generally comprised of flexible foam that is capable of suitably distributing the pressure from a user's body or portion thereof across the pillow 10. Such flexible foams include, but are not limited to, latex foam, reticulated or non-reticulated visco-elastic foam (sometimes referred to as memory foam or low-resilience foam), reticulated or non-reticulated non-visco-elastic foam, polyurethane high-resilience foam, expanded polymer foams (e.g., expanded ethylene vinyl acetate, polypropylene, polystyrene, or polyethylene), and the like. In the embodiment shown in FIGS. 1 and 2, both the first flexible foam 22 and the second flexible foam 24 comprising the core 20 of the pillow 10 are comprised of reticulated visco-elastic foam fragments or, in other words, both the first flexible foam 22 and second flexible foam 24 are visco-elastic foam fragments having a reticulated cellular structure.

[0019] Reticulated foam (visco-elastic or otherwise) is a cellular foam structure in which the cells of the foam are essentially skeletal. In such a structure, the cells of the reticulated foam are each defined by a plurality of apertured windows surrounded by cell struts, where the cell windows of reticulated foam can be entirely absent (leaving only the cell struts) or substantially missing. In some embodiments, the reticulated visco-elastic foam fragments comprising the first flexible foam 22 and the reticulated visco-elastic foam fragments comprising the second flexible foam 24 are considered "reticulated" if at least 50% of the windows of the cells are missing (i.e., windows having apertures therethrough, or windows that are completely missing and therefore leaving only the cell struts). Such structures can be created by destruction or other removal of cell window material, by chemical or mechanical means, or by preventing the complete formation of cell windows during the manufacturing process of the foam.

[0020] Regardless of the manufacturing process used to produce the reticulated visco-elastic foam fragments, the reticulated visco-elastic foam fragments comprising the first flexible foam 22 and the reticulated visco-elastic foam fragments comprising the second flexible foam 24, by virtue of their reticulated cellular structure, have characteristics that are well-suited for use in the core 20 of the pillow 10, including the enhanced ability to permit fluid movement through the reticulated visco-elastic foam fragments and, consequently, the ability to provide enhanced air movement throughout the core 20 and allow for the removal of heat and/or humidity from the core 20 of the pillow 10 to provide a user with a cooling sensation.

[0021] Generally, such reticulated visco-elastic foam fragments have a hardness of at least about 10 N to no greater than about 80 N, as measured by exerting pressure from a plate against a sample of the material to a compression of at least 40% of an original thickness of the material at approximately room temperature (i.e., 21° C. to 23° C.), where the 40% compression is held for a set period of time as established by the International Organization of Standardization (ISO) 2439 hardness measuring standard. In some embodiments, the reticulated visco-elastic foam fragments comprising the first flexible foam 22 and the reticulated visco-elastic foam fragments comprising the second flexible foam 24 each have a hardness of about 10 N, about 20 N, about 30 N, about 40 N, about 50 N, about 60 N, about 70 N, or about 80 N to provide

a desired degree of comfort and body-conforming qualities. In some embodiments, the reticulated visco-elastic foam fragments comprising the first flexible foam 22 have a hardness of about 30 N to about 60 N, while the reticulated visco-elastic foam fragments comprising the second flexible foam 24 have a hardness about 60 N to about 90 N.

[0022] The reticulated visco-elastic foam fragments comprising the first flexible foam 22 and the reticulated visco-elastic foam fragments comprising the second flexible foam 24 can also have a density that assists in providing not only a desired degree of comfort and body-conforming qualities, as well as an increased degree of material durability, but that also assists in facilitating the movement of air through the core 20 of the pillow 10 by virtue of the inclusion of less dense visco-elastic foam fragments as compared to the density of traditional visco-elastic foam pillows. In some embodiments, in the core 20 of the pillow 10, the density of the reticulated visco-elastic foam fragments comprising the first flexible foam 22 and the density of the reticulated visco-elastic foam fragments comprising the second flexible foam 24 have a density of no less than about 30 kg/m³ to no greater than about 150 kg/m³. In some embodiments, the density of the visco-elastic foam used in the core 20 of the pillow 10 is about 30 kg/m³, about 40 kg/m³, about 50 kg/m³, about 60 kg/m³, about 70 kg/m³, about 80 kg/m³, about 90 kg/m³, about 100 kg/m³, about 110 kg/m³, about 120 kg/m³, about 130 kg/m³, about 140 kg/m³, or about 150 kg/m³. In one preferred embodiment, the first flexible foam 22 has a density of about 45 kg/m³ to about 65 kg/m³ and the second flexible foam 24 has a density of about 85 kg/m³, such that the core 20 provides a sufficiently soft and supportive cushion, while also including less dense material within the core 20 of the pillow 10 that allows air to more readily flow through the pillow 10.

