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(54) **HORIZONTAL OSCILLATING DEVICE PROVIDING POSTURAL ADJUSTMENT**

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(57) **ABSTRACT**

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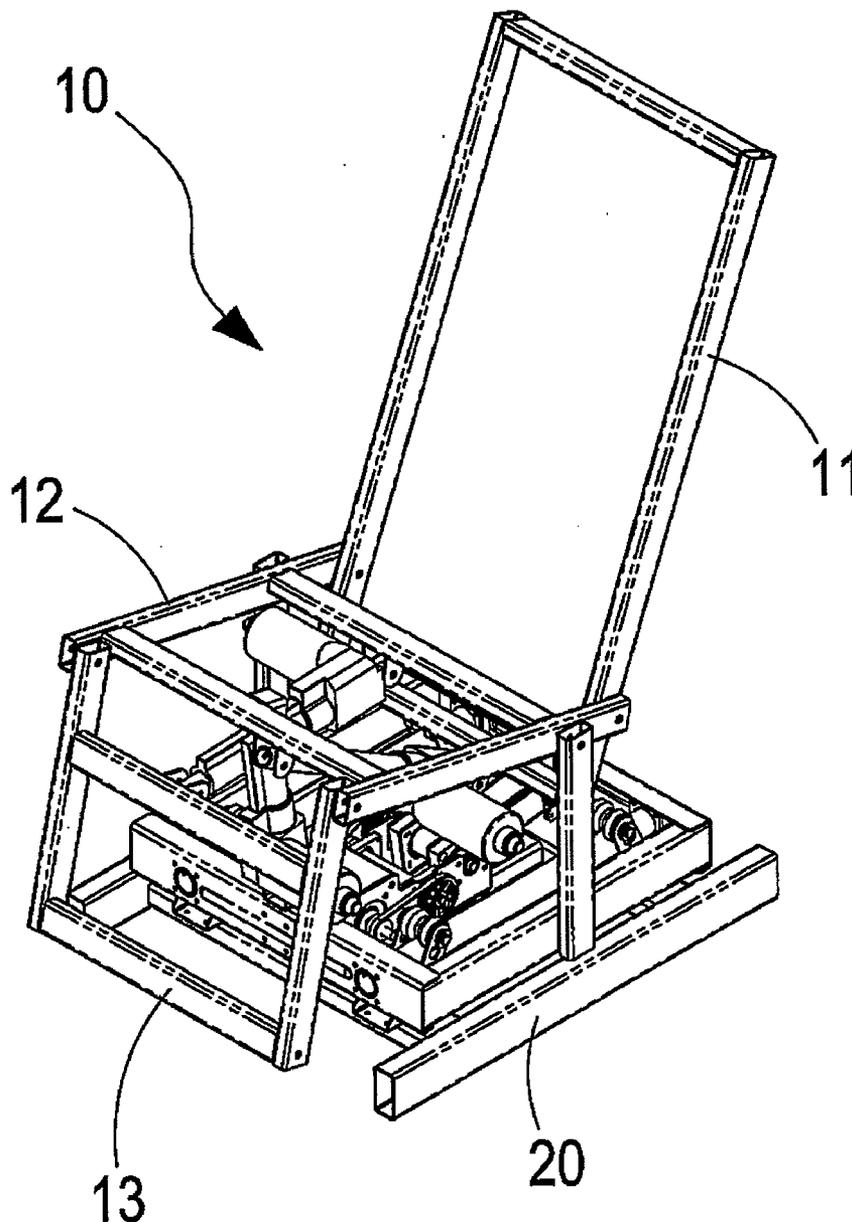
The present invention relates to a horizontal oscillating device providing postural adjustment, primarily structured so that a bottom portion of a chair is fitted with an oscillating device enabling horizontal oscillation of the chair, and the oscillating device is equipped with a recline actuating device, which can be a telescopic link, to enable changing the angle of elevation of the chair back of the chair. The chair operates on a lever principle through actuation of the recline actuating device, and further enables changing the angle of the chair back to cause the chair back to recline, while at the same time conforming to ergonomics.

