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(54) **COMPACT STEPPING AND SWINGING FITNESS MACHINE**

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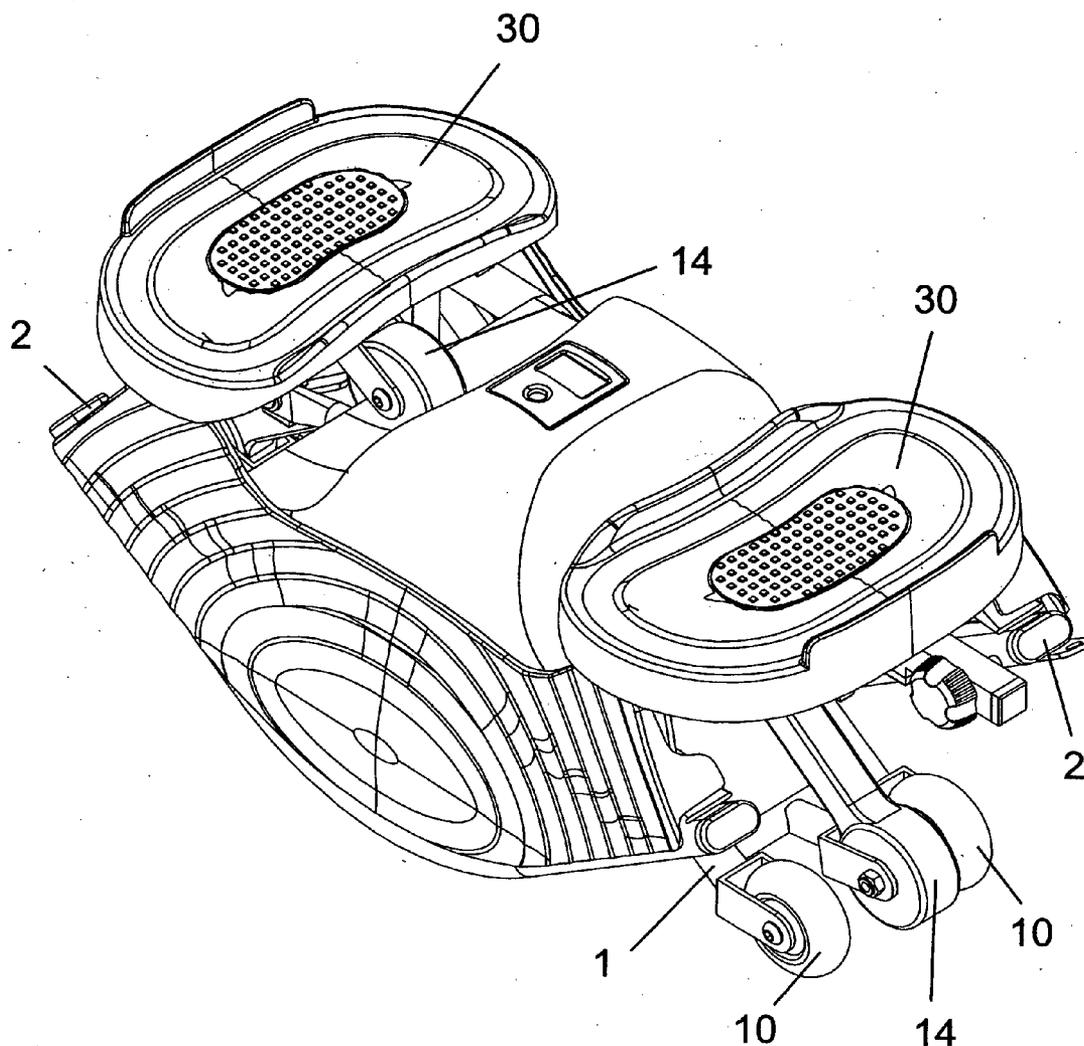
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(57) **ABSTRACT**

The present invention discloses a compact stepping and swinging fitness machine, comprising: a frame base, an arc frame base, a pedal frame and a handlebar or a pulling string, such that the fitness machine can be supported stably on the floor by a plurality of wheels of the transverse frame base, and a user can stand on the pedals by both feet and hold upper ends of left and right handlebars or pulling strings by both hands and apply a stepping force on both left and right pedals alternately. The stepping movement is performed repeatedly to achieve the sports fitness effect of swinging and balancing the user's body.



