United States Patent

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[54] **EXERCISE DEVICE**
5 Claims, 4 Drawing Figs.

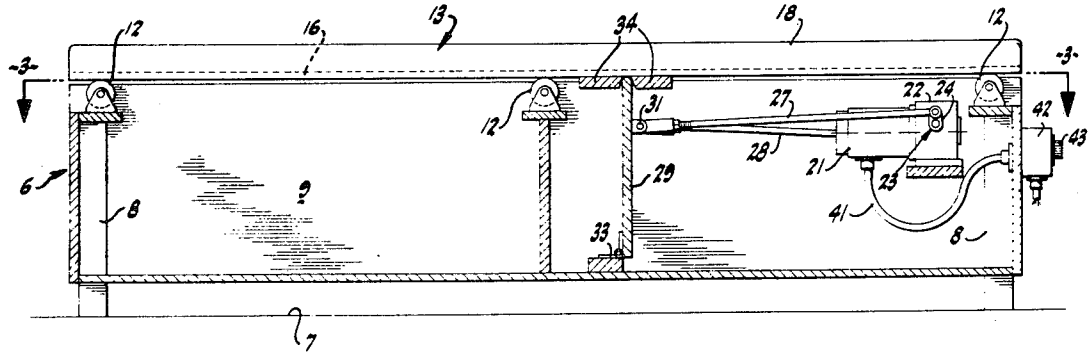
[52] **U.S. Cl.** **128/33**
[51] **Int. Cl.** **A61h 1/00**
[50] **Field of Search** 128/25, 33, 52

[56] **References Cited**
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ABSTRACT: An exercise device comprises a frame on which two side-by-side, horizontal tables are reciprocated 180° out of phase with each other, the tables, considered together, being wide enough and long enough for a person to lie thereon. Reciprocation is accomplished by a timed motor driving a double crank connected by pitmans to rocker arms pivoted on the frame and loosely engaging the tables which are supported on rollers on the frame.



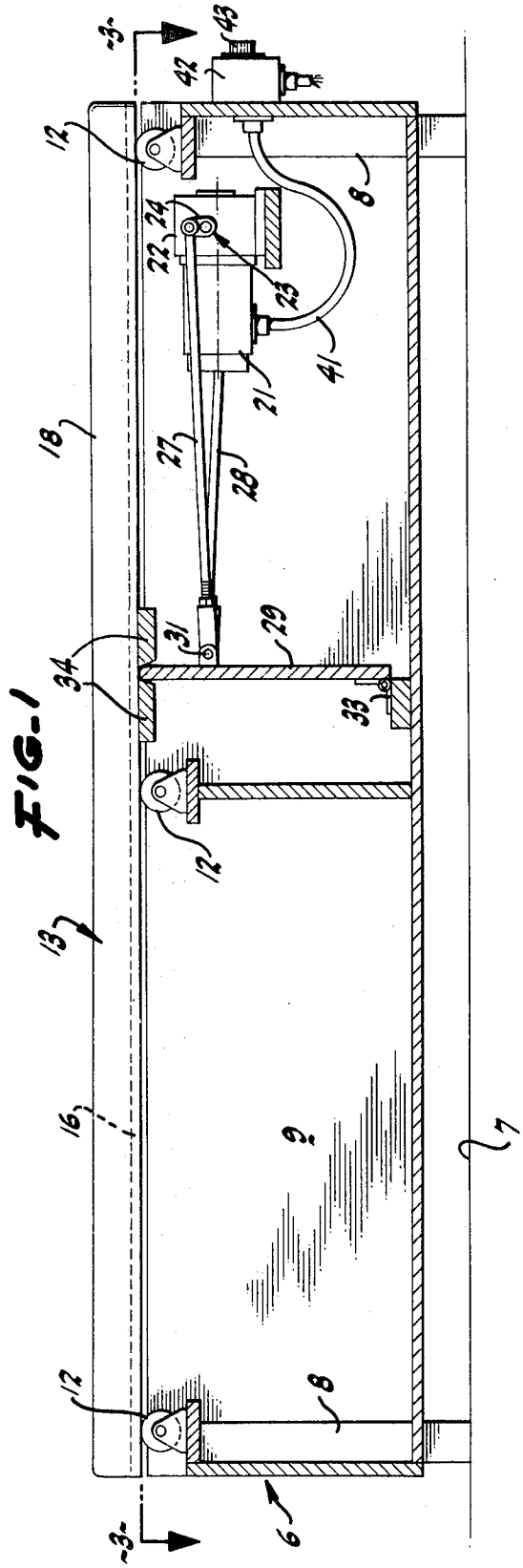
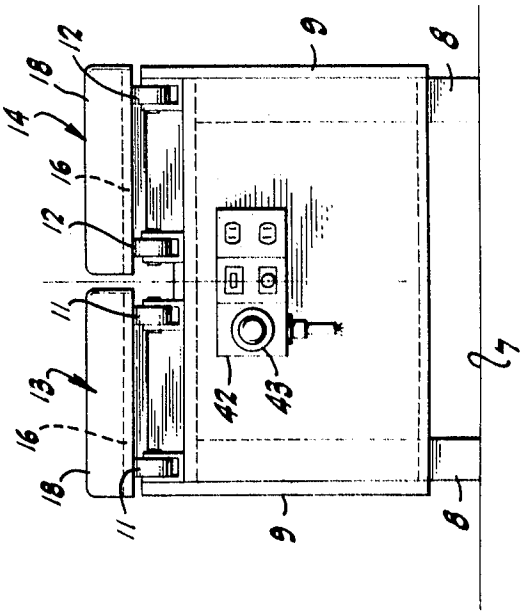


