United States Patent [19]

Whitaker

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[54] **THERAPEUTIC CHAIR FOR EXERCISING BACK MUSCLES**

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[52] **U.S. Cl.** ..... **128/24 R,** 128/33, 128/49

[51] **Int. Cl.** **A61h 1/00**

[58] **Field of Search** 128/24, 25, 33, 48, 70, 128/49; 272/58

[56] **References Cited**

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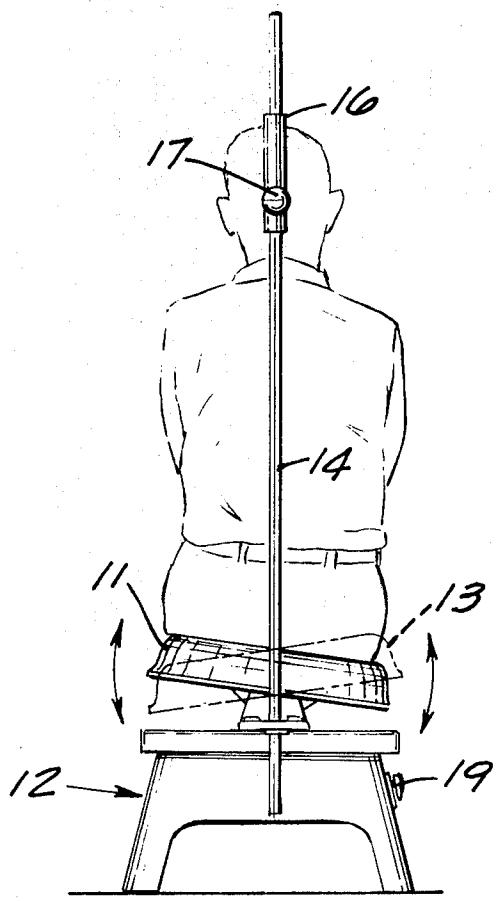
Attorney, Agent, or Firm—Dominick Nardelli

[57] **ABSTRACT**

A therapeutic chair to enable a person to exercise his back muscles. The chair includes a base that sets on the floor and includes a seat rockably mounted on the base to rock from side to side about a horizontal axis. To the base there is fixed a guide that extends over the person's head. The guide is adjustable to accommodate various size people so that the guide just contacts the head of the person sitting on the seat, to notify the person to keep his head steady. Mounted within the base is an electric motor with an eccentric crank that is coupled to the seat to rock it from side to side. A timer is provided in series with the electric motor, which cuts off current to the motor after a predetermined time.