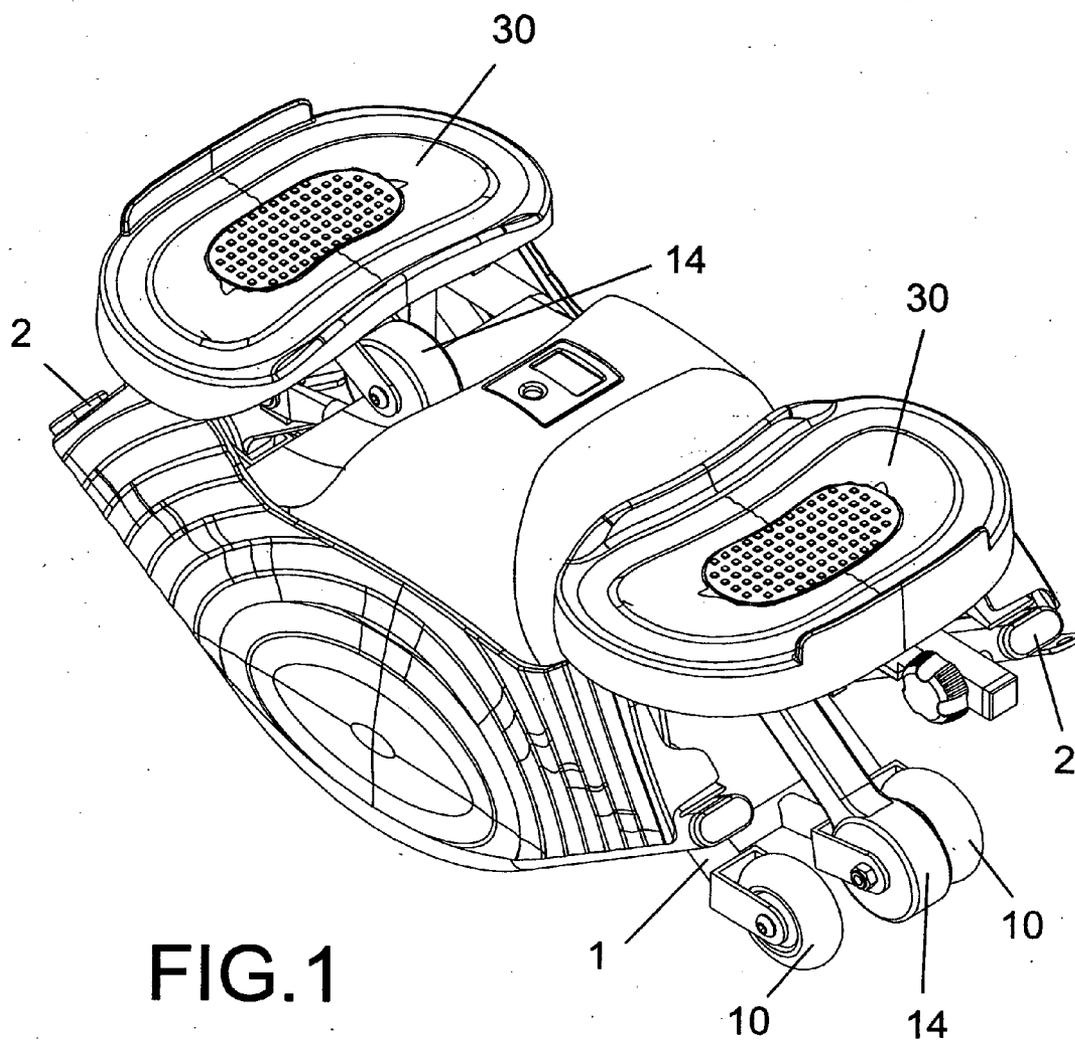


