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(54) **CHAIR BACKREST POSTURE APPARATUS**

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CPC **A47C 7/425** (2013.01)

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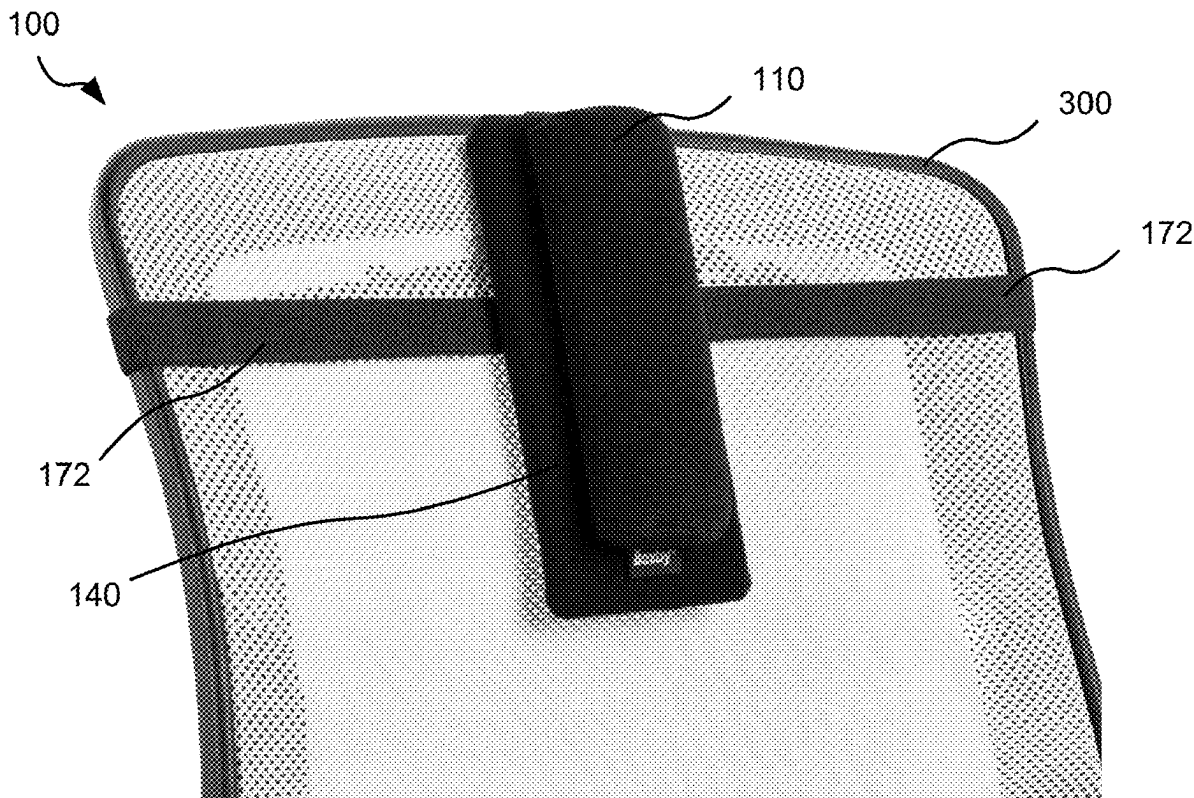
(57) **ABSTRACT**

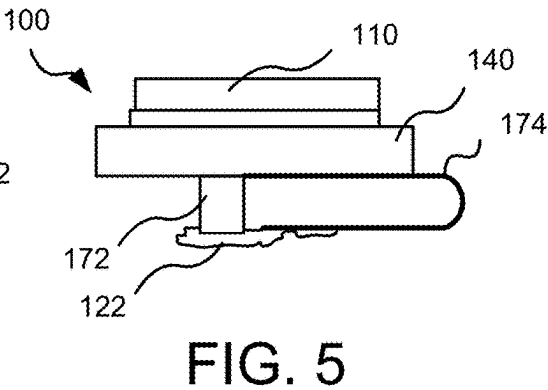
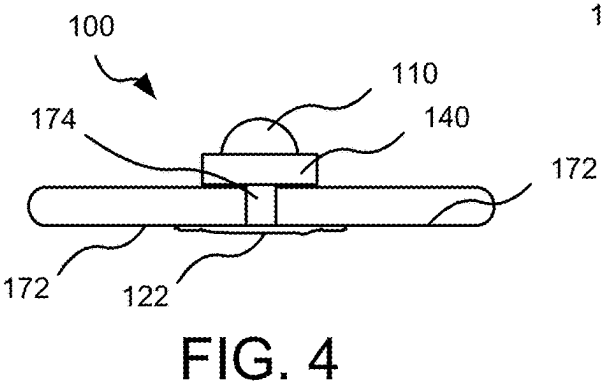
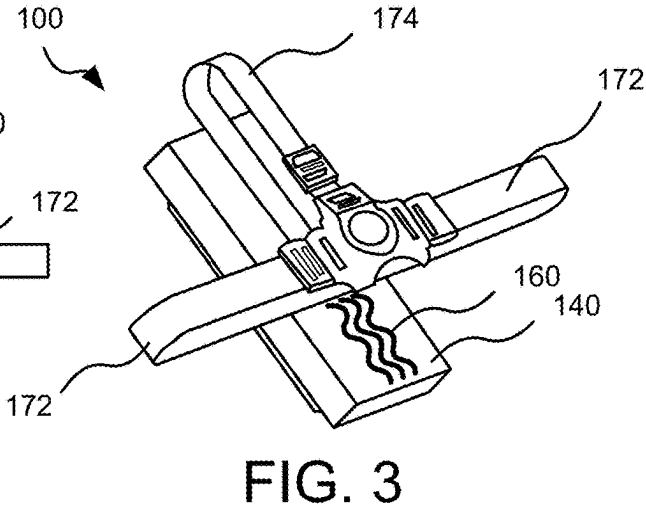
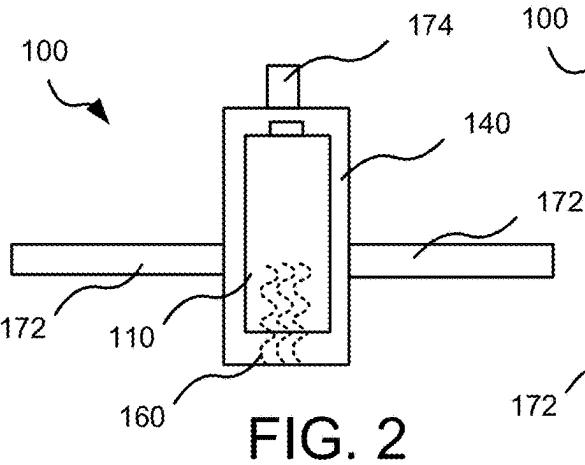
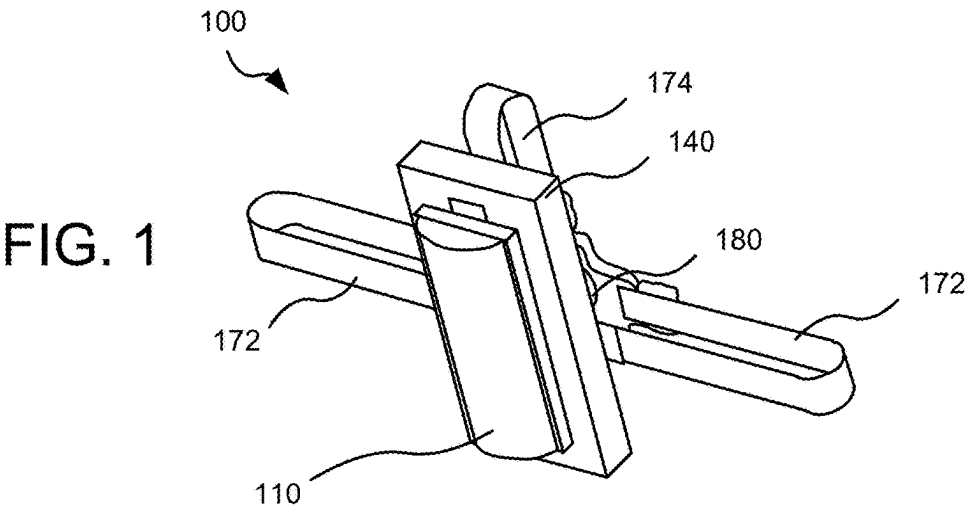
(22) Filed: **Feb. 20, 2025**

Related U.S. Application Data

(60) Provisional application No. 63/555,891, filed on Feb.
20, 2024.

A chair backrest posture apparatus includes a base pad assembly including a first compressible pad, and a second compressible pad that is removably coupled to the base pad assembly. The second compressible pad is a different size than the base pad assembly. The chair backrest posture apparatus includes a securing apparatus coupled to the base pad assembly. The securing apparatus is configured to secure the chair backrest posture apparatus to a backrest of a chair.





