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Pillow elevating assembly

Abstract

A pillow elevating assembly for improving sleep posture includes a base that is positionable on top of a mattress of a bed. A panel is hingedly coupled to the base and the panel is positionable at a variety of angles with respect to the base such that the panel defines an angled support surface for a pillow. A pair of mating members is each attached to the panel for retaining the pillow on the panel. A pair of lifting units is each integrated into the base and each of the lifting units is in mechanical communication with the panel. Each of the lifting units lifts the panel into a desired angle with the base when the lifting units are actuated. A control is attached to the panel for actuating the lifting unit to position the panel at a desired angle.

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Background/Summary

CROSS-REFERENCE TO RELATED APPLICATIONS

(1) Not Applicable

STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT

(2) Not Applicable

THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT

(3) Not Applicable

INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC OR AS A TEXT FILE VIA THE OFFICE ELECTRONIC FILING SYSTEM

(4) Not Applicable

STATEMENT REGARDING PRIOR DISCLOSURES BY THE INVENTOR OR JOINT INVENTOR

(5) Not Applicable

BACKGROUND OF THE INVENTION

(1) Field of the Invention

(6) The disclosure relates to elevating devices and more particularly pertains to a new elevating device for improving sleep posture. The device includes a base that is positionable on a mattress and a panel hingedly attached to the base. The device includes a lifting unit integrate into the base for lifting or lowering the panel into a desired angle with respect to the base. In this way the panel

can support a pillow at the desired angle to hold a user's head at an upward angle.
(2) Description of Related Art Including Information Disclosed Under 37 CFR 1.97 and 1.98
(7) The prior art relates to elevating devices including a device for adjusting the angle of a pivotable surface includes a base, a panel hingedly disposed on the base and a plurality of pneumatic actuators for moving the panel. The prior art discloses a portable adjustable backrest that includes a base, a panel hingedly coupled to the base, a lock attached to the base and an arm attached to the panel which has a series of engagement points that can be engaged by the lock for retaining the panel at one of a plurality of predetermined angles. The prior art discloses a backrest support apparatus that includes an inflatable bag structure that moves into an angled orientation when inflated. The prior art discloses a collapsible wedge that is positionable on a mattress for supporting a user in an inclined orientation while sleeping. The prior art discloses an upper body lift that includes a base, a panel hingedly coupled to the base and an actuator coupled to the base and slidably attached to the panel for lifting and lowering the panel.
BRIEF SUMMARY OF THE INVENTION
(8) An embodiment of the disclosure meets the needs presented above by generally comprising a base that is positionable on top of a mattress of a bed. A panel is hingedly coupled to the base and the panel is positionable at a variety of angles with respect to the base such that the panel defines an angled support surface for a pillow. A pair of mating members is each attached to the panel for retaining the pillow on the panel. A pair of lifting units is each integrated into the base and each of the lifting units is in mechanical communication with the panel. Each of the lifting units lifts the panel into a desired angle with the base when the lifting units are actuated. A control is attached to the panel for actuating the lifting unit to position the panel at a desired angle.
(9) There has thus been outlined, rather broadly, the more important features of the disclosure in order that the detailed description thereof that follows may be better understood, and in order that the present contribution to the art may be better appreciated. There are additional features of the disclosure that will be described hereinafter and which will form the subject matter of the claims appended hereto.
(10) The objects of the disclosure, along with the various features of novelty which characterize the disclosure, are pointed out with particularity in the claims annexed to and forming a part of this disclosure.

Description

BRIEF DESCRIPTION OF SEVERAL VIEWS OF THE DRAWING(S)
(1) The disclosure will be better understood and objects other than those set forth above will become apparent when consideration is given to the following detailed description thereof. Such description makes reference to the annexed drawings wherein:
(2) FIG. **1** is an exploded perspective view of a pillow elevating assembly according to an embodiment of the disclosure.
(3) FIG. **2** is a perspective in-use view of an embodiment of the disclosure.
(4) FIG. **3** is a right side view of an embodiment of the disclosure showing a panel in a lifted orientation.
(5) FIG. **4** is a right side view of an embodiment of the disclosure showing a panel in a lowered orientation.
(6) FIG. **5** is a front view of an embodiment of the disclosure showing a panel in a lowered orientation.
(7) FIG. **6** is a front view of an embodiment of the disclosure showing a panel in a lifted orientation.
(8) FIG. **7** is a back view of an embodiment of the disclosure showing a panel in a lifted

orientation.