FIG. 1

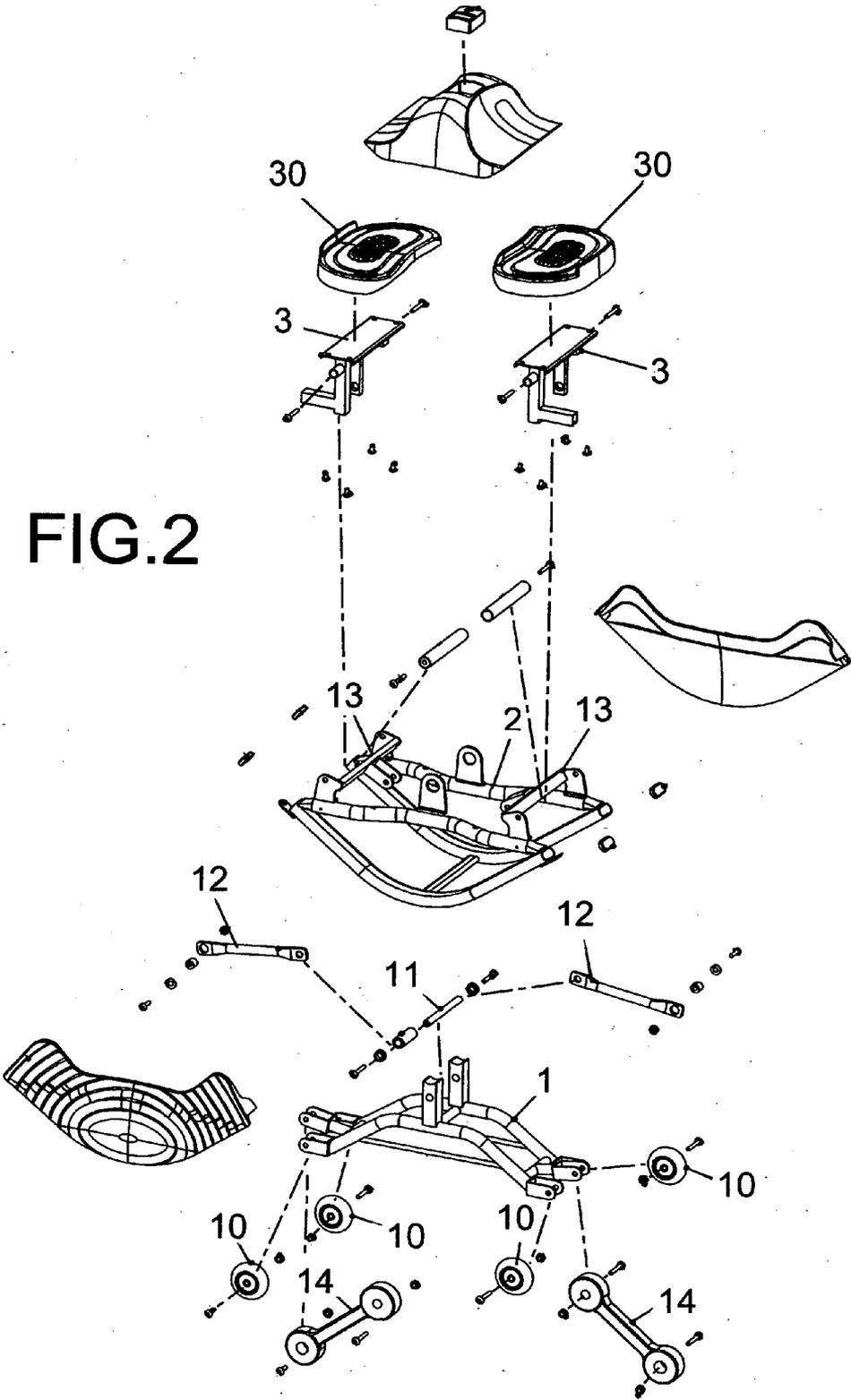