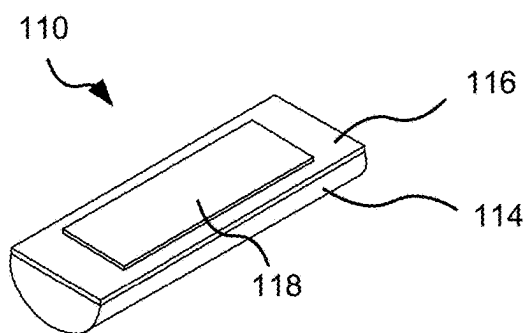


FIG. 6

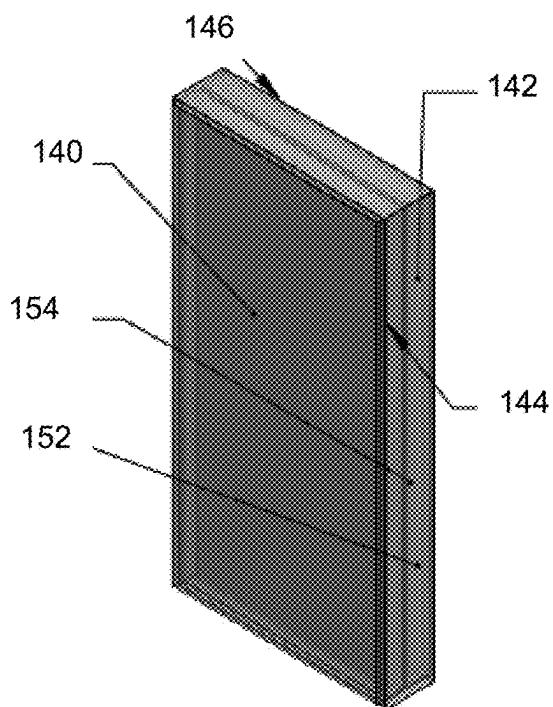


FIG. 7

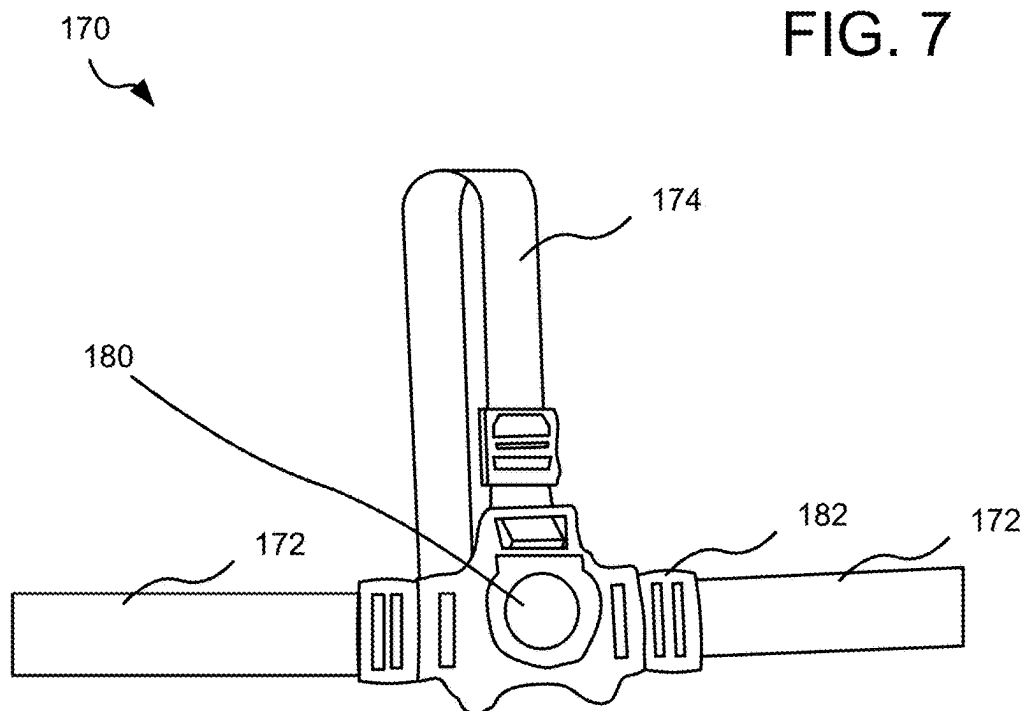


FIG. 8

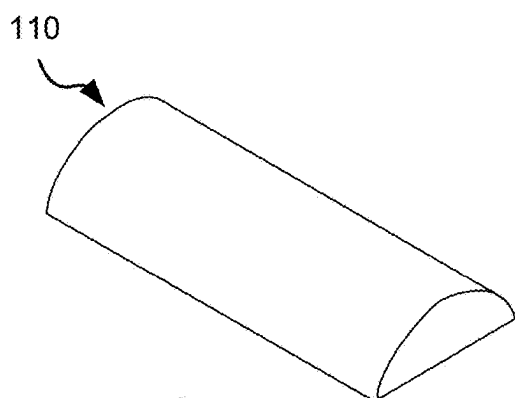


FIG. 9

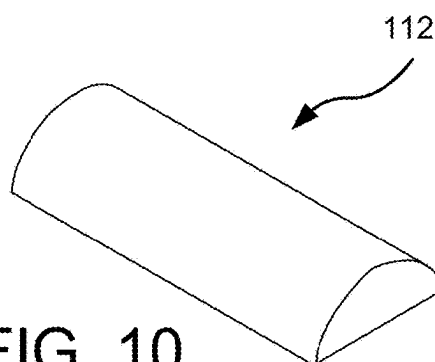


FIG. 10

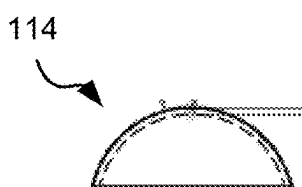


FIG. 11

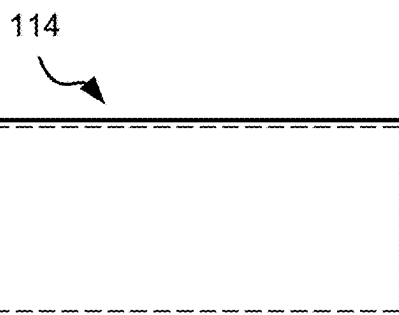


FIG. 12

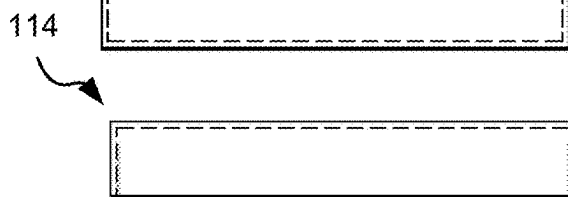


FIG. 13

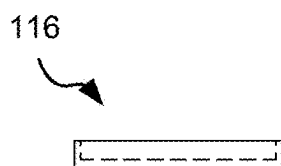


FIG. 14

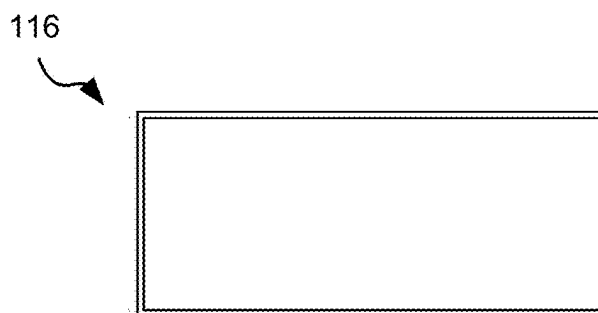


FIG. 15

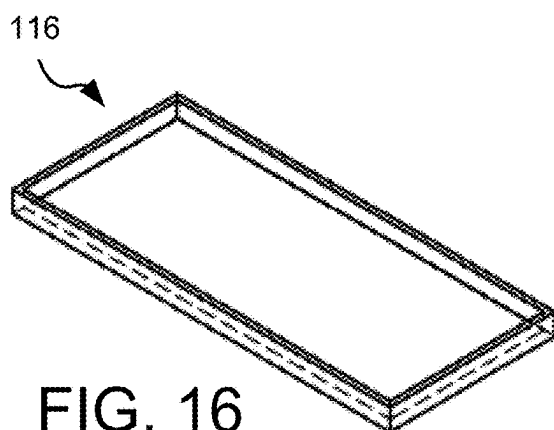


FIG. 16

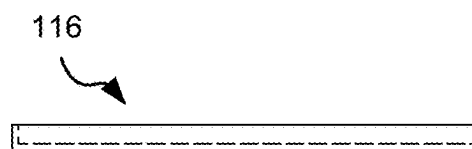


FIG. 17

FIG. 18

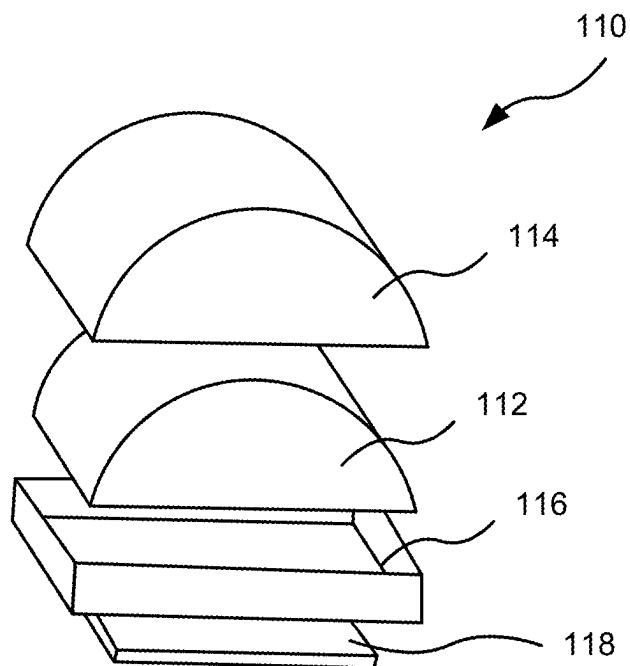
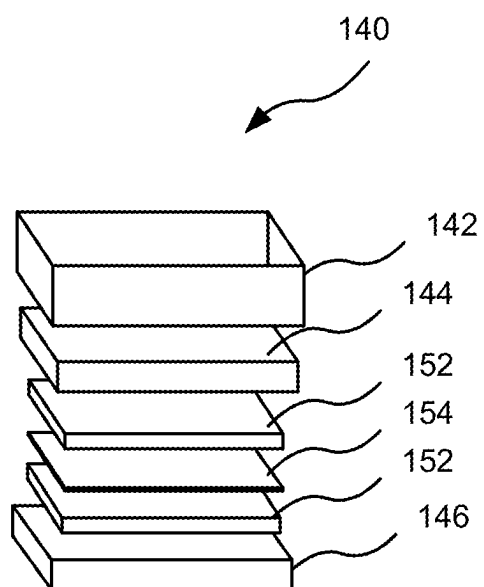