DETAILED DESCRIPTION OF THE INVENTION

(9) With reference now to the drawings, and in particular to FIGS. **1** through **7** thereof, a new elevating device embodying the principles and concepts of an embodiment of the disclosure and generally designated by the reference numeral **10** will be described.

(10) As best illustrated in FIGS. **1** through **7**, the pillow elevating assembly **10** generally comprises a base **12** that is positionable on top of a mattress **14** of a bed **16**. The bed **16** may be a sleeping bed of any conventional design upon which a user **18** will sleep. The base **12** has a pair of holes **20** each extending through a top wall **22** of the base **12**. Each of the holes **20** is spaced from a front side **24** of the base **12** and the holes **20** are spaced apart from each other and are distributed along the front side **24**. The base **12** has a plurality of lobes **26** each extending upwardly from the top wall **22** and the lobes **26** are spaced apart from each other and are distributed along the front side **24** of the base **12**.

(11) A panel **28** is provided and the panel **28** is hingedly coupled to the base **12**. The panel **28** is positionable at a variety of angles with respect to the base **12** such that the panel **28** defines an angled support surface for a pillow **30**. In this way the pillow **30** can be retained at an angle to facilitate the user's head **32** to be at an angle when the user **18** sleeps. In this way the user **18** can enjoy relief from sinus pressure, for example, and other physical benefits from sleeping with their head angled upwardly.

(12) The panel **28** has a plurality of notches **34** each extending into a rear side **36** of the panel **28**. The notches **34** are spaced apart from each other and are distributed along the rear side **36**. Furthermore, each of the lobes **26** on the top wall **22** of the base **12** is positioned in a respective one of the notches **34**. A shaft **38** extends laterally through each of the lobes **26** and laterally through the panel **28** for hingedly attaching the panel **28** to each of the lobes **26**. As is most clearly shown in FIG. **7**, the panel **28** has a perimeter wall **41** extending downwardly from a bottom side **62** of the panel **28**.

(13) A pair of mating members **40** is each attached to the panel **28** thereby facilitating the pair of mating members **40** to engage the pillow **30** for retaining the pillow **30** on the panel **28**. Each of the mating members **40** is positioned on a top side **42** of the panel **28**. Additionally, each of the mating members **40** is oriented to extend substantially between a front side **44** of the panel **28** and the rear side **36** of the panel **28**. Each of the mating members **40** has an exposed surface **45** with respect to the top side **42** of the panel **28** which engages the pillow **30** when the pillow **30** is positioned on the panel **28**. Furthermore, each of the mating members **40** may comprise, but not be limited to, an adhesive strip, a hook and loop fastener or any other type of mating member that can repeatedly engage a fabric pillowcase without becoming degraded.

(14) A pair of lifting units **46** is provided and each of the lifting units **46** is integrated into the base **12**. Each of the lifting units **46** is in mechanical communication with the panel **28**. Furthermore, each of the lifting units **46** lifts the panel **28** into a desired angle with the base **12** when the lifting units **46** are actuated. Each of the pair of lifting units **46** comprises a motor **48** that is positioned in a respective one of the holes **20** in the top wall **22** of the base **12**. The motor **48** rotates in a first direction or a second direction when the motor **48** is turned on. Additionally, the motor **48** may comprise a two direction electric motor or the like.

(15) Each of the lifting units **46** includes a gear **50** that is attached to an output shaft **52** of the motor **48**. The gear **50** has a plurality of valleys **54** each extending into an outer surface **56** of the gear **50** to define a plurality of peaks **58** spaced apart from each other and distributed around the outer surface **56**. Each of the lifting units **46** includes an arm **60** that is pivotally coupled to and extends downwardly from the bottom side **62** of the panel **28**. The arm **60** is aligned with the motor **48** and the arm **60** is curved between a pivot **64** on the bottom side **62** of the panel **28** and a distal end **66** of the arm **60**.

(16) The arm **60** has a back side **68** extending between the pivot **64** on the bottom side **62** of the

panel **28** and the distal end **66** and the back side **68** is concavely arcuate between the pivot **64** and the distal end **66**. Furthermore, the arm **60** has a plurality of valleys **70** each extending into the back side **68** to define a plurality of peaks **72** spaced apart from each other and distributed along the back side **68**. The plurality of peaks **72** on the back side **68** engages the plurality of peaks **58** on the outer surface **56** of the gear **50**. In this way the arm **60** is urged upwardly when the motor **48** rotates in the first direction for lifting the panel **28**. Conversely, the arm **60** is urged downwardly when the motor **48** rotates in the second direction for lowering the panel **28**.