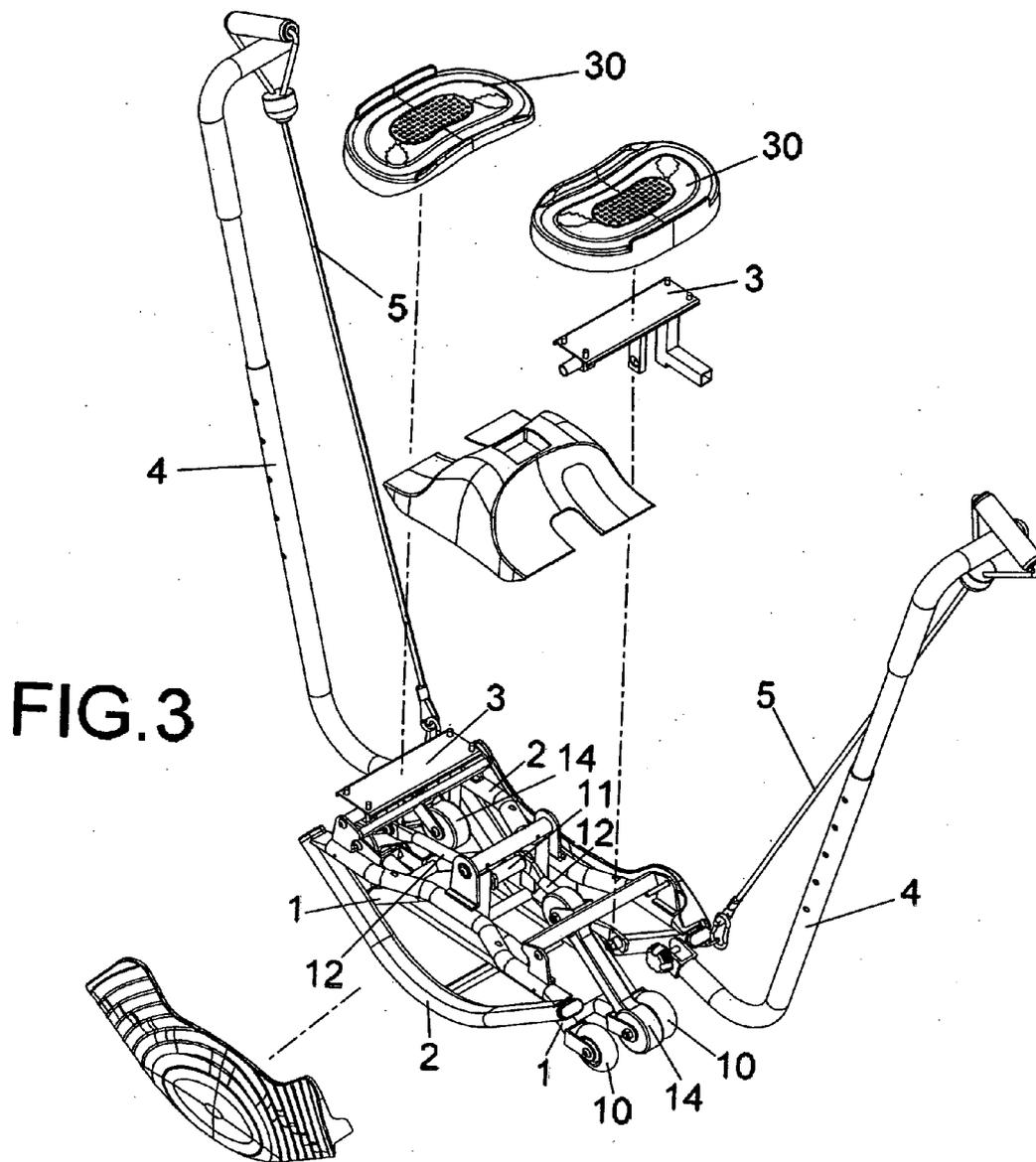