FIG. 19



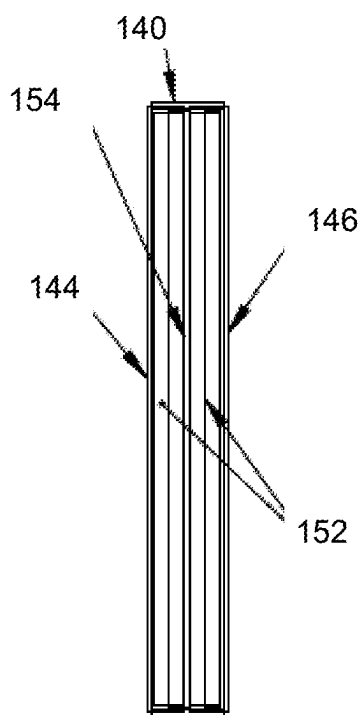


FIG. 20

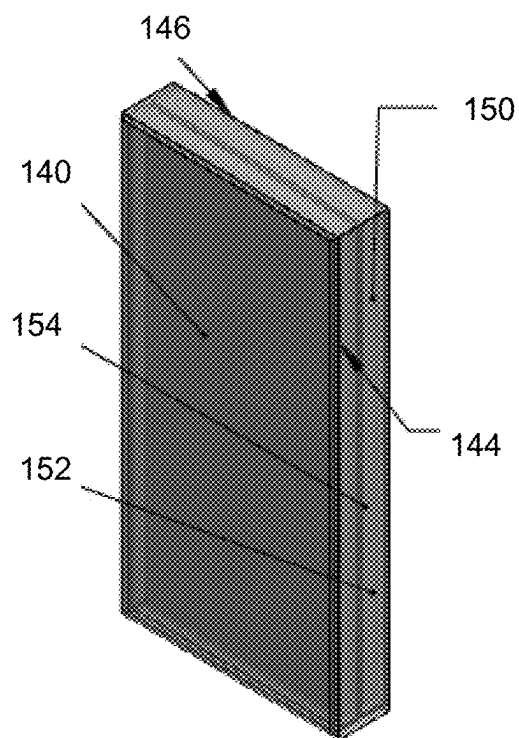


FIG. 21

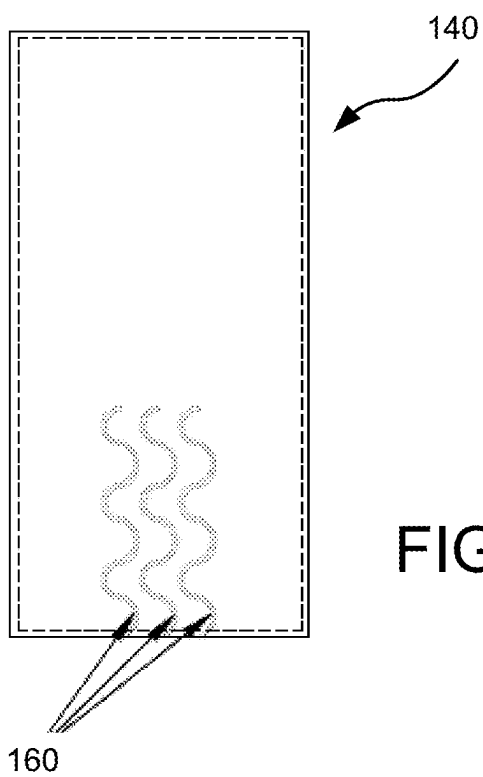


FIG. 22

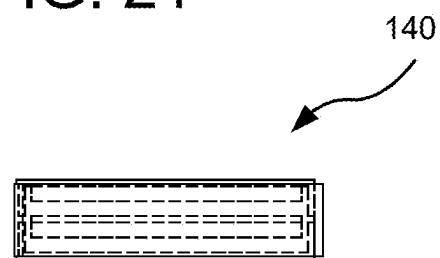


FIG. 23

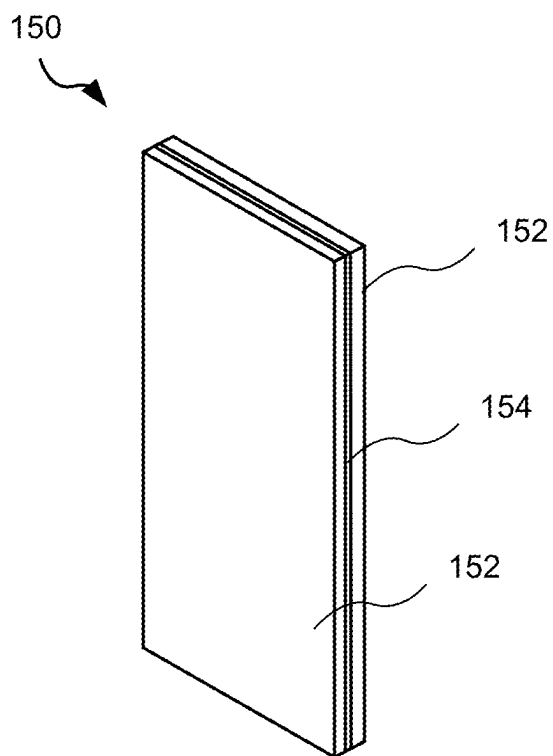


FIG. 24

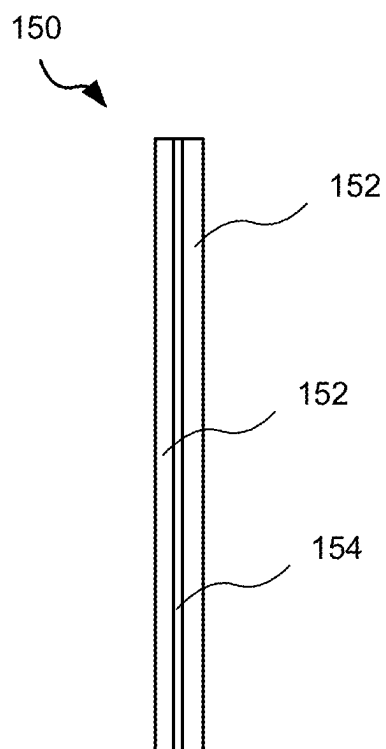


FIG. 25

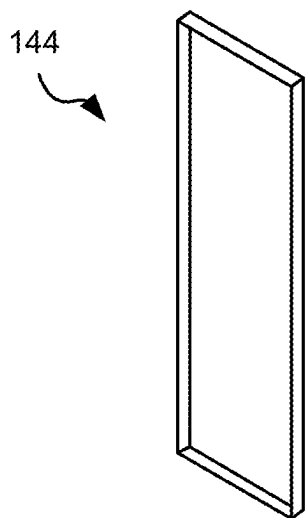


FIG. 26

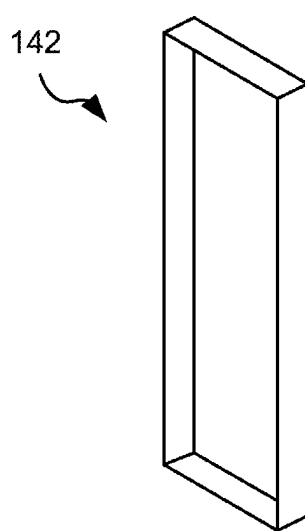
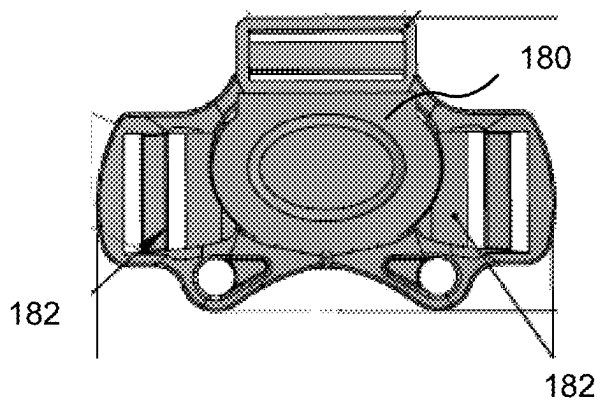
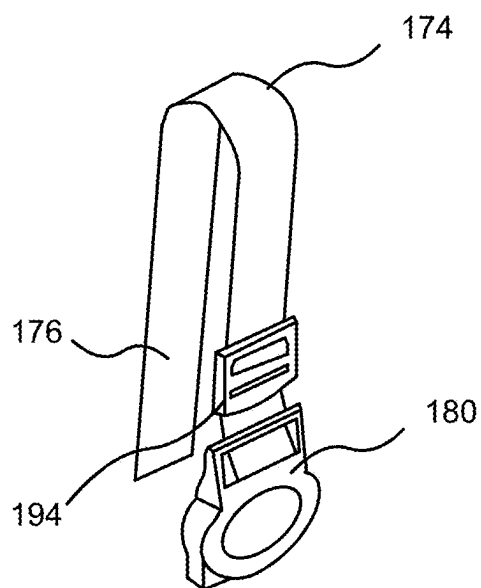
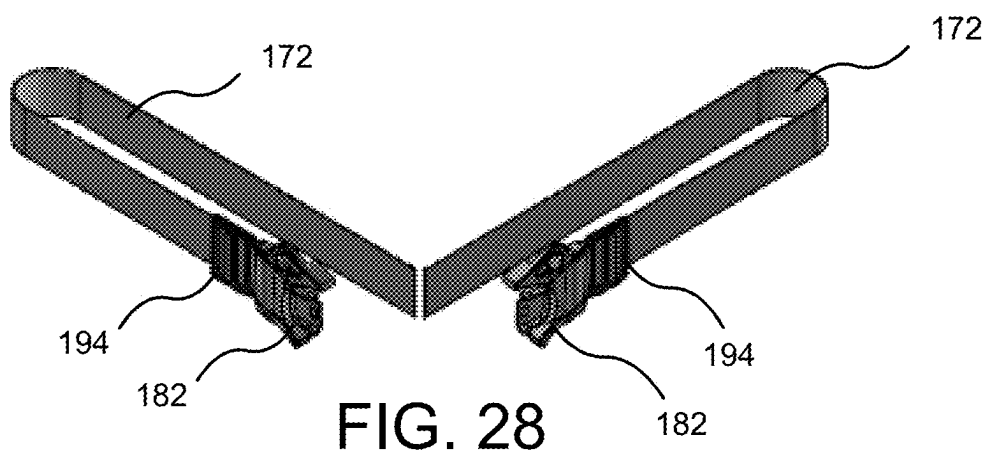