7 Claims, 5 Drawing Figures



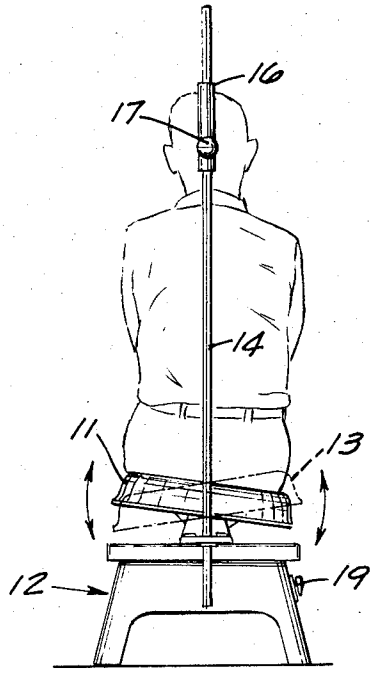


Fig. 1

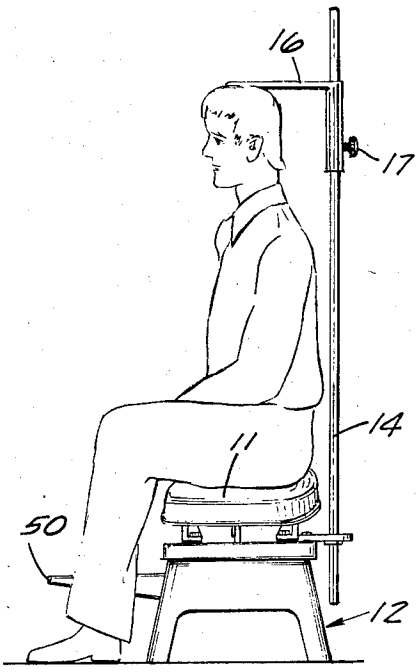


Fig. 2

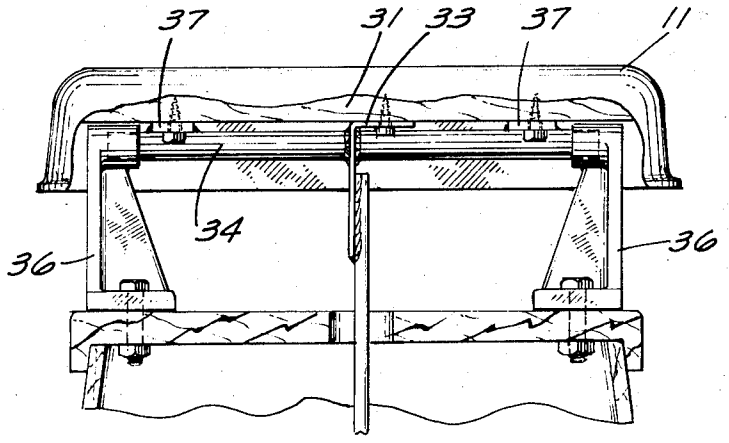


Fig. 5

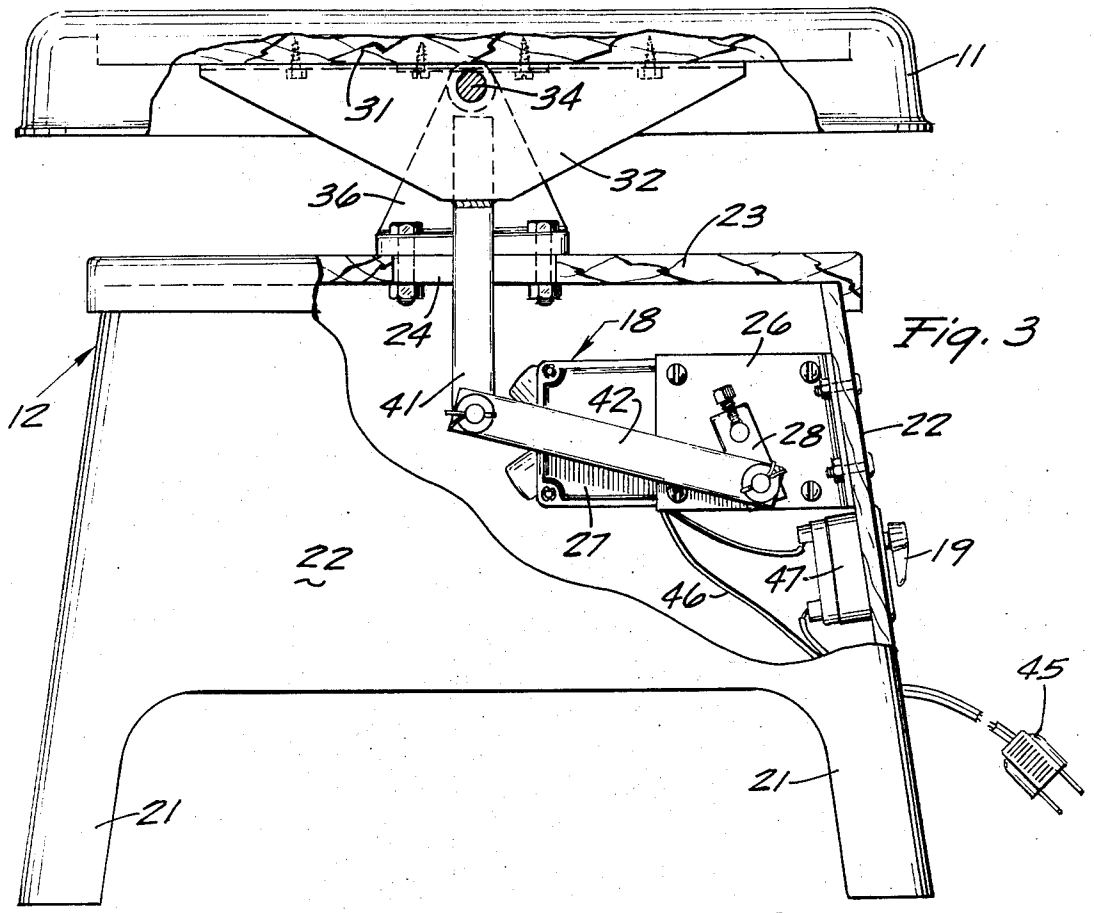

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Fig. 3

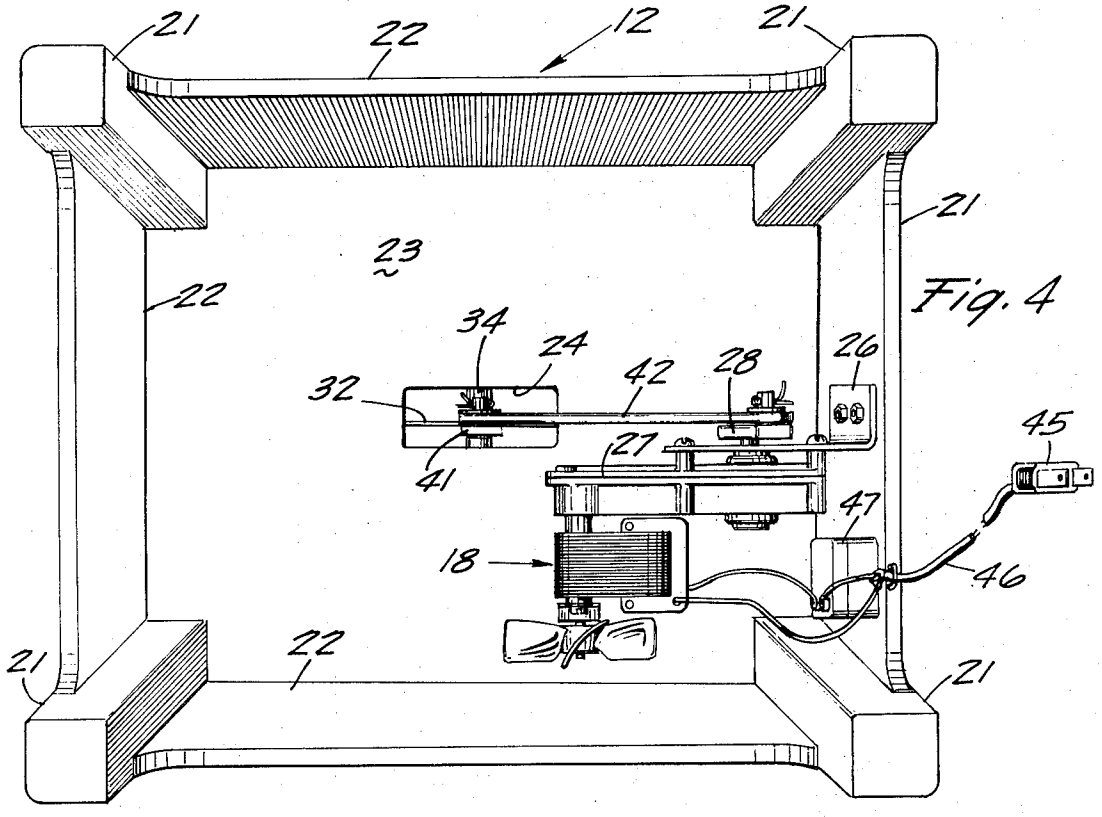
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Fig. 4

THERAPEUTIC CHAIR FOR EXERCISING BACK MUSCLES

FIELD OF THE INVENTION

This invention relates to therapeutic devices, and more particularly to a therapeutic chair for exercising a person's back muscles.

BACKGROUND OF THE INVENTION

In the past, therapeutic devices have been produced to exercise, relax and develop various parts of the human body; however, none of these have been capable of effectively exercising the back muscles. Many people with back trouble are required to bend their torsos side to side to develop certain muscles. This requires some dexterity on the part of the person to perform these exercises because he can easily lose his balance as he bends his back either to the left or right. In addition, people with back trouble find it difficult to perform the simplest exercise without mechanical aid.

OBJECTS OF THE INVENTION

An object of this invention is to provide a simple, economical back exerciser.

Another object is to provide a chair which allows a person's back to bend to the right and then to the left, alternatively.

Another object is to provide a therapeutic chair which bends the back to the left and to the right, alternatively, and has means to insure that the person's head has remained substantially stationary.

These and other objects and features of advantage will become more apparent after studying the following detailed description of the preferred embodiment together with the appended drawings.

BRIEF DESCRIPTION OF THE DRAWINGS:

FIG. **1** is a back elevation of the novel therapeutic chair showing a person sitting thereon.

FIG. **2** is a left side elevation of the chair and person of FIG. **1.**

FIG. **3** is an enlarged back view of the chair of FIG. **1,** shown in partial sections.

FIG. **4** is the bottom view of the chair, showing the prime mover.

FIG. **5** is a side section of the chair of FIG. **3,** showing the upper portion only.