(17) A control **74** is attached to the panel **28** and the control **74** is in communication with the lifting units **46** for actuating the lifting units **46** to position the panel **28** at a desired angle. The control **74** is electrically coupled to the motor **48** associated with each of the lifting units **46**. Additionally, the control **74** includes a power button **76**, a lift button **78** for lifting the panel **28** and a lower button **80** for lowering the panel **28**. The power button **76** has an outer edge **82** that is continuously arcuate such that the power button **76** has a circular shape. Each of the lift button **78** and the lower button **80** has an outside edge **84** which has a plurality of intersecting sides **86** such that each of the lift button **78** and the lower button **80** has a triangular shape. The lift button **78** is oriented to point in a lifting direction on the control **74**. Additionally, the lower button **80** is oriented to point in a lowering direction on the control **74**. A power supply **88** is mounted to the top wall **22** of the base **12**, the power supply **88** is electrically coupled to the control **74** and the power supply **88** comprises at least one battery.

(18) In use, the base **12** is positioned on the mattress **14** and the power button **76** is depressed to turn on each of the lifting units **46**. The lift button **78** is depressed to lift the panel **28** or the lower button **80** is depressed to lower the panel **28**. In this way the panel **28** is positioned at a desired angle to support the pillow **30** at the desired angle. In this way the user's head **32** is held at an upward angle while the user **18** sleeps for reducing pressure in the user's head **32**. In this way the user **18** can enjoy relief from sinus pressure, for example, and other physical benefits from sleeping with their head at an upward angle.

(19) With respect to the above description then, it is to be realized that the optimum dimensional relationships for the parts of an embodiment enabled by the disclosure, to include variations in size, materials, shape, form, function and manner of operation, assembly and use, are deemed readily apparent and obvious to one skilled in the art, and all equivalent relationships to those illustrated in the drawings and described in the specification are intended to be encompassed by an embodiment of the disclosure.

(20) Therefore, the foregoing is considered as illustrative only of the principles of the disclosure. Further, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the disclosure to the exact construction and operation shown and described, and accordingly, all suitable modifications and equivalents may be resorted to, falling within the scope of the disclosure. In this patent document, the word “comprising” is used in its non-limiting sense to mean that items following the word are included, but items not specifically mentioned are not excluded. A reference to an element by the indefinite article “a” does not exclude the possibility that more than one of the element is present, unless the context clearly requires that there be only one of the elements.

Claims

1. A pillow elevating assembly for holding a pillow in an upward angle on a bed thereby enhancing comfort for a user while sleeping, said assembly comprising: a base being positionable on top of a mattress of a bed, said base having a pair of holes each extending through a top wall of said base, each of said holes being spaced from a front side of said base, said holes being spaced apart from each other and being distributed along said front side, said base having a plurality of lobes each extending upwardly from said top wall, said lobes being spaced apart from each other and being

distributed along said front side of said base; a panel being hingedly coupled to said base, said panel being positionable at a variety of angles with respect to said base such that said panel defines an angled support surface for a pillow, said panel having a plurality of notches each extending into a rear side of said panel, said notches being spaced apart from each other and being distributed along said rear side, each of said lobes on said top wall of said base being positioned in a respective one of said notches; a shaft extending laterally through each of said lobes and laterally through said panel for hingedly attaching said panel to each of said lobes; a pair of mating members each being attached to said panel thereby facilitating said pair of mating members to engage the pillow for retaining the pillow on said panel, each of said mating members being positioned on a top side of said panel, each of said mating members being oriented to extend substantially between a front side of said panel and said rear side of said panel, each of said mating members having an exposed surface with respect to said top side of said panel which engages the pillow when the pillow is positioned on said panel; a pair of lifting units, each of said lifting units being integrated into said base, each of said lifting units being in mechanical communication with said panel, each of said lifting units lifting said panel into a desired angle with said base when said lifting units are actuated, each of said pair of lifting units comprising: a motor being positioned in a respective one of said holes in said top wall of said base, said motor rotating in a first direction or a second direction when said motor is turned on; a gear being attached to an output shaft of said motor, said gear having an plurality of valleys each extending into an outer surface of said gear to define a plurality of peaks spaced apart from each other and distributed around said outer surface; and an arm being pivotally coupled to and extending downwardly from a bottom side of said panel, said arm being aligned with said motor, said arm being curved between a pivot on said bottom side of said panel and a distal end of said arm, said arm having a back side extending between said pivot on said bottom of said panel and said distal end, said back side being concavely arcuate between said pivot and said distal end, said arm having a plurality of valleys each extending into said back side to define a plurality of peaks spaced apart from each other and distributed along said back side, said plurality of peaks on said back side engaging said plurality of peaks on said outer surface of said gear, said arm being urged upwardly when said motor rotates in said first direction for lifting said panel, said arm being urged downwardly when said motor rotates in said second direction for lowering said panel; a control being attached to said panel, said control being in communication with said lifting unit for actuating said lifting unit to position said panel at a desired angle, said control being electrically coupled to said motor associated with each of said lifting units, said control including a power button, a lift button for lifting said panel and a lower button for lowering said panel, said power button having an outer edge being continuously arcuate such that said power button has a circular shape, each of said lift button and said lower button having an outside edge which as a plurality of intersecting sides such that each of said lift button and said lower button has a triangular shape, said lift button being oriented to point in a lifting direction on said control, said lower button being oriented to point in a lowering direction on said control; and a power supply being mounted to said top wall of said base, said power supply being electrically coupled to said control, said power supply comprising at least one battery.