FIG. 27



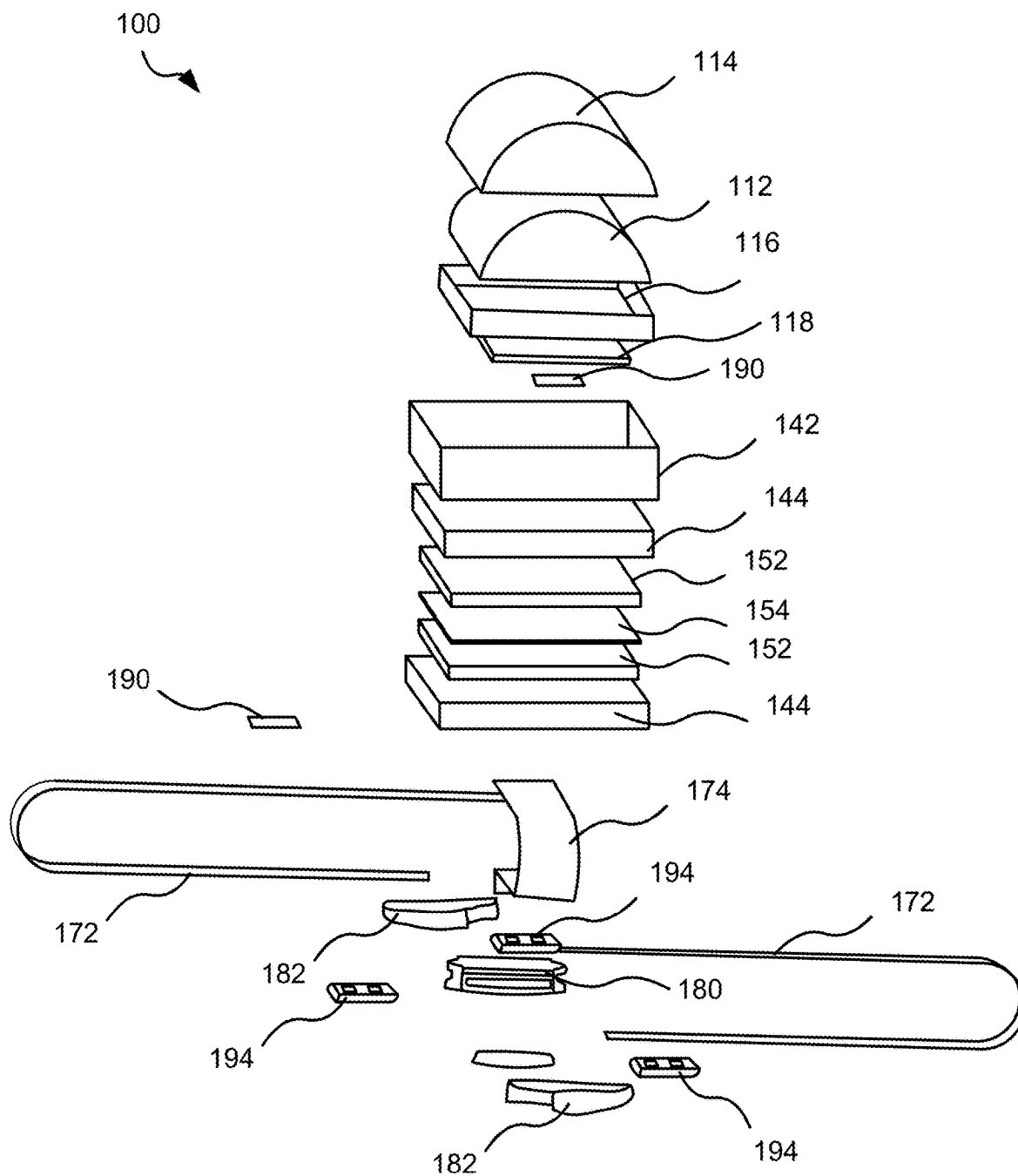


FIG. 31

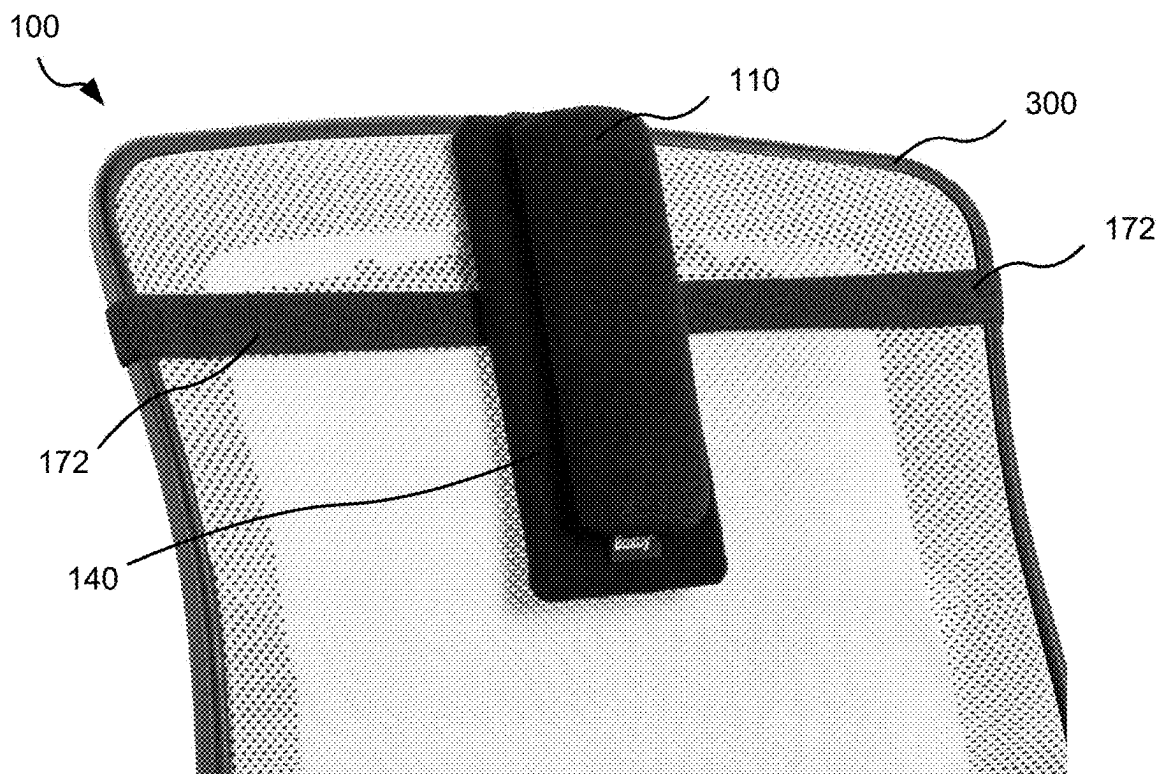


FIG. 32

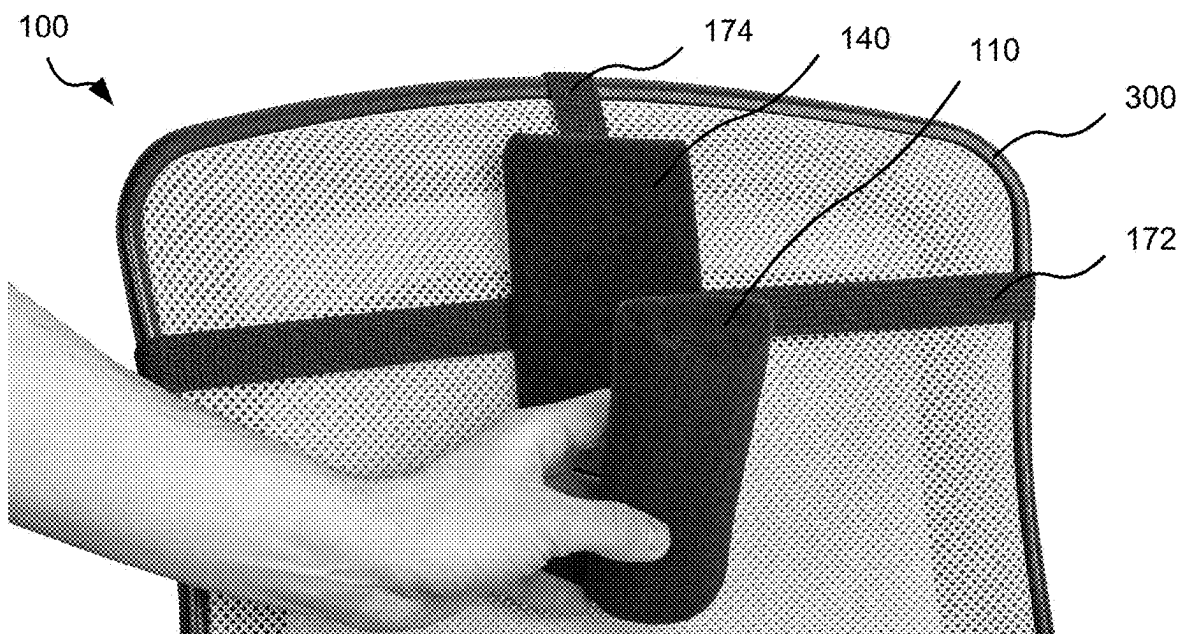


FIG. 33

CHAIR BACKREST POSTURE APPARATUS

RELATED APPLICATIONS

[0001] This application claims the benefit of U.S. Provisional Patent Application No. 63/555,891, filed Feb. 20, 2024, which is incorporated herein by reference in its entirety.

BACKGROUND

[0002] This disclosure relates generally to a posture apparatus. More specifically, this disclosure relates generally to a backrest posture apparatus.

[0003] A posture apparatus for use with a backrest is disclosed. In some embodiments, the posture apparatus includes various components and accessories. Such components may allow for the posture apparatus to be acutely adjustable and help with posture of a user in a chair or seat. Persons sitting in a chair/seat and using phones/computers puts the human body in a non-ideal position. A person's head tends to lean forward from the body's centerline and the shoulders tend to be rounded forward in a concave position. Such posture creates tension in the muscles along the back, neck, shoulders, etc. to help overcome gravity and weight displacement. Embodiments described herein may promote the body to be in such a position that could help reduce problems of discomfort, pain, and generally poor posture (leading to a myriad of issues) by providing a comfortable reminder for the user to sit back and let their shoulders and head come back to a centerline with the body. Embodiments described herein include an adjustable cushion within the apparatus. The apparatus can allow users to contract their muscles to pull their shoulders and head back into the backrest. This can be done with an isometric hold or with repetitions of the movement. The apparatus in this sense can be used as a training device that helps a user develop muscles used in proper posture. In some embodiments, the focus of the apparatus may be the thoracic spine. Conventional products and systems are focused on temporary relief and are typically associated with the lower back (lumbar).

[0004] Various embodiments are shown and described herein and depict variations that help in understanding the full scope of this disclosure. The posture apparatus may include memory foam, elastic straps, buckles, and removable parts that come together to form an ergonomic shape that allows shoulders to come back while in a seated position. The apparatus, in many embodiments, is placed on the backrest of a chair/seat. It is not worn or attached to the body of the user. The apparatus can be easily adjusted vertically and laterally with more acute adjustments available by refining the position of a removable pad associated with the apparatus. The apparatus can be placed on a chair/seat so that it contacts the middle of the back (i.e., spine) between the shoulder blades of the user. It can be placed on the backrest and utilized as a gentle reminder to a seated individual to keep their shoulders and back in an ergonomically beneficial position for any period of time.