[0023] Of course, the selection of a reticulated visco-elastic foam having a particular density will affect other characteristics of the foam, including its hardness, the manner in which the foam responds to pressure, and the overall feel of the foam, but it is appreciated that a reticulated visco-elastic foam having a desired density and hardness can readily be selected and included in an amount suitable for a particular application or support cushion as desired. For instance, in some embodiments, the first flexible foam 22 included in the core 20 of the pillow 10 has a hardness of about 37 N to about 55 N and a density of about 45 kg/m³, while the second flexible foam has a hardness of about 68 N to about 88 N and a density of about 85 kg/m³ to provide the pillow 10 with a softer feel. As another example, in some embodiments, the first flexible foam 22 included in the core 20 of the pillow 10 has a hardness of about 37 N to about 55 N and a density of about 65 kg/m³, while the second flexible foam 24 has a hardness of about 68 N to about 88 N and a density of about 85 kg/m³ to provide the pillow 10 with a medium feel (i.e., not too soft and not too firm). As yet another example, in some embodiments, the first flexible foam 22 included in the core 20 of the pillow 10 again has a hardness of about 37 N to about 55 N and a density of about 65 kg/m³, and the second flexible foam 24 again has a hardness of about 68 N to about 88 N and a density of about 85 kg/m³, but the first flexible foam 22 is included in the core 20 of the pillow 10 in an increased amount relative to the amount included in a "medium feel" pillow to thereby provide the pillow 10 with a firm feel.

[0024] Referring still to FIGS. 1-2, to further enhance the air movement through the pillow 10, the sleeve 30 encapsulating the core 20 is comprised of a three-dimensional spacer

material having an outer surface 32, an inner surface 34, and a middle spacer layer 36. The middle spacer layer 36 is generally a woven layer that connects the outer surface 32 to the inner surface 34, but that also sufficiently separates the outer surface 32 from the inner surface 34 and allows the sleeve 30 to have a high air permeability. To further enhance the flow of air and the removal of heat and humidity from the pillow 10 and, more particularly, through the sleeve 30 of the pillow 10, the outer surface 32 of the sleeve 30 also defines a plurality of vents 38 (FIG. 1) that allow air and any associated heat and humidity to be transferred from the core 20 of the pillow 10 and through sleeve 30. Additionally, in the pillow 10, the sleeve 30 also incorporates a flame-retardant material, such that a flame-retardant barrier surrounds the core 20 of the pillow 10.

[0025] In addition to including the sleeve 30 in the pillow 10 to provide for enhanced air flow, the outer cover 40 that surrounds the sleeve 30 is also configured to provide enhanced air flow through the pillow 10. As shown best in FIG. 1, in the pillow 10, the outer cover 40 includes a first surface 42 and a second surface 43 that is opposite the first surface 42. Included on both the first surface 42 and the second surface 43, only one of which is fully shown in FIG. 1, is a central panel 44 surrounded by a border 45 that defines a plurality of openings 46. By including such a border 45 in the outer cover 40 of the pillow 10, the pillow 10 is further configured to allow air and any associated heat and humidity in the pillow 10 and, more specifically, in the core 20 of the pillow 10 to travel through the openings 46 and be removed from the pillow 10. Such an outer cover 40 is typically comprised of one or more textiles having a sufficient amount of durability to protect the underlying sleeve 30 and core 20 of the pillow 10, but is also sufficiently breathable to allow air to flow through both the openings 46 in the border 45 and the remainder of the outer cover 40 (e.g., through the central panel 44). For example, in the embodiment shown in FIG. 1, the central panel 44 of the outer cover 40 is comprised of one-hundred percent cotton while the border 45 is comprised of a polyester to allow for an a sufficient amount of breathability. However, it is further contemplated that numerous other textiles, including silk, textiles having a lower percentage of cotton, and cotton/polyester blends can also be readily used to produce a sufficient outer cover.