FIG. 1

FIG. 2



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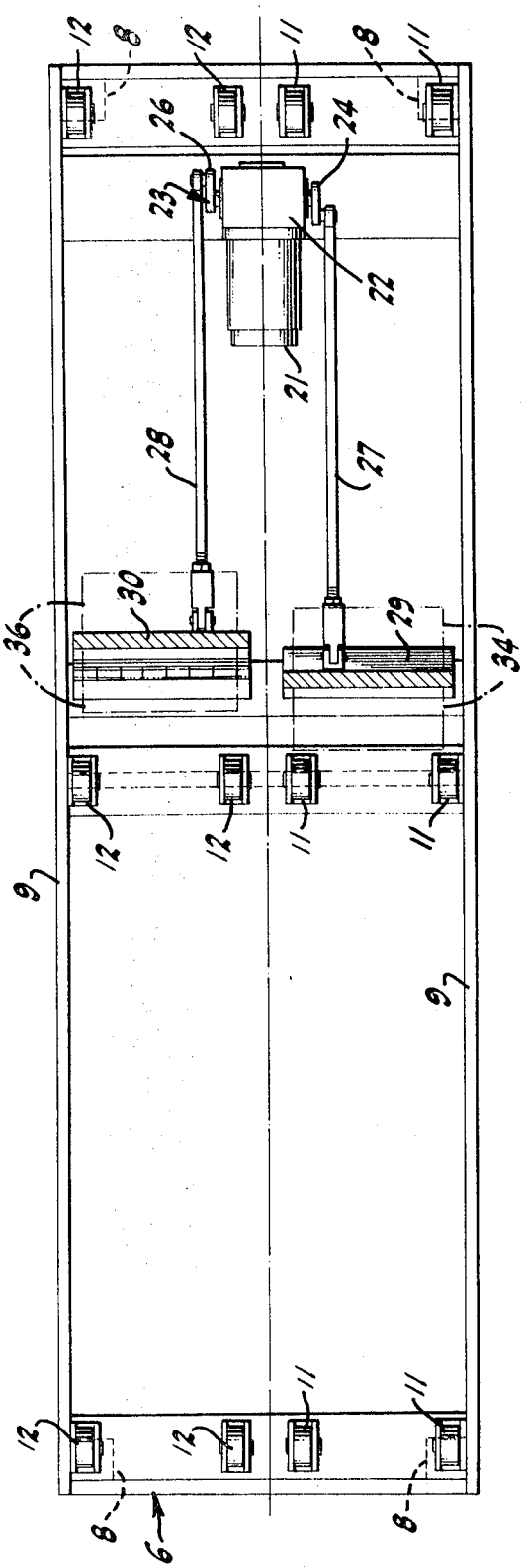


FIG. 3

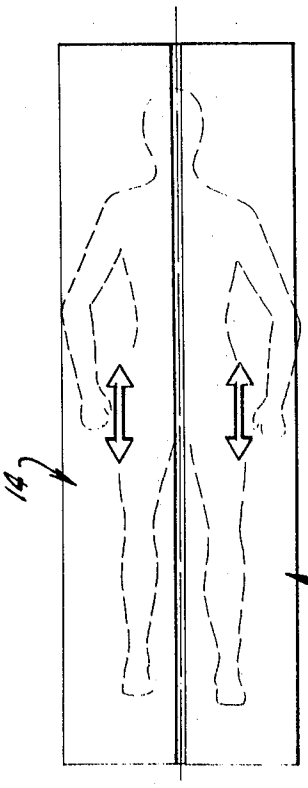


FIG. 4

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EXERCISE DEVICE

There is always a need for devices to assist people in obtaining appropriate exercise and to insure that the exercise is of a generalized character. It has occurred to me that a beneficial and effective form of exercise can be given to an individual in a bilateral fashion corresponding to the bilateral nature of the individual.