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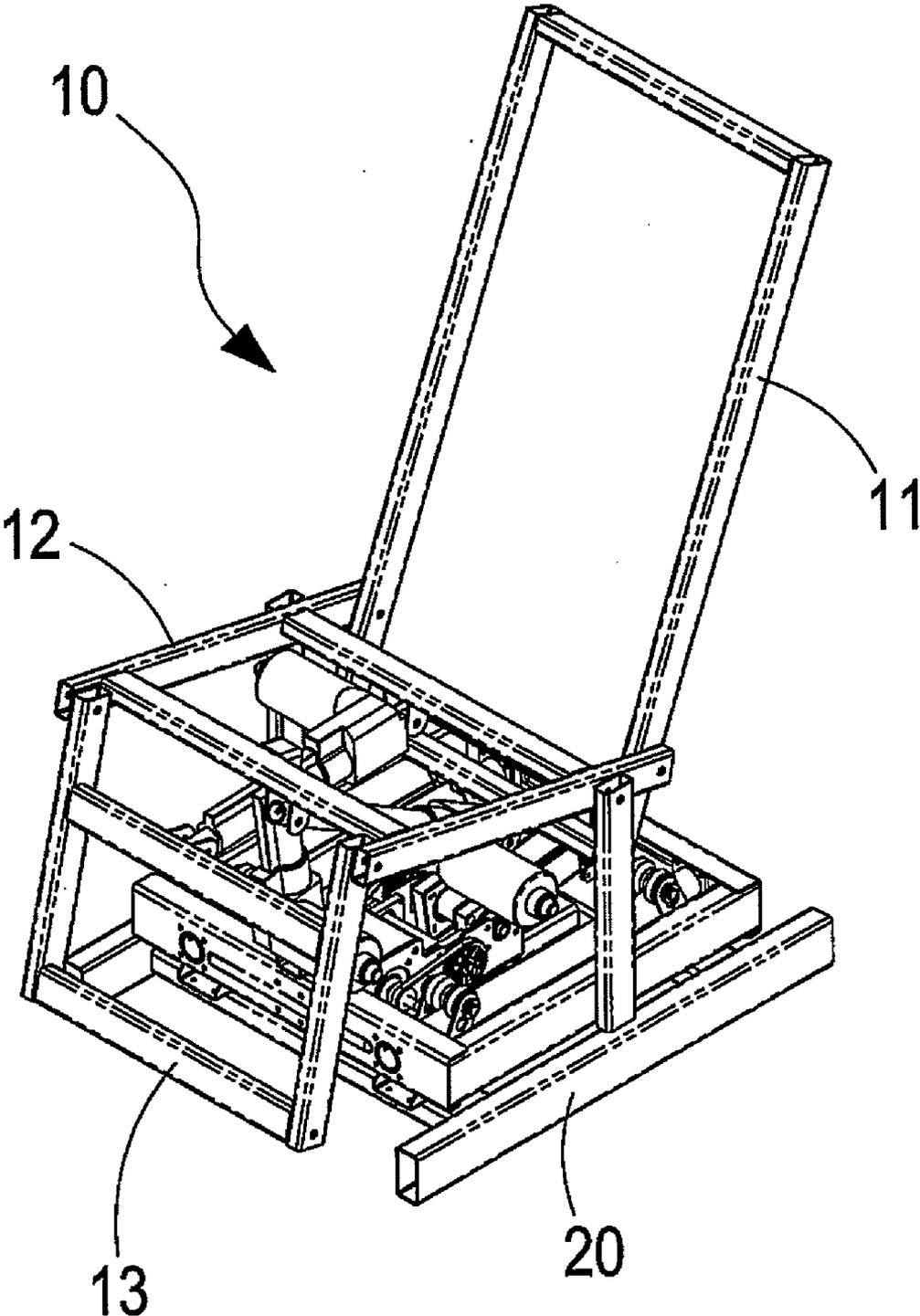