[0026] Referring now to FIGS. 3-4, in another exemplary embodiment of the present invention, a support cushion is provided in the form of a pillow 110 that includes a core 120 comprised of a first amount of reticulated visco-elastic foam fragments 122 and second amount of reticulated visco-elastic foam fragments 124, a sleeve 130, and an outer cover 140. Like the pillow 10 shown in FIGS. 1 and 2, the sleeve 130 of the pillow 110 is comprised of a three-dimensional spacer material having an outer surface 132 defining a plurality of vents 138, an inner surface 134, and a middle spacer layer 136 that separates the outer surface 132 from the inner surface 134. Likewise, the outer cover 140 of the pillow also includes a first surface 142 having a central panel 144 surrounded by a border 145 that defines a plurality of openings 146. Unlike the pillow shown in FIGS. 1 and 2, however, the pillow 110 has a curved profile that acts to align the head, neck and shoulders of a user lying on the pillow 10. Additionally, in the pillow 110, while the first amount of reticulated visco-elastic foam fragments 122 typically has a density that is less than the second amount of visco-elastic foam fragments 124 included in the pillow 110, the second amount of visco-elastic foam

fragments **124** included in the pillow **110** as well as the sleeve **130** also includes an amount of phase change material, as indicated by the stippling in FIGS. **3-4** to enhance the cooling sensation that is provided to the body of a user, or a portion thereof, resting on the pillow **110**. In this regard, the phase change material is not only generally positioned and configured to place the body of the user, or a portion thereof, resting on the pillow **110** in close proximity to the phase change material, but is also positioned to absorb heat in the core **120** of the pillow **110**.

[0027] The phase change material that is incorporated into the second amount of visco-elastic foam fragments **124** and the sleeve **130** of the pillow **110** is typically comprised of microspheres that include substances having a high heat of fusion and that store or release heat as the substances oscillate between solid and liquid form (i.e., phase change materials). As the phase change material included in the second amount of visco-elastic foam fragments **124** and the sleeve **130** changes from solid to liquid form (i.e., melts) as the result of heat generated by a user lying on the pillow **110**, the phase change material thus continually absorbs heat and provides a cooling effect to the user until all of the phase change material has been transformed from a solid to a liquid form.

[0028] The phase change material is incorporated into the second amount of visco-elastic foam fragments **124** and the sleeve **130** by infusing and coating the second amount of visco-elastic foam fragments **124** and the sleeve **130** with the microspheres of phase change material. However, it is, of course, contemplated that the phase change material need not be infused into and/or used to coat both the second amount of visco-elastic foam fragments **124** and the sleeve **130** to provide a sufficient amount of cooling to the body of a user lying on the pillow **110**, but can also be infused into and/or used to coat only the second amount of visco-elastic foam fragments **124**, only the sleeve **130**, or other portions or combinations of portions of the pillow **110** without departing from the spirit and scope of the subject matter described herein.

[0029] Regardless of the particular configuration of the phase change material in the pillow **110**, the reticulated visco-elastic foam fragments that comprise first flexible foam **122** and the second flexible foam **124** in the core **120** of the pillow **110** are generally secured to one another and molded to create a molded or integrated foam core and to prevent the visco-elastic fragments comprising the first flexible foam **122** and the visco-elastic foam fragments comprising the second flexible foam **124** from moving during use. Various means of securing flexible foam materials to another can be used in this regard, including tape, hook and loop fasteners, conventional fasteners, stitches, and the like. In the particular embodiment shown in FIGS. **3-4**, although the visco-elastic fragments comprising the first flexible foam **122** and the visco-elastic foam fragments comprising the second flexible foam **124** are shown as separate from one another for purposes of clarity, the visco-elastic fragments comprising the first flexible foam **122** and the visco-elastic foam fragments comprising the second flexible foam **124** are bonded together by an adhesive or cohesive bonding material to create a substantially continuous assembly where the visco-elastic fragments comprising the first flexible foam **122** and the visco-elastic foam fragments comprising the second flexible foam **124** are fully adhered to one another. Such adhesive bonding materials include, for example, environmentally-friendly, water based adhesives, like SABA AQUABOND RSD, a two-component

water-based adhesive product produced by SABA DINXPERLO BV, B-7090 AA, Dinxperlo, Belgium.