FIG.2



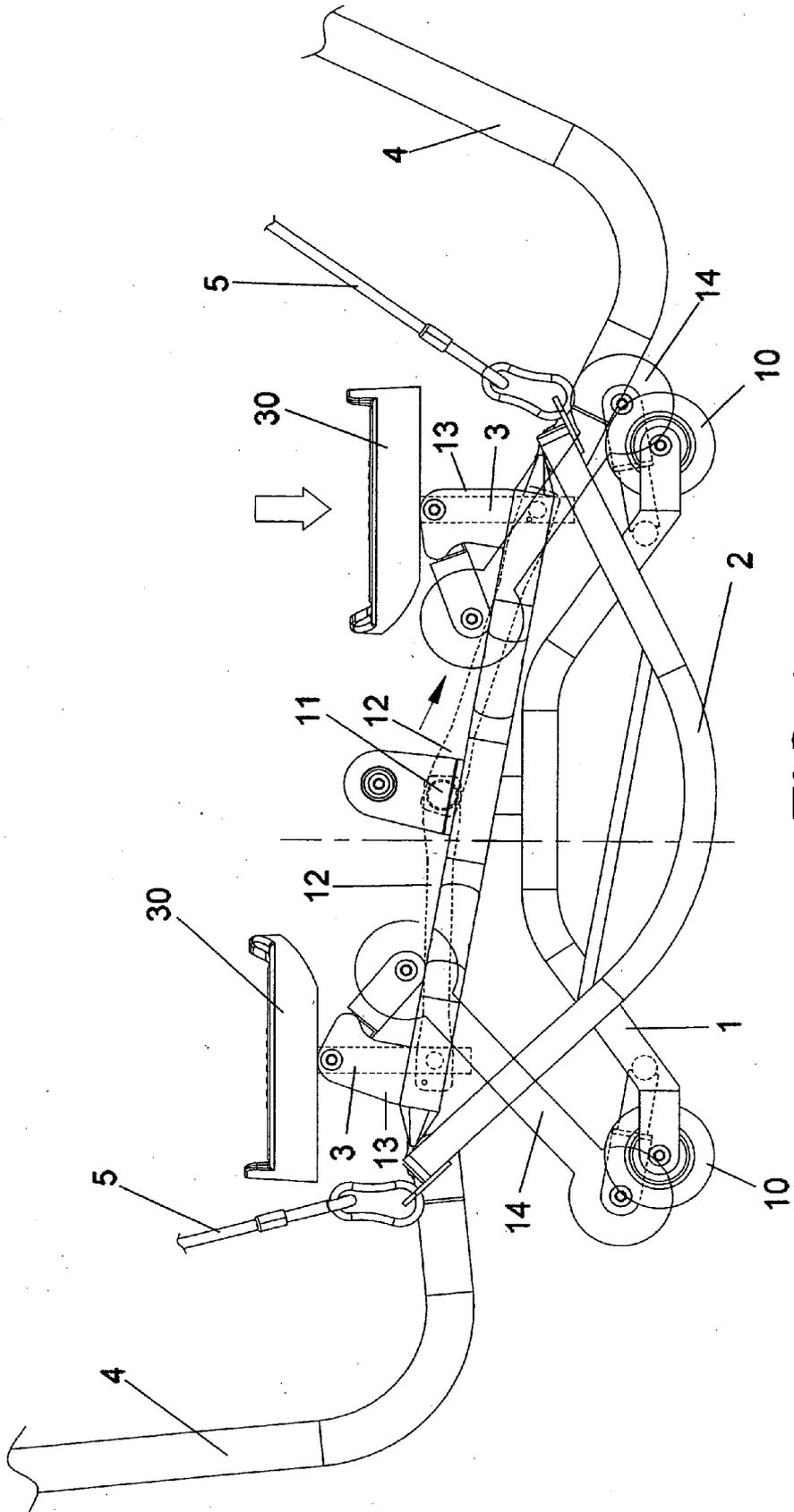


FIG.4

**COMPACT STEPPING AND SWINGING
FITNESS MACHINE**

BACKGROUND OF THE INVENTION

[0001] 1. Field of the Invention

[0002] The present invention relates to a compact stepping and swinging fitness machine, in particular to the compact stepping and swinging fitness machine comprising: a transverse frame base with a plurality of wheels installed on both left and right sides for stably supporting the machine on the floor; an arc frame base pivotally coupled to both front and rear ends of a vertical shaft at the middle of the arc frame base and being swayable transversally; a link rod separately and pivotally coupled to both front and rear ends of a central shaft, and another end of each link rod being coupled to a traction plate and pivotally coupled to a left and right pedal frame having left and right pedals, and both front and rear ends of the left and right pedal frame being respectively and pivotally coupled to a traction plate of the arc frame base; a rubber band pivotally coupled between the traction plate of the left and right pedal frame and the transverse frame base; and a handlebar or a pulling string upwardly latched to an outer end of the rotating arc frame base, such that the fitness machine can be supported stably on the floor by a plurality of wheels of the transverse frame base, and a user can stand on the pedals by both feet and hold upper ends of left and right handlebars or pulling strings by both hands and apply a stepping force on both left and right pedals alternately, such that the left and right pedal frame can be displaced up and down to drive the arc frame base through the traction plate, so as to produce rotations and displacement of the shaft and stretch the rubber band and produce an automatically restoring pulling force. The stepping movement is performed repeatedly to achieve the sports fitness effect of swinging and balancing the user's body. The invention has the advantages of providing a quick and simple way of assembling or removing the handlebar or pulling string to reduce the storage and transportation volume and the compact and economic features.

[0003] 2. Description of the Related Art

[0004] Various sports fitness machines are developed as people pay increasingly more attention to their health and due to their unbalanced diets and lacks of sports facilities and exercises. Among these sports fitness machines, fitness stepers generally comes with have no swinging balance function, and the disadvantages of a high cost, a large volume, and a poor stability. Therefore, the conventional fitness machines require further improvements.

SUMMARY OF THE INVENTION