FIG.1

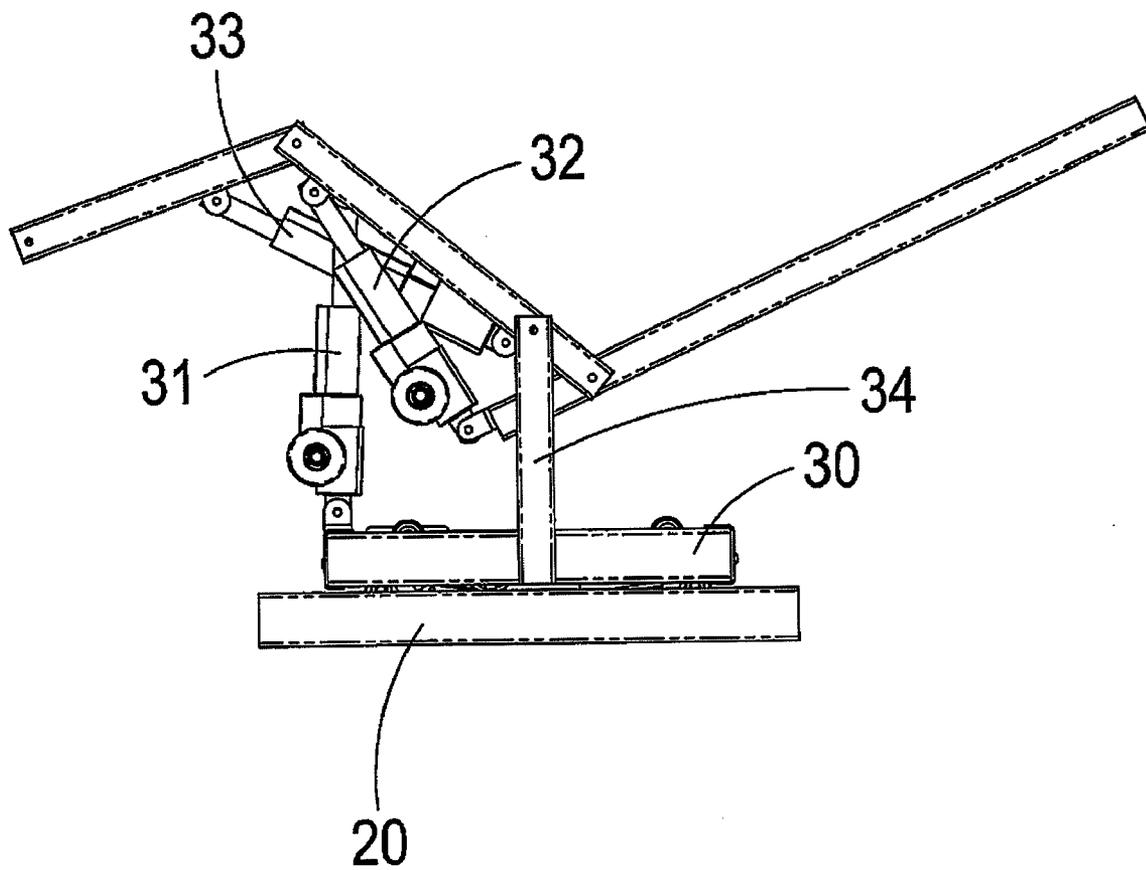


FIG.2

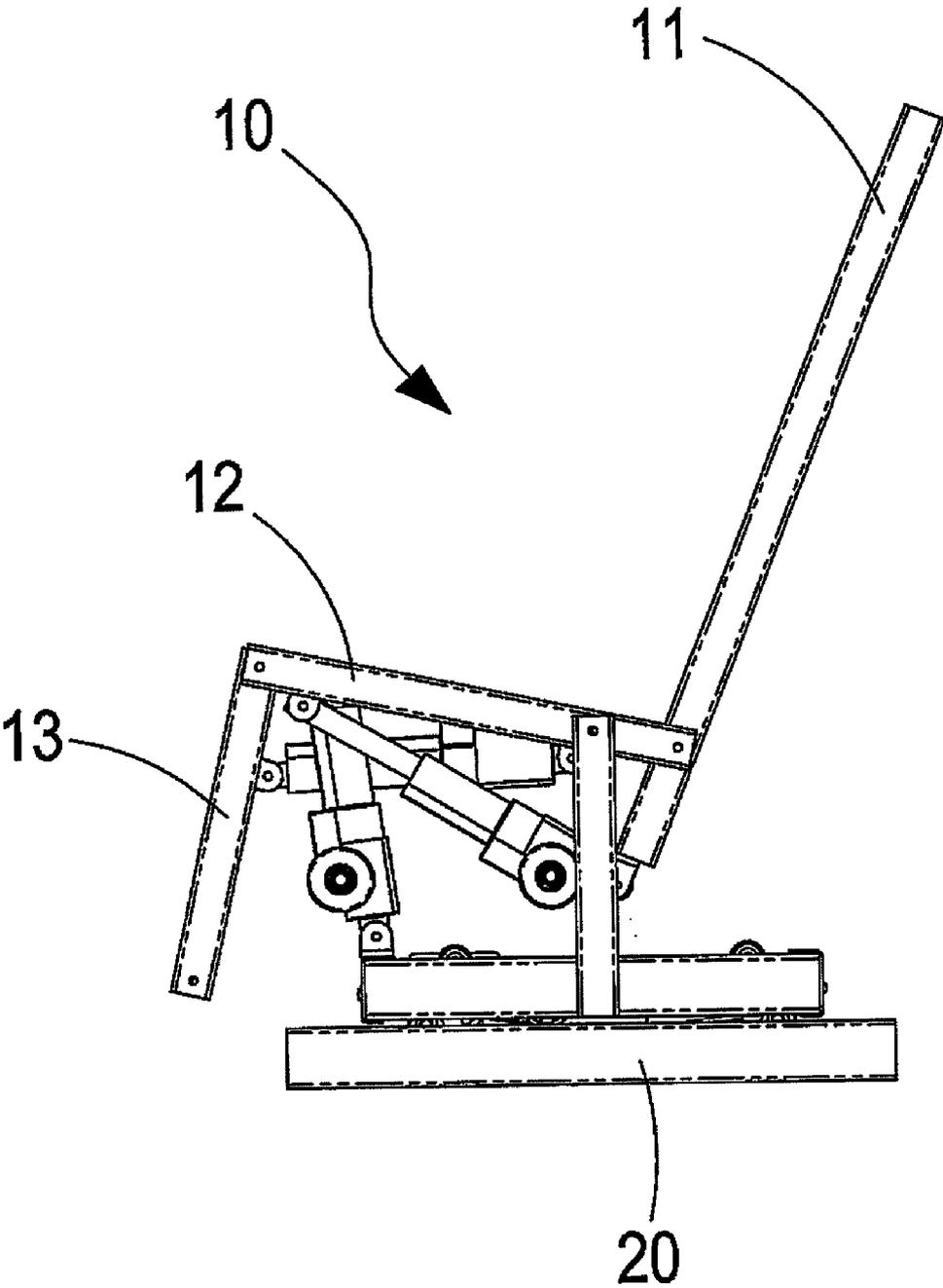


FIG.3

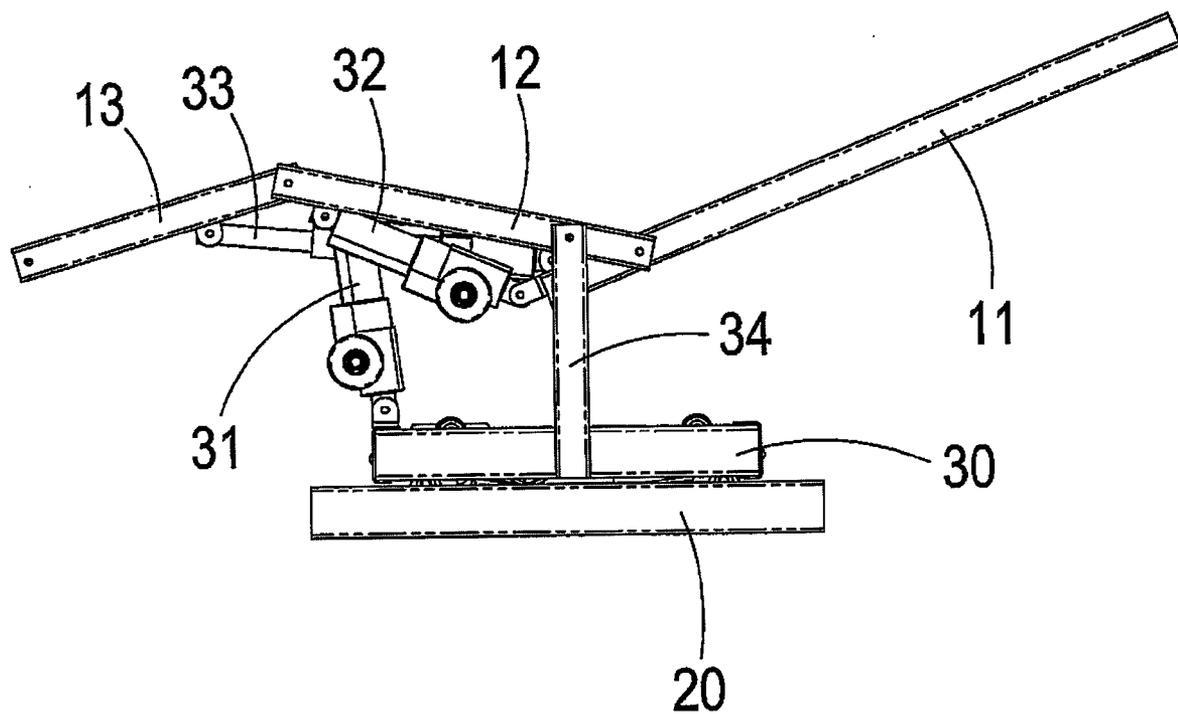


FIG.4

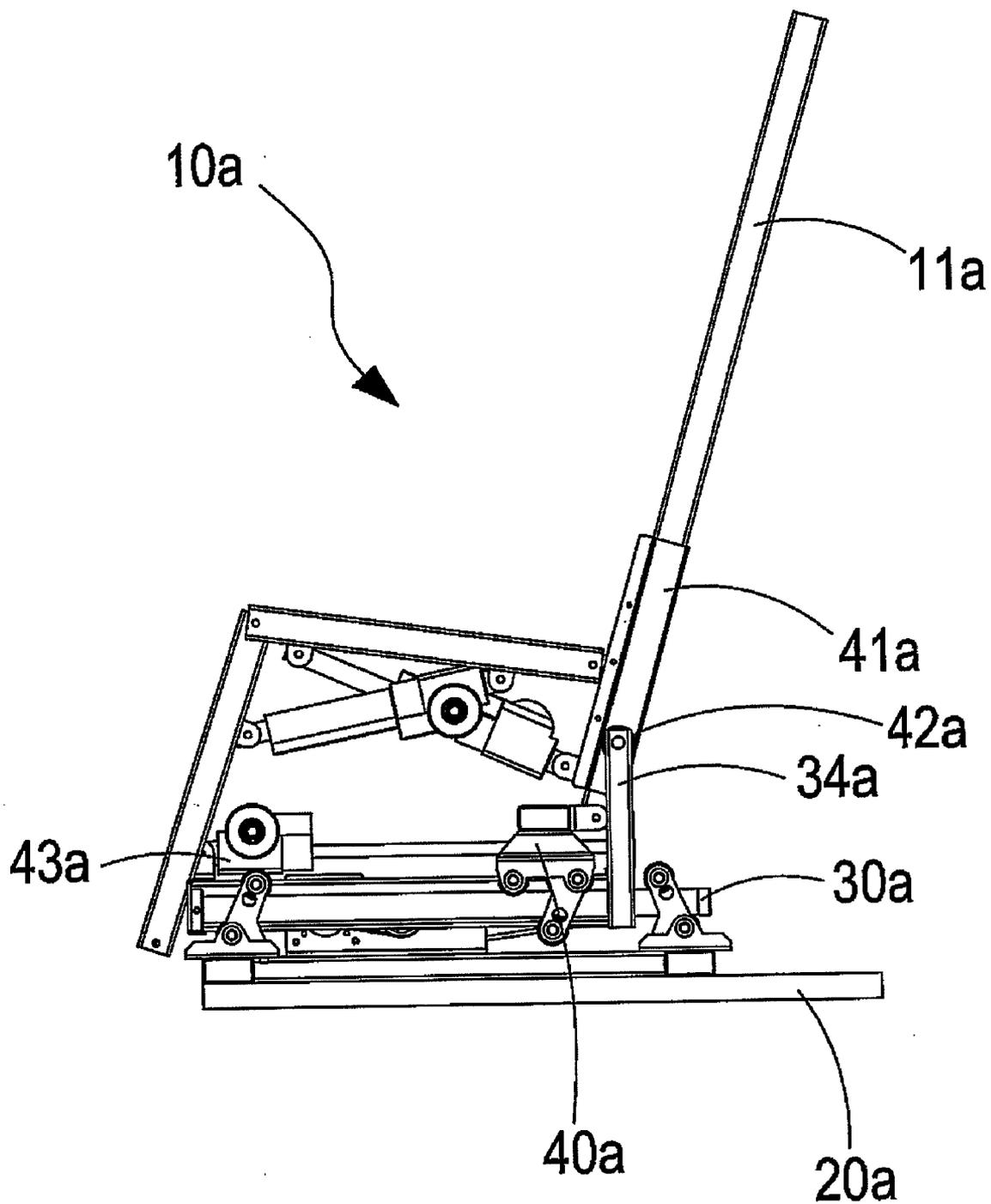


FIG.5

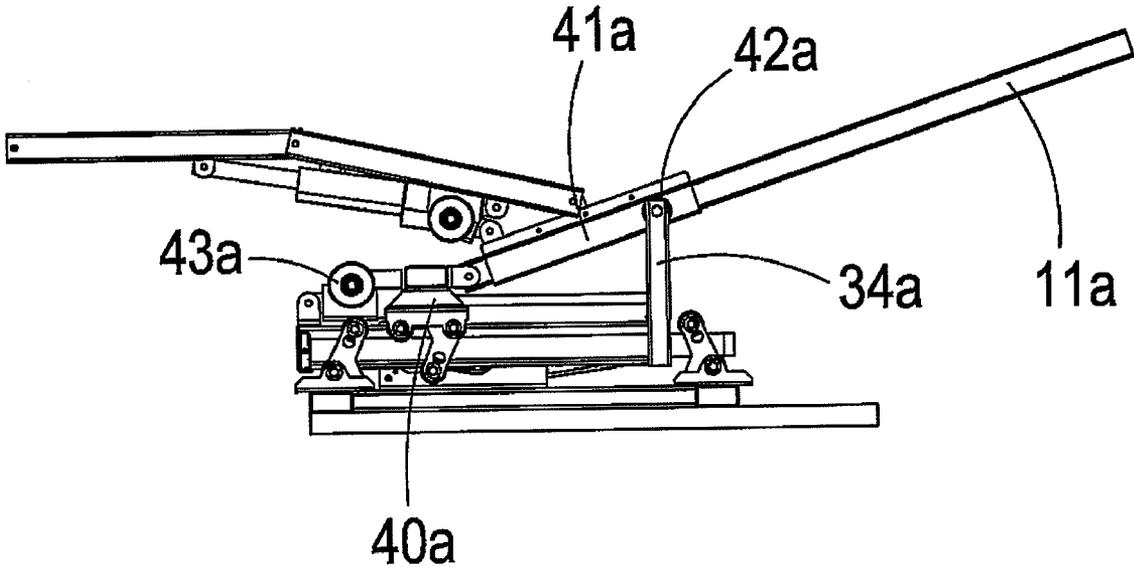


FIG.6

HORIZONTAL OSCILLATING DEVICE PROVIDING POSTURAL ADJUSTMENT

BACKGROUND OF THE INVENTION

[0001] (a) Field of the Invention

[0002] The present invention provides a horizontal oscillating device providing postural adjustment, and more particularly provides a horizontal oscillating device providing postural adjustment that is not only provided with horizontal oscillation effectiveness, but is also at the same time provided with functionality to adjust the angle of a chair back.

[0003] (b) Description of the Prior Art

[0004] The fast pace of life of people these days often causes people to suffer from increasing mental and physical pressure, requiring the need for external methods to appropriately alleviate the physical pressure. Generally speaking, many people use general sports equipment and special appliances as a means to passively alleviate and relieve the pressure, such as general electric rocking beds that horizontally rocks back and forth. And such electric rocking beds are used to achieve the effectiveness to