[0030] As yet another refinement to the present invention, although the support cushions shown in FIGS. **1-4** are in the form of pillows **10**, **110** and are dimensionally sized to support the head of a user, it is contemplated that the features described herein are equally applicable to mattresses, seat cushions, seat backs, neck pillows, leg spacer pillows, mattress toppers, overlays, and the like. As such, the phrase "support cushion" is used herein to refer to any and all such objects having any size and shape, and that are capable of or are generally used to support the body of a user or a portion thereof. For example, as shown in FIG. **5**, support cushions made in accordance with the present invention are incorporated into a seat **212** and back **214** of a desk chair **210**. Each support cushion of the desk chair **210** includes a core **220** comprised of a first amount of reticulated visco-elastic foam fragments **222** and a second amount of reticulated visco-elastic foam fragments **224**, with the first amount of visco-elastic foam fragments **222** having a density less than the second amount of visco-elastic foam fragments **224** to provide for enhanced air movement through the seat **212** and back **214** of the desk chair **210**. The support cushions of the desk chair **210** further include and a sleeve **230** comprised of a three-dimensional spacer material and, similar to the pillows of the present invention, each support cushion of the desk chair **210** also includes an outer cover **240** configured to enhance the movement of air and the removal of heat and humidity from the support cushions of the desk chair **210**.

[0031] One of ordinary skill in the art will recognize that additional embodiments or implementations are possible without departing from the teachings of the present invention or the scope of the claims which follow. This detailed description, and particularly the specific details of the exemplary embodiments and implementations disclosed herein, is given primarily for clarity of understanding, and no unnecessary limitations are to be understood therefrom, for modifications will become obvious to those skilled in the art upon reading this disclosure and may be made without departing from the spirit or scope of the claimed invention.

What is claimed is:

1. A support cushion, comprising:
 - a core comprised of a first flexible foam including a reticulated cellular structure and a second flexible foam including a reticulated cellular structure, the first flexible foam having a density less than the second flexible foam; and
 - a sleeve encapsulating the core.
2. The support cushion of claim 1, wherein the first flexible foam, the second flexible foam, or both is a visco-elastic foam.
3. The support cushion of claim 1, wherein the first flexible foam has a density of about 45 kg/m³ to about 65 kg/m³, and wherein the second flexible foam has a density of about 85 kg/m³.
4. The support cushion of claim 1, wherein the first flexible foam has a hardness of about 30 N to about 60 N, and wherein the second flexible foam has a hardness of about 60 N to about 90 N.
5. The support cushion of claim 1, wherein the first flexible foam and the second flexible foam are comprised of a plurality of visco-elastic foam fragments.
6. The support cushion of claim 1, wherein the core is a molded foam core.

7. The support cushion of claim 1, wherein the sleeve is comprised of a three-dimensional spacer material having an outer surface, an inner surface, and a middle spacer layer.

8. The support cushion of claim 7, wherein the outer surface of the sleeve defines a plurality of vents.

9. The support cushion of claim 1, wherein the first flexible foam, the second flexible, the sleeve, or a combination thereof includes an amount of phase change material.

10. The support cushion of claim 1, wherein the sleeve is comprised of a flame retardant material.

11. The support cushion of claim 1, further comprising an outer cover surrounding the sleeve.

12. The support cushion of claim 11, wherein the outer cover is comprised of one or more textiles.

13. The support cushion of claim 11, wherein the outer cover includes a first surface and a second surface opposite the first surface, and wherein at least one of the first surface or the second surface includes a central panel surrounded by a border, the border defining a plurality of openings.

14. The support cushion of claim 13, wherein the central panel is comprised of cotton and the border is comprised of polyester.

15. A pillow, comprising:

a core comprised of a reticulated visco-elastic foam; and
a sleeve encapsulating the core, the sleeve comprised of a three-dimensional spacer material having a top surface, a bottom surface, and a middle spacer layer.

16. The pillow of claim 15, further comprising an outer cover surrounding the sleeve.

17. The pillow of claim 15, further comprising an amount of phase change material incorporated into the core, the sleeve, or both.

18. The pillow of claim 17, wherein the reticulated visco-elastic foam comprises a plurality of reticulated visco-elastic foam fragments.

19. A pillow, comprising:

a sleeve encapsulating a plurality of reticulated visco-elastic foam fragments; and
an outer cover having a first surface and a second surface opposite the first surface, at least one of the first surface or the second surface including a central panel surrounded by a border, the border defining a plurality of openings.

20. The pillow of claim 19, wherein the sleeve is comprised of a three-dimensional spacer material having a top surface, a bottom surface, and a middle spacer layer.

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