[0005] In view of the aforementioned shortcomings of the conventional fitness machines, the inventor of the present invention based on years of experience in the sports fitness machine industry to conduct extensive researches and experiments, and finally developed a compact stepping and swinging fitness machine in accordance with the present invention to overcome the shortcomings of the prior art.

[0006] Therefore, it is a primary objective of the present invention to provide a compact stepping and swinging fitness machine, comprising: a transverse frame base with a plurality of wheels installed on both left and right sides for stably supporting the machine on the floor; an arc frame base pivotally coupled to both front and rear ends of a vertical shaft at the middle of the arc frame base and being swayable trans-

versally; a link rod separately and pivotally coupled to both front and rear ends of a central shaft, and another end of each link rod being coupled to a traction plate and pivotally coupled to a left and right pedal frame having left and right pedals, and both front and rear ends of the left and right pedal frame being respectively and pivotally coupled to a traction plate of the arc frame base; a rubber band pivotally coupled between the traction plate of the left and right pedal frame and the transverse frame base; and a handlebar or a pulling string upwardly latched to an outer end of the rotating arc frame base, such that the fitness machine can be supported stably on the floor by a plurality of wheels of the transverse frame base, and a user can stand on the pedals by both feet and hold upper ends of left and right handlebars or pulling strings by both hands and apply a stepping force on both left and right pedals alternately, such that the left and right pedal frame can be displaced up and down to drive the arc frame base through the traction plate, so as to produce rotations and displacement of the shaft and stretch the rubber band and produce an automatically restoring pulling force. The stepping movement is performed repeatedly to achieve the sports fitness effect of swinging and balancing the user's body. The invention has the advantages of providing a quick and simple way of assembling or removing the handlebar or pulling string to reduce the storage and transportation volume and the compact and economic features.

[0007] Another objective of the present invention is to provide a compact stepping and swinging fitness machine, wherein the quantity of the rubber bands can be increased or decreased to apply different pulling forces, so that the fitness machine can have different stepping resistances to fit different users and meet different training requirements.