It is therefore an object of my invention to provide an exercise device effective to exercise the individual halves of a person's body individually and simultaneously.

Another object of the invention is to provide an exercise device in which a person can be subjected to exercising motions while he is lying down with opposite sides of his body receiving complementary treatment.

Another object of the invention is to provide an exercise device which can be utilized by virtually anyone.

Another object of the invention is to provide an exercise device which can be utilized in nearly any surroundings without special provisions other than a supply of electric power.

Another object of the invention is in general to provide an improved exercise device.

Another object of the invention is to provide a device for giving an individual exercise even though the individual himself may be relatively passive.

Other objects together with the foregoing are attained in the embodiment of the invention described in the accompanying description and shown in the accompanying drawings, in which:

FIG. 1 is a cross section on a longitudinal, vertical plane through the center of the exercise device;

FIG. 2 is an end elevation of the structure shown in FIG. 1;

FIG. 3 is a cross section, the plane of which is indicated by the line 3–3 of FIG. 1; and

FIG. 4 is a detailed diagram showing the appearance of a person on the exercise device.

While the exercise device pursuant to the invention can be incorporated in a large number of different ways, it has with success been incorporated and utilized in the form shown herein. In this embodiment the device includes a frame **6** designed to rest on the floor **7** and having a number of uprights **8** and joining panels **9**. The frame in its upper portion is provided with a number of pairs of rollers **11** on one side of the longitudinal center and rollers **12** on the other side of the center. Each of the pairs of rollers is arranged to support part of an individual one of a pair of tables **13** and **14**. Each table has a rectangular structure **16** affording side rails to engage the sides of the rollers to maintain alignment and has a pad **18** thereon for the comfort of the user. The elongated tables are arranged side by side in quite close proximity. When considered together in plan, the two tables are long enough and wide enough to accommodate a person lying thereon, substantially as shown in FIG. 4.

Pursuant to the invention, the separate tables are individually reciprocated on the rollers in a translational or longitudinal fashion, each table operating substantially 180° out of phase with the other table. Stated differently, as one table is going forwardly the other table is going rearwardly and vice versa.

To drive the tables there is provided on the frame an electric drive motor **21** of the customary kind operating through a gear reducer **22** to rotate a double crank **23**. Each of the arms **24** and **26** of the double crank has its related crankpin connected by the respective one of a pair of pitmans **27** and **28** to a pair of rocker arms **29** and **30**. The connections to the rocker arms are made by pivot pins **31**. The rocker arms are each connected to the frame **8** by means of a pivot or hinge connection **33**. The upper end of each of the rocker arms is loosely lodged in an individual one of a pair of brackets **34** and **36**. Each of the brackets is secured to a respective one of the two tables.

An electric supply for the motor is furnished through a conduit **41** which extends to a timer **42** on the end panel of the frame whereat there can likewise be located a speed controller **43** and any other electrical controls desired.

In the use of this exercise device the person to be treated or to receive the exercise lies on the pairs of tables substantially centrally thereof, as shown in FIG. 4. The timer and speed control are then operated to energize the motor whereupon the two tables **13** and **14** are reciprocated in opposite directions. Since the individual lying thereon is similarly bilateral, one side of his body is pulled frictionally in one direction, whereas the other side is pulled frictionally in the opposite direction. This produces an effective exercise of various of the bodily muscles and produces a motion of the body something akin to that when a person is running or walking. A convenient frequency of rotation of the motor is, for example, about 50 r.p.m., although this is subject to rather a wide variation, and it has been found in practice that an effective throw or stroke for each table is approximately 1½ inches.

By this means an effective and suitable device for exercise, particularly passive exercise, has been provided.

What is claimed is:

1. An exercise device comprising a frame, a pair of table members, said table members considered together having substantially the width and length to support a person lying down thereon, means on said frame for supporting said pair of table members for independent motion parallel to each other and substantially in a horizontal plane, and means on said frame and joined to said table members for repeatedly reciprocating said tables 180° out of phase with each other.

2. An exercise device as in claim **1** in which supporting rollers are interposed between said frame and said table members.

3. An exercise device as in claim **2** in which said rollers are on said frame and said table members have guides engaging the sides of said rollers.

4. An exercise device as in claim **1** in which said reciprocating means includes a double-throw crank and pitman connections from each of said cranks to a respective one of said table members.

5. An exercise device as in claim **1** in which said reciprocating means for each table member includes a bracket on a table member, a rocker arm pivotally mounted on said frame and loosely engaging said bracket, a crank rotatably mounted on said frame, and a pitman pivotally mounted on said crank and on said rocker arm.