2. A pillow elevating assembly for holding a pillow in an upward angle on a bed thereby enhancing comfort for a user while sleeping, said assembly comprising: a base being positionable on top of a mattress of a bed; a panel being hingedly coupled to said base, said panel being positionable at a variety of angles with respect to said base such that said panel defines an angled support surface for a pillow; a pair of mating members each being attached to said panel thereby facilitating said pair of mating members to engage the pillow for retaining the pillow on said panel; a pair of lifting units, each of said lifting units being integrated into said base, each of said lifting units being in mechanical communication with said panel, each of said lifting units lifting said panel into a desired angle with said base when said lifting units are actuated; a control being attached to said panel, said control being in communication with said lifting unit for actuating said lifting unit to

position said panel at a desired angle; wherein said base having a pair of holes each extending through a top wall of said base, each of said holes being spaced from a front side of said base, said holes being spaced apart from each other and being distributed along said front side, said base having a plurality of lobes each extending upwardly from said top wall, said lobes being spaced apart from each other and being distributed along said front side of said base; wherein said panel has a plurality of notches each extending into a rear side of said panel, said notches being spaced apart from each other and being distributed along said rear side, each of said lobes on said top wall of said base being positioned in a respective one of said notches; and wherein said assembly includes a shaft extending laterally through each of said lobes and laterally through said panel for hingedly attaching said panel to each of said lobes.

3. The assembly according to claim 2, wherein each of said mating members is positioned on a top side of said panel, each of said mating members being oriented to extend substantially between a front side of said panel and said rear side of said panel, each of said mating members having an exposed surface with respect to said top side of said panel which engages the pillow when the pillow is positioned on said panel.

4. The assembly according to claim 2, wherein each of said pair of lifting units comprises: a motor being positioned in a respective one of said holes in said top wall of said base, said motor rotating in a first direction or a second direction when said motor is turned on; a gear being attached to an output shaft of said motor, said gear having a plurality of valleys each extending into an outer surface of said gear to define a plurality of peaks spaced apart from each other and distributed around said outer surface.

5. The assembly according to claim 4, wherein: each of said pair of lifting units includes an arm being pivotally coupled to and extending downwardly from a bottom side of said panel, said arm being aligned with said motor, said arm being curved between a pivot on said bottom side of said panel and a distal end of said arm, said arm having a back side extending between said pivot on said bottom of said panel and said distal end, said back side being concavely arcuate between said pivot and said distal end; said arm has a plurality of valleys each extending into said back side to define a plurality of peaks spaced apart from each other and distributed along said back side, said plurality of peaks on said back side engaging said plurality of peaks on said outer surface of said gear; said arm is urged upwardly when said motor rotates in said first direction for lifting said panel; and said arm is urged downwardly when said motor rotates in said second direction for lowering said panel.

6. The assembly according to claim 4, wherein said control is electrically coupled to said motor associated with each of said lifting units, said control including a power button, a lift button for lifting said panel and a lower button for lowering said panel.

7. The assembly according to claim 6, wherein: said power button has an outer edge being continuously arcuate such that said power button has a circular shape; each of said lift button and said lower button has an outside edge which as a plurality of intersecting sides such that each of said lift button and said lower button has a triangular shape; said lift button is oriented to point in a lifting direction on said control; and said lower button is oriented to point in a lowering direction on said control; and said assembly includes a power supply being mounted to said top wall of said base, said power supply being electrically coupled to said control, said power supply comprising at least one battery.