BRIEF DESCRIPTION OF THE DRAWINGS

[0008] FIG. 1 is a perspective view of a preferred embodiment of the present invention;

[0009] FIG. 2 is an exploded view of the preferred embodiment of the present invention;

[0010] FIG. 3 is a partial exploded view of the preferred embodiment of the present invention;

[0011] FIG. 4 is a partial front view of stepping on a left pedal in accordance with the preferred embodiment of the present invention; and

[0012] FIG. 5 is a partial front view of stepping on a right pedal in accordance with the preferred embodiment of the present invention.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

[0013] The structure, technical characteristics and effects of the present invention will become apparent by the detailed description of preferred embodiments and related drawings as follows.

[0014] With reference to FIGS. 1 to 5, the compact stepping and swinging fitness machine of the present invention comprises a frame base (1), an arc frame base (2), a pedal frame (3) and a handlebar, (4) or a pulling string (5), wherein the frame base (1) is a transverse frame supported stably on a floor by a plurality of wheels (10) installed on both left and right sides; the transversally rotating arc frame base (2) is pivotally coupled to both front and rear ends of the vertical shaft (11) at the middle; a link rod (12) is pivotally coupled to both front and rear sides of the central shaft (11), and another

end of each link rod (12) is pivotally coupled to a traction plate (13) and the having left and right pedal frame (3) having left and right pedals (30), and both front and rear ends of the left and right pedal frame (3) are respectively and pivotally coupled to the traction plate (13) of the arc frame base (2); a rubber band (14) is provided for pivotally coupling the traction plate (13) of the left and right pedal frame (3) and the transverse frame base (1), and an outer end of the rotating arc frame base (2) is latched to an upward handlebar (4) or pulling string (5); and the rubber band (14) can be replaced, or the quantity of rubber bands (14) can be increased or decrease to produce different stepping resistances.

[0015] In actual operations and uses, a user can use the plurality of wheels (10) installed on the left and right sides of the frame base (1) to support the whole fitness machine on the floor and stand on the pedals (30) by both feet and hold upper ends of the left and right handlebars (4) or pulling string (5) by both hands, and then apply a stepping force on the pedals (30) by both legs alternately, so that the pedals (30) drive the left and right pedal frame (3) to move up and down, so as to push and drive the arc frame base (2) to swing or displace the shaft (10) to the left and right sides, and an end of the arc frame base (2) is moved upward to pull and extend the rubber band (14). Until the applied force is exhausted or a force in an opposite direction is applied, the rubber band (14) will produce an automatically restoring pulling force. The stepping movement is performed repeatedly to achieve the swinging sport exercise. In addition, the handlebar (4) or pulling string (5) can be installed or removed quickly and easily to reduce the storage and transportation volume, so as to provide the compact and economic features. The quantity of rubber band (14) can be increased or decreased to provide different pulling forces and produce different stepping resistances, so as to fit different users or different training requirements.

[0016] The assembly and device of the present invention is novel and capable of achieving the swinging sports fitness effect as well as reducing the storage and transportation volume of the product. Obviously, the present invention improves over the prior arts and complies with the patent application requirements.

[0017] While the invention has been described by means of specific embodiments, numerous modifications and variations could be made thereto by those skilled in the art without departing from the scope and spirit of the invention set forth in the claims.

What the invention claimed is:

1. A compact stepping and swinging fitness machine, comprising a frame base, an arc frame base, a pedal frame and a handlebar or a pulling string, characterized in that the frame base is a transverse frame stably supported on a floor by a plurality of wheels installed on both left and right sides; the arc frame base is pivotally coupled to both front and rear ends of a vertical shaft at the middle of the arc frame base and swayable transversally; a link rod is separately and pivotally coupled to both front and rear ends of a central shaft, and another end of each link rod is coupled to a traction plate and pivotally coupled to a left and right pedal frame having left and right pedals, and both front and rear ends of the left and right pedal frame are respectively and pivotally coupled to a traction plate of the arc frame base; a rubber band is pivotally coupled between the traction plate of the left and right pedal frame and the transverse frame base, and a handlebar or a pulling string upwardly latched to an outer end of the rotating arc frame base.

2. The compact stepping and swinging fitness machine of claim 1, wherein the rubber band is replaceable, and the quantity of the rubber bands can be increased or decreased to change a stepping resistance.

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