SUMMARY

[0005] The subject matter of the present application has been developed in response to the present state of the art, and in particular, in response to the problems and disadvantages associated with conventional systems that have not yet been fully solved by currently available techniques. Accordingly,

the subject matter of the present application has been developed to provide embodiments of a chair backrest posture apparatus and method that overcome at least some of the shortcomings of prior art techniques.

[0006] Disclosed herein is a chair backrest posture apparatus. The chair backrest posture apparatus includes a base pad assembly including a first compressible pad, and a second compressible pad that is removably coupled to the base pad assembly. The second compressible pad is a different size than the base pad assembly. The chair backrest posture apparatus includes a securing apparatus coupled to the base pad assembly. The securing apparatus is configured to secure the chair backrest posture apparatus to a backrest of a chair. The preceding subject matter of this paragraph characterizes example 1 of the present disclosure.

[0007] The second compressible pad is a curved pad with a first flat side that engages with the base pad assembly and a second curved side opposite the first flat side. The preceding subject matter of this paragraph characterizes example 2 of the present disclosure, wherein example 2 also includes the subject matter according to example 1, above.

[0008] The curved pad comprises a first flat side that engages with the base pad assembly and a second curved side opposite the first flat side. The preceding subject matter of this paragraph characterizes example 3 of the present disclosure, wherein example 3 also includes the subject matter according to any one of examples 1-2, above.

[0009] The base pad assembly and the second compressible pad are one unitary pad. The preceding subject matter of this paragraph characterizes example 4 of the present disclosure, wherein example 4 also includes the subject matter according to any one of examples 1-3, above.

[0010] The second compressible pad comprises a hook strip on the first flat side that is configured to couple to an engagement surface of the base pad assembly. The preceding subject matter of this paragraph characterizes example 5 of the present disclosure, wherein example 5 also includes the subject matter according to any one of examples 1-4, above.

[0011] The second compressible pad is shaped substantially as a half of a cylinder with a major length and a minor width. The preceding subject matter of this paragraph characterizes example 6 of the present disclosure, wherein example 6 also includes the subject matter according to any one of examples 1-5, above.

[0012] The minor width of the second compressible pad is sized to fit between a user's shoulder blades. The preceding subject matter of this paragraph characterizes example 7 of the present disclosure, wherein example 7 also includes the subject matter according to any one of examples 1-6, above.

[0013] The second compressible pad is configured to provide more depth to the chair backrest posture apparatus, and wherein the second compressible pad is narrower in width than the base pad assembly. The preceding subject matter of this paragraph characterizes example 8 of the present disclosure, wherein example 8 also includes the subject matter according to any one of examples 1-7, above.

[0014] The base pad assembly comprises an engagement surface that engages the second compressible pad and a second side opposite the engagement surface that engages the back of a chair. The preceding subject matter of this paragraph characterizes example 9 of the present disclosure, wherein example 9 also includes the subject matter according to any one of examples 1-8, above.

[0015] The second side of the base pad assembly comprises friction beads that are configured to engage the backrest and keep the base pad assembly in a single location during use. The preceding subject matter of this paragraph characterizes example 10 of the present disclosure, wherein example 10 also includes the subject matter according to any one of examples 1-9, above.

[0016] The base pad assembly comprises a plastic sheet sandwiched between two foam base pads. The preceding subject matter of this paragraph characterizes example 11 of the present disclosure, wherein example 11 also includes the subject matter according to any one of examples 1-10, above.

[0017] Disclosed herein is a chair backrest posture apparatus. The chair backrest posture apparatus includes a base pad assembly comprising a first compressible pad, wherein the base pad assembly comprises a major length and a minor width, wherein the major length is configured to run vertically on a backrest of a chair and the minor width is configured to run horizontally on the backrest of the chair. The chair backrest posture apparatus includes a securing apparatus coupled to the base pad assembly, the securing apparatus configured to secure the chair backrest posture apparatus to the backrest of the chair and position the base pad assembly centrally on the backrest of the chair. The preceding subject matter of this paragraph characterizes example 12 of the present disclosure.

[0018] The chair backrest posture apparatus further includes a second compressible pad that is removably coupled to the base pad assembly, wherein the second compressible pad is a different size than the base pad assembly. The preceding subject matter of this paragraph characterizes example 13 of the present disclosure, wherein example 13 also includes the subject matter according to example 12, above.

[0019] The second compressible pad is a curved pad with a first flat side that engages with the base pad assembly and a second curved side opposite the first flat side. The preceding subject matter of this paragraph characterizes example 14 of the present disclosure, wherein example 14 also includes the subject matter according to any one of examples 12-13, above.

[0020] The curved pad comprises a first flat side that engages with the base pad assembly and a second curved side opposite the first flat side. The preceding subject matter of this paragraph characterizes example 15 of the present disclosure, wherein example 15 also includes the subject matter according to any one of examples 12-14, above.

[0021] The second compressible pad is shaped substantially as a half of a cylinder with a major length and a minor width. The preceding subject matter of this paragraph characterizes example 16 of the present disclosure, wherein example 16 also includes the subject matter according to any one of examples 12-15, above.

[0022] The minor width of the second compressible pad is sized to fit between a user's shoulder blades. The preceding subject matter of this paragraph characterizes example 17 of the present disclosure, wherein example 17 also includes the subject matter according to any one of examples 12-16, above.

[0023] The second compressible pad is configured to provide more depth to the chair backrest posture apparatus, and wherein the second compressible pad is narrower in width than the base pad assembly. The preceding subject

matter of this paragraph characterizes example 18 of the present disclosure, wherein example 18 also includes the subject matter according to any one of examples 12-17, above.

[0024] The base pad assembly comprises an engagement surface that engages the second compressible pad and a second side opposite the engagement surface that engages the back of a chair. The preceding subject matter of this paragraph characterizes example 19 of the present disclosure, wherein example 19 also includes the subject matter according to any one of examples 12-18, above.

[0025] The base pad assembly and the second compressible pad have different densities. The preceding subject matter of this paragraph characterizes example 20 of the present disclosure, wherein example 20 also includes the subject matter according to any one of examples 12-19, above.

DESCRIPTION OF THE DRAWINGS

[0026] In order that the advantages of the subject matter may be more readily understood, a more particular description of the subject matter briefly described above will be rendered by reference to specific embodiments that are illustrated in the appended drawings. Understanding that these drawings depict only typical embodiments of the subject matter and are not therefore to be considered to be limiting of its scope, the subject matter will be described and explained with additional specificity and detail through the use of the drawings.

[0027] FIG. 1 depicts a front perspective view of a posture apparatus, according to one or more embodiments of this disclosure.

[0028] FIG. 2 depicts a front view of the posture apparatus of FIG. 1, according to one or more embodiments of this disclosure.

[0029] FIG. 3 depicts a rear perspective view of the posture apparatus of FIGS. 1 and 2, according to one or more embodiments of this disclosure.

[0030] FIG. 4 depicts a top view of a posture apparatus, according to one or more embodiments of this disclosure.

[0031] FIG. 5 depicts a side view of a posture apparatus, according to one or more embodiments of this disclosure.

[0032] FIG. 6 depicts a rear perspective view of a removable curved pad of a posture apparatus, according to one or more embodiments of this disclosure.

[0033] FIG. 7 depicts a perspective side view of a base pad assembly of a posture apparatus, according to one or more embodiments of this disclosure.

[0034] FIG. 8 depicts a rear perspective view of strap apparatus of a posture apparatus, according to one or more embodiments of this disclosure.

[0035] FIG. 9 depicts a front perspective view of a removable curved pad, according to one or more embodiments of this disclosure.

[0036] FIG. 10 depicts a front perspective view of an interior foam pad, according to one or more embodiments of this disclosure.

[0037] FIG. 11 depicts a top view of a top cover of the removable curved pad, according to one or more embodiments of this disclosure.

[0038] FIG. 12 depicts a front view of the top cover of the removable curved pad, according to one or more embodiments of this disclosure.

[0039] FIG. 13 depicts a side view of the top cover of the removable curved pad, according to one or more embodiments of this disclosure.

[0040] FIG. 14 depicts a top view of a bottom cover of the removable curved pad, according to one or more embodiments of this disclosure.

[0041] FIG. 15 depicts a front view of the bottom cover of the removable curved pad, according to one or more embodiments of this disclosure.

[0042] FIG. 16 depicts a perspective view of the bottom cover of the removable curved pad, according to one or more embodiments of this disclosure.

[0043] FIG. 17 depicts a side view of the bottom cover of the removable curved pad, according to one or more embodiments of this disclosure.

[0044] FIG. 18 depicts a perspective exploded view of the removable curved pad, according to one or more embodiments of this disclosure.

[0045] FIG. 19 depicts a perspective exploded view of a base pad assembly, according to one or more embodiments of this disclosure.

[0046] FIG. 20 depicts a side view of the base pad assembly with the internal components visible, according to one or more embodiments of this disclosure.

[0047] FIG. 21 depicts a perspective view of the base pad assembly with a transparent cover and covering with the internal components visible, according to one or more embodiments of this disclosure.

[0048] FIG. 22 depicts a rear view of the base with a transparent cover and covering with the internal components visible, according to one or more embodiments of this disclosure.

[0049] FIG. 23 depicts a top view of the base with a transparent cover and covering with the internal components visible, according to one or more embodiments of this disclosure.

[0050] FIG. 24 depicts a perspective view of a base pad internal assembly, according to one or more embodiments of this disclosure.

[0051] FIG. 25 depicts a side view of a base pad internal assembly, according to one or more embodiments of this disclosure.

[0052] FIG. 26 depicts a perspective view of a back cover of a base pad, according to one or more embodiments of this disclosure.

[0053] FIG. 27 depicts a perspective view of a perimeter covering of a base pad, according to one or more embodiments of this disclosure.

[0054] FIG. 28 depicts a perspective view of side straps of a strap apparatus, according to one or more embodiments of this disclosure.

[0055] FIG. 29 depicts a perspective view of a top strap of a strap apparatus, according to one or more embodiments of this disclosure.

[0056] FIG. 30 depicts a perspective view of a buckle of a strap apparatus, according to one or more embodiments of this disclosure.

[0057] FIG. 31 depicts a perspective exploded view of a posture apparatus, according to one or more embodiments of this disclosure.

[0058] FIG. 32 depicts a perspective view of a posture apparatus positioned on a backrest, according to one or more embodiments of this disclosure.