completely alleviate pressure on people. Such electric rocking beds enable the user to lie down on the upper portion, and when actuated, a slide rest is used to drive the bed frame and realize the effectiveness to provide back and forth rocking. Moreover, a power supply is used to actuate the slide rest and thereby drive the bed frame, thereby effectively helping the user to relax his body and achieve the function to assist falling asleep through the rhythmic rocking, thus improving sleep quality.

[0005] However, the following problems and shortcomings are still in need of improvement when using the aforementioned electric rocking beds of the prior art:

[0006] Although such electric rocking beds achieve the effectiveness to assist falling asleep by rocking back and forth, however, they only provide a rocking oscillation effect. The effectiveness of such pure rocking beds to assist falling asleep is limited, and the user is unable to completely relax to achieve functionality to assist falling asleep. If the user wants to adjust himself to a comfortable posture and further achieve the effectiveness to assist falling asleep, then he is unable to use the electric rocking bed to achieve such effectiveness and functionality.

[0007] Hence, it is the strong desire of the inventor and manufacturers engaged in related art and purpose of the present invention to research, improve and resolve the problems and shortcomings of the aforementioned prior art.

SUMMARY OF THE INVENTION

[0008] Accordingly, in light of the shortcomings of the aforementioned prior art, the inventor of the present invention, having collected related data, and through evaluation and consideration from many aspects, as well as having accumulated years of experience in related arts, through continuous testing and improvements, has designed a new horizontal oscillating device providing postural adjustment as disclosed in the present invention that is not only provided with horizontal oscillation effectiveness, but is also at the same time provided with functionality to adjust the angle of a chair back.

[0009] The primary objective of the present invention lies in: A chair primarily comprising a chair back, a seat portion and a foot pad, and the bottom portion of the chair is fitted with a base. The base is used to stabilize the chair, thereby preventing the chair from toppling over, and an oscillating

device is assembled on the base. The oscillating device is equipped with a recline actuating device to enable changing the angle of elevation of the chair back of the chair (the recline actuating device can be a telescopic link). Moreover, the base is equipped with a pair of supports used to support the seat portion. Accordingly, when wanting to change the angle of elevation of the chair back of the chair, then the recline actuating device is lengthened and shortened, thereby causing the angle of elevation of the chair back to change. For example: when the user wants to recline to a horizontal position, then the recline actuating device is made to extend upward, thereby upwardly lifting one side of the seat portion, while at the same time pivot support from the supports is used to cause the other side of the seat portion to naturally move downward and be held in position, thus, the chair back is caused to recline using a lever principle. According to the art described above, and in the light of the problems of the inability to carry out rocking and overall angular adjustment of conventional hospital beds, as well as the inability to carry out postural changes in general horizontal oscillating and rocking mechanisms, the present invention uses a combination of an oscillating device and a recline actuating device to achieve the practical advancement of providing a chair with oscillating massage and at the same time enable position adjustment of the chair back.