DETAILED DESCRIPTION OF THE DRAWINGS:

Referring to the drawings, and FIGS. **1** and **2** in particular, my novel device is shown in use with a man sitting on a seat **11** mounted to a base member **12.** As shown by dash lines **13** in FIG. **1,** the seat **12** pivots about a horizontal axis by means to be described more fully hereinafter. Mounted to the base member **12** is a vertically disposed rod **14** that has a head feeler **16** slidably mounted thereon. A thumb screw **17** locks the feeler **16** to the rod in a standard manner common to the art. The head feeler **16** is adjusted in height so that the man sitting upright feels the feeler **16** with his head. The seat **11** is made to rock with the aid of a convenient prime mover such as an electric motor **18** (FIGS. **3** and **4**) by turning the switch **19** (FIG. **1**).

Referring to FIGS. **3, 4** and **5,** the operation of the device will be described. The base **12** has four legs **21** connected by four side plates **22.** The legs **21** and plates

22 are, for example, integrally formed out of wood. Over the top of the legs and plates is disposed a cover **23** that has a central opening **24.** The motor **18** is suitably mounted on one plate **22** as shown in FIGS. **3** and **4,** by a bracket **26.** Attached to the shaft of the motor **18** is a gear box **27** that reduces the rotational speed so that an eccentric crank **28** rotates about, for example, **6** RPM. The crank **28** is coupled by suitable means to rock the seat **11** about a horizontal axis. The seat **11** is preferably contoured molded out of plastic and has bonded to its underside a wood board **31** to which is fastened a triangular shaped bracket **32,** near the center of the seat, by means of a flange **33** (FIG. **5**) on the bracket. Welded to the bracket **32** is a shaft **34** that has its ends journalled mounted within a pair of bearing pillow blocks **36,** which are in turn bolted to the cover **23.** To provide greater stability and strength to the seat, a pair of steel bars **37** are also welded to shaft **34,** as shown in FIG. **5,** which bars **37** are also fastened to the wood board **31.** These described parts allow the seats to rotate about the horizontal axis defined by shaft **34.**

The motion of the seat **11** is controlled to pivot back and forth by the aid of a steel bar **41** depending from and welded to bracket **32** and also by a connecting rod **42** pin connected at one end to the lower end of bar **41.** The other end of rod **42** is connected to the eccentric crank **28** so that as crank **28** rotates, bar **41** pivots back and forth about the shaft **34,** moving the seat **11** therewith. The motor **18** is powered by electrical currents through a plug **45** and wire **46.** In series with the motor is a timer **47** that is actuated by switch **19.** The timer **47** is of the standard type that turns off the current after a predetermined time.

Seat **11,** although it is not shown, is preferably contoured to conform to the human body in a manner standard to the art. In addition, if one does not desire to use the head feeler **16,** a sighting means **50** can be fixed to the base so that a sighting bar extends out, horizontally from the base between a person's legs as shown in FIG. **2.** The bar is parallel to the horizontal axis of rotation. The sighting means **50** is used by aligning the end of the sighting rod with a spot on the floor and in this manner the head is capable of being maintained substantially steady.

Although only one embodiment of my invention has been described, one skilled in the art after studying the above disclosure can devise other embodiments coming within the spirit and scope of the invention. Therefore this invention is not limited to the described embodiment, but includes all embodiments which fall within the scope of the claims.

I claim:

1. A therapeutic chair comprising:

a base adopted to be disposed firmly on a floor,

a seat pivotably mounted to said base and disposed to pivot about a fixed horizontal axis,

first means for pivoting said seat back and forth on either side from its horizontal position, and

second means fixed to said base to assist in maintaining the user's head substantially stationary and adopted to allow the user's back to bend to the left and to the right.

2. The chair of claim **1** wherein:

said second means includes a rod vertically fixed to said base member, and

a horizontal feeler slidably mounted on said rod and projecting therefrom over said seat.

3. The chair of claim **2** wherein:

said first means includes a pair of bearing pillow blocks mounted on top of said base member,

a shaft bearing mounted to said pillow blocks with said seat fixed to said shaft,

a bar depending from and fixed to said shaft,

a motor means mounted within said base member to provide rotational motion to said eccentric, and

a connecting rod connecting said eccentric to said bar.

4. The chair of claim **3** wherein:

a timer switch is serially connected with said motor to cause said motor to turn off after a predetermined time.

5. The chair of claim **1** wherein said second means includes a sighting means fixed to said base projecting

therefrom parallel to said axis and disposed substantially directly below said axis.

6. The chair of claim **5** wherein:

said first means includes a pair of bearing pillow blocks mounted on the top of said base member,

a shaft bearing mounted in said pillow blocks with said seat fixed to said shaft,

a bar depending from and fixed to said shaft,

a motor means mounted within said shaft member to provide rotational motion to an eccentric, and

a connecting rod connecting said eccentric to said bar.

7. The chair of claim **6** wherein:

a timing switch is serially connected with said motor to cause said motor to turn off after a predetermined time.

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