[0059] FIG. 33 depicts a perspective view of a posture apparatus positioned on a backrest with the removable curved pad being moved and positioned, according to one or more embodiments of this disclosure.

[0060] Throughout the description, similar reference numbers may be used to identify similar elements.

DETAILED DESCRIPTION

[0061] It will be readily understood that the components of the embodiments as generally described herein and illustrated in the appended figures could be arranged and designed in a wide variety of different configurations. Thus, the following more detailed description of various embodiments, as represented in the figures, is not intended to limit the scope of the present disclosure, but is merely representative of various embodiments. While the various aspects of the embodiments are presented in drawings, the drawings are not necessarily drawn to scale unless specifically indicated.

[0062] The present invention may be embodied in other specific forms without departing from its spirit or essential characteristics. The described embodiments are to be considered in all respects only as illustrative and not restrictive. The scope of the invention is, therefore, indicated by the appended claims rather than by this detailed description. All changes which come within the meaning and range of equivalency of the claims are to be embraced within their scope.

[0063] Reference throughout this specification to features, advantages, or similar language does not imply that all of the features and advantages that may be realized with the present invention should be or are in any single embodiment of the invention. Rather, language referring to the features and advantages is understood to mean that a specific feature, advantage, or characteristic described in connection with an embodiment is included in at least one embodiment of the present invention. Thus, discussions of the features and advantages, and similar language, throughout this specification may, but do not necessarily, refer to the same embodiment.

[0064] Furthermore, the described features, advantages, and characteristics of the invention may be combined in any suitable manner in one or more embodiments. One skilled in the relevant art will recognize, in light of the description herein, that the invention can be practiced without one or more of the specific features or advantages of a particular embodiment. In other instances, additional features and advantages may be recognized in certain embodiments that may not be present in all embodiments of the invention.

[0065] Reference throughout this specification to “one embodiment,” “an embodiment,” or similar language means that a particular feature, structure, or characteristic described in connection with the indicated embodiment is included in at least one embodiment of the present invention. Thus, the phrases “in one embodiment,” “in an embodiment,” and similar language throughout this specification may, but do not necessarily, all refer to the same embodiment.

[0066] The expression “configured to” as used herein may be used interchangeably with “suitable for,” “having the capacity to,” “designed to,” “adapted to,” “made to,” or “capable of” according to a context. The term “configured” does not necessarily mean “specifically designed to” in a hardware level. Instead, the expression “apparatus config-

ured to . . . ” may mean that the apparatus is “capable of . . . ” long with other devices or parts in a certain context.

[0067] The terms “part”, “component”, “device”, or “item” may be used interchangeably.

[0068] While many embodiments are described herein, at least some of the described embodiments allow for an adjustable posture apparatus. Some embodiments described herein have multiple pads of different shapes and sizes that are configured to be adjustable in position on the back of a chair such that any size user may use the apparatus. Some embodiments include two pads. Some embodiments include a single base pad or base pad assembly to help posture. The base pad may be of various shapes and sizes but in the illustrated embodiments herein, the base pad includes a substantially flat engagement surface and is substantially rectangular in shape. Many embodiments include a removable pad that is curved. The removable pad is configured to be acutely adjustable relative to the base pad so that the removable pad is positioned in the best location for engaging the user (and typically along the user’s thoracic spine). Shown herein a strap apparatus that is associated with the base pad. The strap apparatus allows the posture apparatus to be placed on many different size backrests. In addition, the strap apparatus allows for the base pad to be secured to the backrest in the most ideal location for a user.

[0069] One principal benefit of embodiments described herein is that the posture apparatus can be placed in an ideal location for the user. Users torso height may vary. By associating the height of the foam pad with the top of the backrest (via the strap apparatus) a user may place the engagement surfaces of the pad(s) in the most beneficial location. Additionally, the use of multiple pads allow for a user to use the appropriately shaped pad that likely depends on the users current fitness or comfort level or body shape. A new user may need a more shallow or thinner pad that may put a user into a more aligned seated posture while a more experienced user may use a deeper or thicker pad. Keeping an aligned posture while seated may be tiring for some users due to the muscles responsible for correct posture being weak in that position. The adjustability of the posture apparatus allows for variability in use and application for a user.

[0070] Various Figures and Drawings are shown to give an idea to the scope of the embodiments of the invention. These figures are not meant to be limiting but illustrative to one skilled in the art.

[0071] Disclosed herein is a chair backrest posture apparatus. In some embodiments, the chair backrest posture apparatus includes a base pad assembly including a first compressible pad, and a second compressible pad that is removably coupled to the base pad assembly. In some embodiments, the second compressible pad is a different size than the base pad assembly. In some embodiments, the chair backrest posture apparatus includes a securing apparatus coupled to the base pad assembly. The securing apparatus is configured to secure the chair backrest posture apparatus to a backrest of a chair. In some embodiments, the securing apparatus utilizes straps to secure the chair backrest posture apparatus to a backrest of a chair.

[0072] In some embodiments, the second compressible pad is a curved pad with a first flat side that engages with the base pad assembly and a second curved side opposite the first flat side.

[0073] In some embodiments, the curved pad comprises a first flat side that engages with the base pad assembly and a second curved side opposite the first flat side.

[0074] In some embodiments, the base pad assembly and the second compressible pad are one unitary pad.

[0075] In some embodiments, the base pad assembly comprises a hook strip or loop strip on an engagement surface and the second compressible pad comprises a corresponding hook strip or loop strip on the first flat side, and wherein the hook strip and the loop strip engage to couple the base pad assembly and the second compressible pad together. In other embodiments, other means of coupling are utilized which are described herein.

[0076] In some embodiments, the second compressible pad is shaped substantially as a half of a cylinder with a major length and a minor width.

[0077] In some embodiments, the minor width of the second compressible pad is sized to a size fit between a user’s shoulder blades.

[0078] In some embodiments, the second compressible pad is configured to provide more depth to the chair backrest posture apparatus, and wherein the second compressible pad is narrower in width than the base pad assembly.

[0079] In some embodiments, the base pad assembly comprises an engagement surface that engages the second compressible pad and a second side opposite the engagement surface that engages the back of a chair.

[0080] In some embodiments, the second side of the base pad assembly comprises friction beads that are configured to engage the backrest and keep the base pad assembly in a single location during use.

[0081] In some embodiments, the base pad assembly comprises a plastic sheet sandwiched between two foam base pads.

[0082] In some embodiments, the base pad assembly and the second compressible pad have different densities. That is the base pad assembly has a first density and the second compressible pad has a second density different from the first density. This allows for the two components have a different firmness or hardness.

[0083] As such, the user can adjust the firmness by adding or removing the second compressible pad. A range of densities and hardnesses are contemplated herein where the pads can compress under pressure at different rates. A range of different densities allow for a support and comfort simultaneously. In some embodiments, the base pad assembly and the second compressible pad have a durometer range from 15 to 40 on the OO scale. In some embodiments, the base pad assembly has a lower durometer than the second compressible pad. In some embodiments, the base pad assembly has a higher durometer than the second compressible pad. In other embodiments, the base pad assembly and the second compressible pad have a durometer range from 5 to 75 on the OO scale. Variations in the density help target specific muscles and areas of the back with more firmness as needed.

[0084] Disclosed herein is a chair backrest posture apparatus. In some embodiments, the chair backrest posture apparatus includes a base pad assembly comprising a first compressible pad, wherein the base pad assembly comprises a major length and a minor width, wherein the major length is configured to run vertically on a backrest of a chair and the minor width is configured to run horizontally on the backrest of the chair. In some embodiments, the chair backrest posture apparatus includes securing apparatus coupled to the

base pad assembly, the securing apparatus configured to secure the chair backrest posture apparatus to the backrest of the chair and position the base pad assembly centrally on the backrest of the chair.

[0085] In some embodiments, the chair backrest posture apparatus further includes a second compressible pad that is removably coupled to the base pad assembly, wherein the second compressible pad is a different size than the base pad assembly.

[0086] In some embodiments, the second compressible pad is a curved pad with a first flat side that engages with the base pad assembly and a second curved side opposite the first flat side.

[0087] In some embodiments, the curved pad comprises a first flat side that engages with the base pad assembly and a second curved side opposite the first flat side.

[0088] In some embodiments, the second compressible pad is shaped substantially as a half of a cylinder with a major length and a minor width.

[0089] In some embodiments, the minor width of the second compressible pad is sized to a size fit between a user's shoulder blades.

[0090] In some embodiments, the second compressible pad is configured to provide more depth to the chair backrest posture apparatus, and wherein the second compressible pad is narrower in width than the base pad assembly.

[0091] In some embodiments, the base pad assembly comprises an engagement surface that engages the second compressible pad and a second side opposite the engagement surface that engages the back of a chair.

[0092] In some embodiments, the base pad assembly comprises a plastic sheet sandwiched between two foam base pads. In some embodiments, the base pad assembly comprises a covering.

[0093] FIG. 1 depicts a front perspective view of a posture apparatus 100, according to one or more embodiments of this disclosure. Although the posture apparatus 100 is shown and described with certain components and functionality, other embodiments of the posture apparatus 100 may include fewer or more components to implement less or more functionality. This is applicable to each Figure below as well. Each individual component may include fewer or more subcomponents or features to implement less or more functionality. The descriptions are merely illustrative.

[0094] As can be seen, the posture apparatus 100 includes a strap apparatus which includes two side straps 172 and a vertical strap 174. The two side straps 172 are configured to fit around the sides of a backrest (this is depicted more clearly in FIGS. 32 and 33). The vertical strap 174 is configured to fit over the top of a backrest (this is depicted more clearly in FIGS. 32 and 33). The vertical strap 174 may fit over a headrest or between the headrest and the backrest where a space exists between the headrest and the backrest. Each strap may be individually adjustable allowing for the posture apparatus 100 to be placed on many different size chairs with a vertical backrest that is high enough to reach a user's shoulders. The straps are flexible also allowing for placement on differently shaped backrests. Used throughout, the strap apparatus may also be referred to as a securing apparatus. In other embodiments, straps are not utilized to secure the base pad assembly to a backrest of a chair. In some embodiments, a covering that completely envelops the top of a backrest is used as a securing apparatus. In other embodiments, curved clips may be used as the securing

apparatus. The curved clips can curve around the top or sides of the backrest of a chair. Other forms of securing mechanisms are contemplated herein.