[0010] To enable a further understanding of said objectives and the technological methods of the invention herein, a brief description of the drawings is provided below followed by a detailed description of the preferred embodiments.

BRIEF DESCRIPTION OF THE DRAWINGS

[0011] FIG. 1 is an elevational view of a preferred embodiment of the present invention.

[0012] FIG. 2 is a sectional view of the preferred embodiment of the present invention.

[0013] FIG. 3 is an operational schematic view I of the preferred embodiment according to the present invention.

[0014] FIG. 4 is an operational schematic view II of the preferred embodiment according to the present invention.

[0015] FIG. 5 is a sectional view of another preferred embodiment of the present invention.

[0016] FIG. 6 is an operational schematic view of the another preferred embodiment according to the present invention.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

[0017] Referring to FIG. 1 and FIG. 2, which show an elevational view and a sectional view respectively of a preferred embodiment of the present invention, and it can be clearly seen from the drawings that the present invention is structured from a chair 10 provided with a chair back 11, a seat portion 12 and a foot pad 13, and a base 20 used to stabilize the chair 10. An oscillating device 30 is assembled on the base 20 enabling horizontal oscillation of the chair 10. The oscillating device 30 is equipped with a recline actuating device 31 to enable changing the angle of elevation of the chair back 11 of the chair 10. The recline actuating device 31 is pin connected to the seat portion 12 away from an end of the oscillating device 30, the chair 10 operates on a lever principle through actuation of the recline actuating device 31, thereby enabling the angle of the chair back 11 to be changed using the lever principle, and achieves functionality that

affords ergonomic comfortability. A seat portion actuating device 32 pin connected to the seat portion 12 is pivotally fitted to a bottom portion of the chair back 11, and the seat portion actuating device 32 is used to change the angle of the seat portion 12. At the same time the angle of the seat portion 12 is changed, because the seat portion 12 is also pivotally fitted to a foot pad actuating device 33 pin connected to the foot pad 13, thus, the foot pad actuating device 33 enables changing the angle of the foot pad 13. Accordingly, the seat portion 12 and the foot pad 13 can be simultaneously or separately actuated. Moreover, the seat portion 12 is pin connected to the chair back 11 away from one side of the foot pad 13 forming a linkage relation adjoining the bottom portion of the chair back 11. Furthermore, the base 20 is equipped with a pair of supports 34 used to support the seat portion 12. Accordingly, pivot points of the supports 34 supporting the seat portion 12 and a change in the angle of elevation of the recline actuating device 31 are used to drive the seat portion actuating device 32, thereby enabling the chair 10 to operate on a lever principle when the recline actuating device 31 is actuated, which further causes the chair back 11 to recline.

[0018] Furthermore, the aforementioned recline actuating device 31, the seat portion actuating device 32 and the foot pad actuating device 33 can all be telescopic links.

[0019] According to the aforementioned structure and constructional design, circumstances during operational use of the present invention are described hereinafter. Referring together to FIG. 2, FIG. 3 and FIG. 4, which show the sectional view, and operational schematic views I and II respectively of a preferred embodiment according to the present invention, and it can be clearly seen from the drawings that the chair 10 is structured from the chair back 11, the seat portion 12 pin connected to the chair back 11, and the foot pad 13 pin connected to the seat portion 12. Moreover, the base 20 is fitted to the bottom portion of the chair 10, the supports 34 fitted to the base 20 are used to support the seat portion 12, and the base 20 is further pin connected to the recline actuating device 31. Furthermore, the recline actuating device 31 is pin connected to the seat portion 12 away from the end of the oscillating device 30. With respect to actuation of the chair 10, the bottom portion of the chair back 11 is pivotally fitted to the seat portion actuating device 32 pin connected to the seat portion 12, thereby enabling the chair 10 to be actuated using a lever principle. In addition, the seat portion 12 is pivotally fitted to the foot pad actuating device 33 pin connected to the foot pad 13. Accordingly, when the user sits on the chair 10 and wants to recline to form a "zero gravity state" (fully horizontal reclined position), then the recline actuating device 31 is upwardly extended, which causes the seat portion 12 to recline, and pivot support from the supports 34 is used to brace the chair back 11 as it reclines, while at the same time the seat portion actuating device 32 horizontally pulls the bottom portion of the chair back 11. Accordingly, increasing the angle of elevation of the chair back 11 causes the chair 10 to essentially assume a horizontally reclined state, thereby accomplishing a "zero gravity state" (fully horizontal reclined position). The user maintaining a horizontally reclined state causes the recline actuating device 31 and the seat portion actuating device 32 to shorten, while at the same time the foot pad actuating device 33 extends, thereby accomplishing the horizontally reclined state of the chair 10.