[0095] The illustrated posture apparatus 100 also includes a removable curved pad 110 and a base pad assembly 140. The illustrated base pad assembly 140 is coupled to the strap apparatus. In many embodiments, the base pad assembly 140 is securely coupled to the side straps 172 and the vertical strap 174. The illustrated removable curved pad 110 is removably coupled to the base pad assembly 140 via a hook and loop attachment (not visible). This allows for the easy adjustment of the removable curved pad 110 relative to the base pad assembly 140.

[0096] The base pad assembly 140 is a compressible pad that in the illustrated embodiment is shaped substantially as a rectangular prism with a major length and a minor width. The base pad is configured with an engagement surface. The engagement surface is where the removable curved pad 110 may couple. The engagement surface may also function as the surface that a user's back engages when the removable curved pad 110 is removed. The minor width of the base pad may be sized to a size corresponding to an average distance between a user's shoulder blades. In addition, the major length of the base pad may be sized to a size corresponding to an average height and length of a user's thoracic spine. As a user leans back into the backrest and engages the posture apparatus 100 (as described with the removable curved pad 110 removed) a user's thoracic spine will engage with the base pad assembly 140 and provide an input to the user to move their shoulders and head back to a centerline position with the body. In some embodiments, the base pad assembly 140 has a narrow depth to allow for a more subtle cue for the body.

[0097] Although the base pad assembly 140 is shown with a particular shape and size (in this case a rectangular prism), the base pad may come in different shapes and sizes. Although the base pad assembly 140 is shown with a substantially flat engagement surface, other embodiments of the base pad may have other shapes including curved, rippled, etc.

[0098] The base pad assembly 140 may include various components that are described more fully in other embodiments and figures described herein. In many embodiments, the engagement surface of the base pad includes one half of a coupling system that allows for the removable curved pad 110 to be coupled to the base pad assembly 140. These components may be coupled together via a hook and loop, buckles, snaps, zippers, magnets, or other like coupling systems.

[0099] The removable curved pad 110 is a foam pad with a substantially flat rear surface that is configured to engage with the engagement surface of the base pad assembly 140. There may be a hook strip coupled to the removable curved pad 110 that engages with a loop strip that is coupled to the base pad assembly 140 or with a material that functions like a loop material (e.g., a microfiber material). With such a system, the removable curved pad 110 may be easily removed and replaced at various locations on the base pad assembly 140 (at a position most beneficial for the particular user). Used throughout, the base pad assembly may be referred to as a first compressible pad and the removable curved pad may be referred to as a second compressible pad.

[0100] The removable curved pad 110 provides even more depth such that it engages with the thoracic spine of a user

and may cause a user to bring their shoulders and head to a centerline position of the body. In the illustrated embodiment, the removable curved pad 110 has a curved engagement surface. Other embodiments may include a more substantially flat engagement surface more similar to the illustrated base pad assembly 140.

[0101] The removable curved pad 110 is a compressible pad (such as a foam pad) that in the illustrated embodiment is shaped substantially as half of a cylinder with a major length and a minor width. The removable curved pad 110 is configured with an engagement surface. The engagement surface is where the removable curved pad 110 engages with a user's back. The minor width of the removable curved pad 110 may be sized to a size corresponding to an average distance between a user's shoulder blades. In addition, the major length of the removable curved pad 110 may be sized to a size corresponding to an average height of a user's thoracic spine. As a user leans back into the backrest and engages the posture apparatus 100 a user's thoracic spine will engage with the removable curved pad 110 and may cause a user to bring their shoulders and head to a centerline position of the body. In some embodiments, the removable curved pad 110 has a more pronounced depth than just the base pad such that a user can achieve further adjustments to their posture. The ability to remove and place the removable curved pad 110 allows for flexibility of use of the posture apparatus 100 for various fitness and comfort levels.

[0102] FIG. 2 depicts a front view of the posture apparatus of FIG. 1, according to one or more embodiments of this disclosure. Although the posture apparatus 100 is shown and described with certain components and functionality, other embodiments of the posture apparatus 100 may include fewer or more components to implement less or more functionality.

[0103] The illustrated embodiment shows the posture apparatus 100 as would be seen by a user if looking at the front of a backrest. The illustrated embodiment also shows friction beads 160. The friction beads 160 are (for example) silicone beading that is placed on the rear of the base pad assembly 140 and are only shown as if the base pad assembly 140 and the removable curved pad 110 were transparent. While called beads, these can be strips of material or otherwise shaped. The friction beads 160 are shown as squiggly lines in the illustrated embodiment. The friction beads are configured to engage the backrest and keep the base pad assembly 140 in a single location during use. That is, the friction between the friction beads 160 and the backrest makes it so as a person leans back into the posture apparatus 100, the base pad assembly 140 doesn't move around relative to the backrest. The base pad assembly 140 will stay in the same position even though the user's back is compressing the posture apparatus.

[0104] FIG. 3 depicts a rear perspective view of the posture apparatus of FIGS. 1 and 2, according to one or more embodiments of this disclosure. Although the posture apparatus 100 is shown and described with certain components and functionality, other embodiments of the posture apparatus 100 may include fewer or more components to implement less or more functionality.

[0105] In the illustrated embodiment, the strap apparatus is more easily seen. As can be envisioned, the buckle would be located on the back of the backrest with the side straps 172 extend around the sides of the backrest with the base pad assembly 140 on the front of the backrest. The vertical strap

174 would extend around the top of the backrest. Also more easily seen are the friction beads 160 on the back of the base pad assembly 140 that will engage with the backrest and keep the base pad in a substantially firm position of the backrest. Obviously, the base pad can be adjusted lower or higher based on the vertical strap (as it is lengthened or shortened). The user can have the base pad assembly 140 positioned in the most beneficial position while seated. In this way, the base pad assembly 140 can be positioned to engage the thoracic spine of the user.

[0106] FIG. 4 depicts a top view of a posture apparatus, according to one or more embodiments of this disclosure. The illustrated view more fully shows the relative shape and size of the various components already discussed above.

[0107] FIG. 5 depicts a side view of a posture apparatus, according to one or more embodiments of this disclosure. The illustrated view more fully shows the relative shape and size of the various components already discussed above.

[0108] FIG. 6 depicts a rear perspective view of a removable curved pad 110 of a posture apparatus 100, according to one or more embodiments of this disclosure. Although the removable curved pad 110 is shown and described with certain components and functionality, other embodiments of the removable curved pad 110 may include fewer or more components to implement less or more functionality.

[0109] The removable curved pad 110 is now shown such that a hook strip 118 is visible on the back side of the removable curved pad 110. This hook strip 118 may be sewn or otherwise coupled to the removable curved pad 110. The removable curved pad 110 may simply be a foam pad with a cover such as a fleece cover surrounding the foam pad. The covering may simply function as a comfortable surface that ergonomically engages a user and the other components of the posture apparatus.

[0110] In some embodiments, the second compressible pad is a curved pad with a first flat side that engages with the base pad assembly and a second curved side opposite the first flat side. In some embodiments, the curved pad comprises a first flat side that engages with the base pad assembly and a second curved side opposite the first flat side. In some embodiments, the base pad assembly and the second compressible pad are one unitary pad.

[0111] In some embodiments, the base pad assembly comprises a loop or hook strip on an engagement surface and the second compressible pad comprises a loop or hook strip on the first flat side, and wherein the hook strip and the loop strip engage to couple the base pad assembly and the second compressible pad together. Other forms of coupling are envisioned. In some embodiments, a hook strip on the second compressible pad engages a microfiber covering on the base pad assembly. The hook strip may be on either component. The material covering may function like a loop strip. For materials that can't function like a loop strip, a loop strip can be positioned to engage the hook strip.

[0112] In some embodiments, the second compressible pad is shaped substantially as a half of a cylinder with a major length and a minor width. In some embodiments, the minor width of the second compressible pad is sized to fit between a user's shoulder blades. In some embodiments, the second compressible pad is configured to provide more depth to the chair backrest posture apparatus, and wherein the second compressible pad is narrower in width than the base pad assembly. In some embodiments, the base pad assembly comprises an engagement surface that engages the

second compressible pad and a second side opposite the engagement surface that engages the back of a chair. In some embodiments, the second side of the base pad assembly comprises friction beads that are configured to engage the backrest and keep the base pad assembly in a single location during use. In some embodiments, the base pad assembly comprises a plastic sheet sandwiched between two foam base pads. In some embodiments, the two foam base pads of the base pad assembly can have different densities. This allows for the two components have a different firmness or hardness. A range of densities and hardnesses are contemplated herein where the pads can compress under pressure at different rates.

[0113] FIG. 7 depicts a perspective side view of a base pad of a posture apparatus, according to one or more embodiments of this disclosure. Although the posture apparatus 100 is shown and described with certain components and functionality, other embodiments of the posture apparatus 100 may include fewer or more components to implement less or more functionality.

[0114] The base pad assembly 140 also includes a covering (transparent in the illustrated embodiment) that has a perimeter covering 142, a front cover 144, a back cover 146. Within the overall covering there is a base pad internal assembly that includes a plastic sheet 154 that is sandwiched between two foam base pads 152. The plastic sheet may be a more rigid construction to provide a rigid skeletal structure to allow for the two foam base pads 152 to not be overly misshapen when the user leans back into the posture apparatus.

[0115] FIG. 8 depicts a rear perspective view of strap apparatus 170 of a posture apparatus, according to one or more embodiments of this disclosure. Although the strap apparatus 170 is shown and described with certain components and functionality, other embodiments of the strap apparatus 170 may include fewer or more components to implement less or more functionality.

[0116] As can be seen, the strap apparatus 170 includes two side straps 172 and a vertical strap 174. The straps may be sewn to the base pad or otherwise coupled to the base pad. The straps may also be connected together via a buckle 180 buckle connectors 182 that would be located on the back of a backrest. The straps are adjustable in length in many embodiments.

[0117] FIG. 9 depicts a front perspective view of a removable curved pad, according to one or more embodiments of this disclosure. The removable curved pad 110 may include an interior foam pad 112 with a covering. FIG. 10 depicts a front perspective view of an interior foam pad 112, according to one or more embodiments of this disclosure.

[0118] FIG. 11 depicts a top view of a top cover of the removable curved pad, according to one or more embodiments of this disclosure. FIG. 12 depicts a front view of the top cover of the removable curved pad, according to one or more embodiments of this disclosure. FIG. 13 depicts a side view of the top cover of the removable curved pad, according to one or more embodiments of this disclosure.

[0119] FIG. 14 depicts a top view of a bottom cover of the removable curved pad, according to one or more embodiments of this disclosure. FIG. 15 depicts a front view of the bottom cover of the removable curved pad, according to one or more embodiments of this disclosure. FIG. 16 depicts a perspective view of the bottom cover of the removable curved pad, according to one or more embodiments of this

disclosure. FIG. 17 depicts a side view of the bottom cover of the removable curved pad, according to one or more embodiments of this disclosure.

[0120] In the illustrated embodiments of FIGS. 11-17, the top cover and the bottom cover may be sewn together to surround and envelop the interior foam pad 112.

[0121] FIG. 18 depicts a perspective exploded view of the removable curved pad 110, according to one or more embodiments of this disclosure. Although the removable curved pad 110 is shown and described with certain components and functionality, other embodiments of the removable curved pad 110 may include fewer or more components to implement less or more functionality. The components of the illustrated embodiment are substantially the same as are described above the previous Figures and are not repeated only for the sake of brevity.

[0122] FIG. 19 depicts a perspective exploded view of a base pad assembly 140, according to one or more embodiments of this disclosure. Although the base pad assembly 140 is shown and described with certain components and functionality, other embodiments of the base pad assembly 140 may include fewer or more components to implement less or more functionality. The components of the illustrated embodiment are substantially the same as are described above the previous Figures and are not repeated only for the sake of brevity.

[0123] FIGS. 20 through 23 depict the base pad assembly 140 of a posture apparatus in various views. FIG. 20 depicts a side view of the base pad with a transparent cover and covering with the internal components visible, according to one or more embodiments of this disclosure. FIG. 21 depicts a perspective view of the base with a transparent cover and covering with the internal components visible, according to one or more embodiments of this disclosure. FIG. 22 depicts a rear view of the base with a transparent cover and covering with the internal components visible, according to one or more embodiments of this disclosure. FIG. 23 depicts a top view of the base with a transparent cover and covering with the internal components visible, according to one or more embodiments of this disclosure.

[0124] FIGS. 24 and 25 depict a base pad internal assembly 150. FIG. 24 depicts a perspective view of a base pad internal assembly, according to one or more embodiments of this disclosure. FIG. 25 depicts a side view of a base pad internal assembly, according to one or more embodiments of this disclosure.

[0125] FIG. 26 depicts a perspective view of a back cover of a base pad, according to one or more embodiments of this disclosure. FIG. 27 depicts a perspective view of a perimeter covering of a base pad, according to one or more embodiments of this disclosure.

[0126] FIGS. 28 through 30 depict various components of the strap apparatus. FIG. 28 depicts a perspective view of side straps of a strap apparatus, according to one or more embodiments of this disclosure. FIG. 29 depicts a perspective view of a top or vertical strap of a strap apparatus, according to one or more embodiments of this disclosure. FIG. 30 depicts a perspective view of a buckle of a strap apparatus, according to one or more embodiments of this disclosure. Although the various components of the strap apparatus are similar to those previously described above, there may be other types and manners to couple the base pad and the removable curved pad to a backrest.

[0127] FIG. 31 depicts a perspective exploded view of a posture apparatus, according to one or more embodiments of this disclosure. The various components are similar to those described above and the description of the components is not repeated only for the sake of brevity.

[0128] FIG. 32 depicts a perspective view of a posture apparatus 100 positioned on a backrest 300, according to one or more embodiments of this disclosure. As can be seen, the posture apparatus includes side straps 172 that extend around the sides of the backrest 300.

[0129] FIG. 33 depicts a perspective view of a posture apparatus 100 positioned on a backrest 300 with the removable curved pad 110 being moved and positioned as needed, according to one or more embodiments of this disclosure. As can be seen, the removable curved pad 110 is removable from the base pad assembly 140 and can be repositioned at a different location on the base pad assembly 140 as needed and to better align the removable curved pad 110 with the thoracic spine of a user.

[0130] Embodiments described herein present various improvements and benefits over conventional systems currently known and used. The various components provide these benefits to better help a user maintain and practice good posture while seated in a chair. Variations of these components and features is contemplated herein and such variations that accomplish these benefits are contemplated to be within the scope of this disclosure.

[0131] Although specific embodiments of the invention have been described and illustrated, the invention is not to be limited to the specific forms or arrangements of parts so described and illustrated. The scope of the invention is to be defined by the claims appended hereto and their equivalents.

[0132] In the above description, certain terms may be used such as “up,” “down,” “upper,” “lower,” “horizontal,” “vertical,” “left,” “right,” and the like. These terms are used, where applicable, to provide some clarity of description when dealing with relative relationships. But, these terms are not intended to imply absolute relationships, positions, and/or orientations. For example, with respect to an object, an “upper” surface can become a “lower” surface simply by turning the object over. Nevertheless, it is still the same object. Further, the terms “including,” “comprising,” “having,” and variations thereof mean “including but not limited to” unless expressly specified otherwise. An enumerated listing of items does not imply that any or all of the items are mutually exclusive and/or mutually inclusive, unless expressly specified otherwise. The terms “a,” “an,” and “the” also refer to “one or more” unless expressly specified otherwise.

[0133] As used herein, the phrase “at least one of”, when used with a list of items, means different combinations of one or more of the listed items may be used and only one of the items in the list may be needed. The item may be a particular object, thing, or category. In other words, “at least one of” means any combination of items or number of items may be used from the list, but not all of the items in the list may be required. For example, “at least one of item A, item B, and item C” may mean item A; item A and item B; item B; item A, item B, and item C; or item B and item C. In some cases, “at least one of item A, item B, and item C” may mean, for example, without limitation, two of item A, one of item B, and ten of item C; four of item B and seven of item C; or some other suitable combination.

[0134] As used herein, a system, apparatus, structure, article, element, component, or hardware “configured to” perform a specified function is indeed capable of performing the specified function without any alteration, rather than merely having potential to perform the specified function after further modification. In other words, the system, apparatus, structure, article, element, component, or hardware “configured to” perform a specified function is specifically selected, created, implemented, utilized, programmed, and/or designed for the purpose of performing the specified function. As used herein, “configured to” denotes existing characteristics of a system, apparatus, structure, article, element, component, or hardware which enable the system, apparatus, structure, article, element, component, or hardware to perform the specified function without further modification. For purposes of this disclosure, a system, apparatus, structure, article, element, component, or hardware described as being “configured to” perform a particular function may additionally or alternatively be described as being “adapted to” and/or as being “operative to” perform that function.

[0135] Although the operations of the method(s) or processes herein are shown and described in a particular order, the order of the operations of each method may be altered so that certain operations may be performed in an inverse order or so that certain operations may be performed, at least in part, concurrently with other operations. In another embodiment, instructions or sub-operations of distinct operations may be implemented in an intermittent and/or alternating manner.

What is claimed is:

1. A chair backrest posture apparatus, the chair backrest posture apparatus comprising:
 - a base pad assembly comprising a first compressible pad;
 - a second compressible pad that is removably coupled to the base pad assembly, wherein the second compressible pad is a different size than the base pad assembly;
 - a securing apparatus coupled to the base pad assembly, the securing apparatus configured to secure the chair backrest posture apparatus to a backrest of a chair.
2. The chair backrest posture apparatus of claim 1, wherein the second compressible pad is a curved pad with a first flat side that engages with the base pad assembly and a second curved side opposite the first flat side.
3. The chair backrest posture apparatus of claim 2, wherein the curved pad comprises a first flat side that engages with the base pad assembly and a second curved side opposite the first flat side.
4. The chair backrest posture apparatus of claim 3, wherein the base pad assembly and the second compressible pad are one unitary pad.
5. The chair backrest posture apparatus of claim 4, wherein the second compressible pad comprises a hook strip on the first flat side that is configured to couple to an engagement surface of the base pad assembly.
6. The chair backrest posture apparatus of claim 1, wherein the second compressible pad is shaped substantially as a half of a cylinder with a major length and a minor width.
7. The chair backrest posture apparatus of claim 6, the minor width of the second compressible pad is sized to a size fit between a user's shoulder blades.
8. The chair backrest posture apparatus of claim 7, wherein the second compressible pad is configured to pro-

vide more depth to the chair backrest posture apparatus, and wherein the second compressible pad is narrower in width than the base pad assembly.

9. The chair backrest posture apparatus of claim 1, wherein the base pad assembly comprises an engagement surface that engages the second compressible pad and a second side opposite the engagement surface that engages the back of a chair.

10. The chair backrest posture apparatus of claim 9, wherein the second side of the base pad assembly comprises friction beads that are configured to engage the backrest and keep the base pad assembly in a single location during use.

11. The chair backrest posture apparatus of claim 1, wherein the base pad assembly comprises a plastic sheet sandwiched between two foam base pads.

12. A chair backrest posture apparatus, the chair backrest posture apparatus comprising:

a base pad assembly comprising a first compressible pad, wherein the base pad assembly comprises a major length and a minor width, wherein the major length is configured to run vertically on a backrest of a chair and the minor width is configured to run horizontally on the backrest of the chair;

a securing apparatus coupled to the base pad assembly, the securing apparatus configured to secure the chair backrest posture apparatus to the backrest of the chair and position the base pad assembly centrally on the backrest of the chair.

13. The chair backrest posture apparatus of claim 12, further comprising a second compressible pad that is remov-

ably coupled to the base pad assembly, wherein the second compressible pad is a different size than the base pad assembly.

14. The chair backrest posture apparatus of claim 13, wherein the second compressible pad is a curved pad with a first flat side that engages with the base pad assembly and a second curved side opposite the first flat side.

15. The chair backrest posture apparatus of claim 14, wherein the curved pad comprises a first flat side that engages with the base pad assembly and a second curved side opposite the first flat side.

16. The chair backrest posture apparatus of claim 15, wherein the second compressible pad is shaped substantially as a half of a cylinder with a major length and a minor width.

17. The chair backrest posture apparatus of claim 16, the minor width of the second compressible pad is sized to fit between a user's shoulder blades.

18. The chair backrest posture apparatus of claim 17, wherein the second compressible pad is configured to provide more depth to the chair backrest posture apparatus, and wherein the second compressible pad is narrower in width than the base pad assembly.

19. The chair backrest posture apparatus of claim 18, wherein the base pad assembly comprises an engagement surface that engages the second compressible pad and a second side opposite the engagement surface that engages the back of a chair.

20. The chair backrest posture apparatus of claim 19, wherein the base pad assembly and the second compressible pad have different densities.

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