[0020] Referring to FIG. 5 and FIG. 6, which show a sectional view and an operational schematic view respectively of another preferred embodiment of the present invention, and it

can be clearly seen from the drawings that the embodiment comprises a base 20a, an oscillating device 30a fitted to the base 20a, and a chair 10a mounted on the oscillating device 30a. In which the bottom portions of two sides of a chair back 11a of the chair 10a are further respectively pivotally fitted with a sliding base 40a. The sliding bases 40a are slidably disposed on the oscillating device 30a, and the side portions of the chair back 11a are further respectively equipped with guide rails 41a. Rollers 42a are insertedly disposed in the guide rails 41a, and each of the rollers 42a are pivotally fitted to a support 34a, in which the supports 34a are used to support the chair back 11a. Accordingly, when the user reclines the chair 10a, a driving motor 43a is used to drive the sliding bases 40a, which are thereby caused to slide on the oscillating device 30a, and at the same time the sliding bases 40a are sliding, the rollers 42a slide in the guide rails 41a, thereby causing the chair back 11a to recline and assume a horizontal state.

[0021] Hence, referring to all the drawings, compared to the prior art, the following advantages exist when using the present invention:

[0022] 1. The chair 10 installed on the oscillating device 30 is used to effect a rocking oscillation which provides a massage effect for the user.

[0023] 2. The recline actuating device 31 is used to enable the chair back 11 to recline through use of a lever principle, and achieve angles that affords ergonomic comfortability for the user.

[0024] 3. Because telescopic links are used to serve as driving elements, thus, when the chair 10 is made to recline or assume a horizontally reclined state, then the components will not easily wear down or be displaced, which would otherwise result in the inability to use the chair 10 normally.

[0025] 4. Because the chair back 11, the seat portion 12 and the foot pad 13 are actuated by different actuating devices, thus, they are able to move separately, and thereby effect even more postural states.

[0026] In conclusion, the horizontal oscillating device providing postural adjustment of the present invention is clearly able to achieve the effectiveness and objectives as disclosed when in use, and is indeed a practical and exceptional invention that complies with the essential elements as required for a new patent application. Accordingly, a new patent application is proposed herein.

[0027] It is of course to be understood that the embodiments described herein are merely illustrative of the principles of the invention and that a wide variety of modifications thereto may be effected by persons skilled in the art without departing from the spirit and scope of the invention as set forth in the following claims.

What is claimed is:

1. A horizontal oscillating device providing postural adjustment, comprising a chair provided with a chair back, a seat portion and a foot pad, and a base used to stabilize the chair, an oscillating device is assembled on the base to enable horizontal oscillation of the chair, wherein:

the oscillating device is equipped with a recline actuating device that enables angle changing of elevation of the chair back, the recline actuating device is pin connected to the seat portion away from an end of the oscillating device portion, and the chair operates on a lever principle through actuation of the recline actuating device, thereby enabling changing the angle of the chair back

using the lever principle, and achieves functionality that affords ergonomic comfortability.

2. The horizontal oscillating device providing postural adjustment according to claim 1, wherein a bottom portion of the chair back is pivotally fitted with a seat portion actuating device pin connected to the seat portion, and the seat portion actuating device is used to change the angle of the seat portion.

3. The horizontal oscillating device providing postural adjustment according to claim 1, wherein the seat portion is pivotally fitted with a foot pad actuating device pin connected to the foot pad, the foot pad actuating device is used to change the angle of the foot pad, and the seat portion is pin connected to the chair back away from one side of the foot pad, and adjoins the bottom portion of the chair back.

4. The horizontal oscillating device providing postural adjustment according to claim 1, wherein the seat portion is equipped with a pair of supports used to support the seat portion.

5. The horizontal oscillating device providing postural adjustment according to claim 1, wherein the recline actuating device is a telescopic link.

6. The horizontal oscillating device providing postural adjustment according to claim 2, wherein the seat portion actuating device is a telescopic link.

7. The horizontal oscillating device providing postural adjustment according to claim 3, wherein the foot pad actuating device is a telescopic link.

8. The horizontal oscillating device providing postural adjustment according to claim 1, wherein bottom portions of the two sides of the chair back are respectively further pivotally fitted with sliding bases, and the sliding bases are slidably disposed on the oscillating device.

9. The horizontal oscillating device providing postural adjustment according to claim 8, wherein side portions of the chair back are respectively further equipped with guide rails, and rollers are insertedly disposed in the guide rails.

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