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EXERCISE APPARATUS WITH STORAGE CONTAINER AND PEDALS AND WEIGHTS

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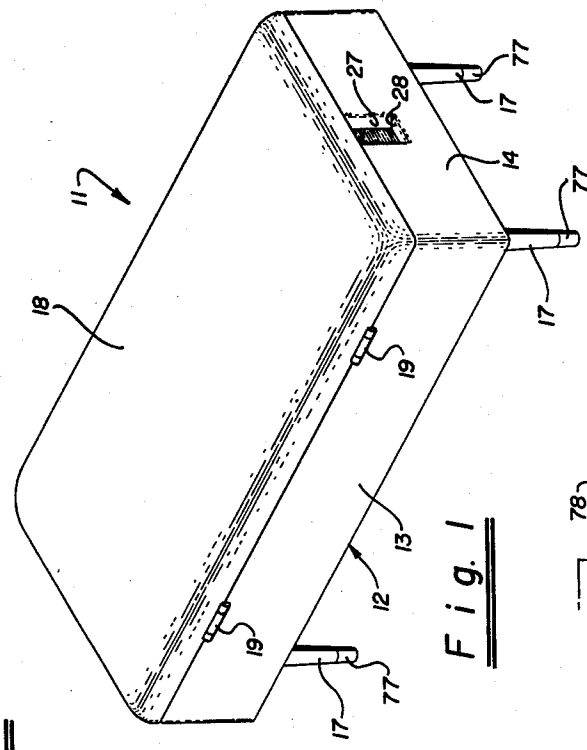


Fig. 1

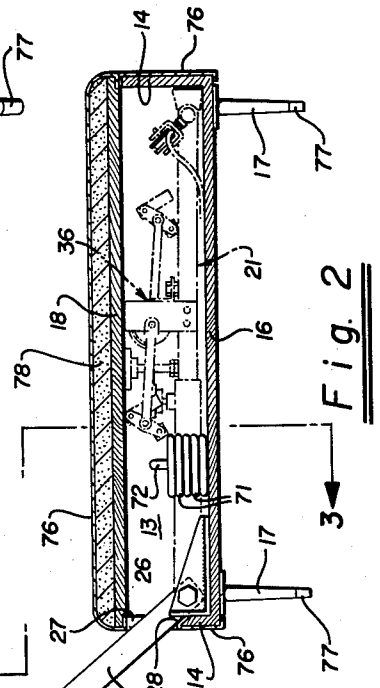


Fig. 2

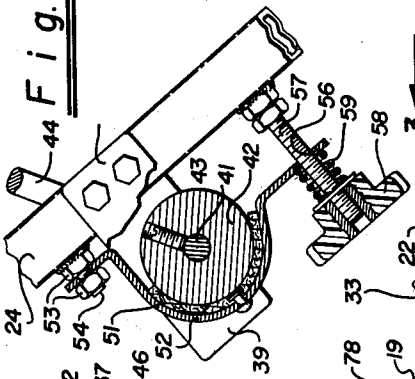


Fig. 4

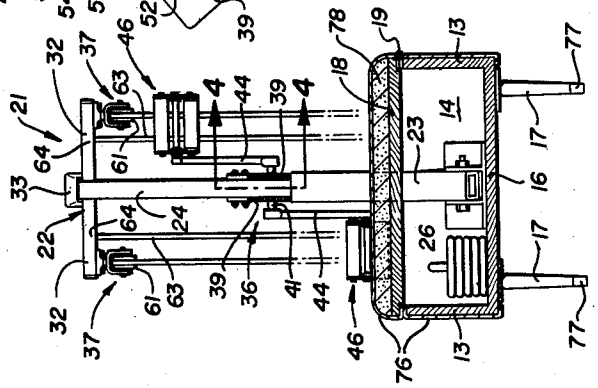


Fig. 3

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EXERCISE APPARATUS WITH STORAGE CONTAINER AND PEDALS AND WEIGHTS

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This invention relates to an exercising device and more particularly to an exercising device for use in the home.

Exercising apparatus heretofore provided for home use has normally been found to be very unsatisfactory. Normally, a separate room must be provided for utilizing such apparatus because when it is not in use it is difficult to store away, and when stored it is not readily accessible. There is, therefore, a need for exercising apparatus for use in the home which can be readily stored away and which can be readily put in use.

In general, it is an object of the present invention to provide an exercising apparatus which can be utilized in the home and which can be easily stored away.

Another object of the invention is to provide an exercising apparatus of the above character in which the exercising apparatus is stored in an attractive chest which can be utilized for other purposes.

Another object of the invention is to provide exercising apparatus of the above character in which the exercising unit can be readily moved from an out-of-the-way position to an in-use position.

Another object of the invention is to provide exercising apparatus of the above character in which the chest performs a useful function in the utilization of the exercise unit.

Another object of the invention is to provide exercising apparatus of the above character in which different types of exercising devices are provided.

Another object of the invention is to provide exercising apparatus of the above character which can be adjusted to accommodate individuals of different sizes.

Another object of the invention is to provide exercising apparatus in which the difficulty of the exercises being performed can be adjusted.

Additional objects and features of the invention will appear from the following description in which the preferred embodiment has been set forth in detail in conjunction with the accompanying drawings.

Referring to the drawings:

FIGURE 1 is an isometric view of an exercise apparatus incorporating the present invention with the exercise unit in the out-of-the-way position.

FIGURE 2 is a view, partly in cross-section, of the exercise apparatus shown in FIGURE 1 with the exercise unit in an in-use position.

FIGURE 3 is a cross-sectional view looking along the line 3—3 of FIGURE 2.

FIGURE 4 is a cross-sectional view of a portion of the pedal assembly.

The exercise apparatus as shown in the drawings consists of a chest 11 in the form of a rectangular box 12 having a pair of vertical side walls 13, a pair of vertical end walls 14, and a bottom wall 16. The box is supported above the floor by a plurality of legs 17 of a conventional type which are secured to the bottom wall of the box. The chest also includes a lid or cover 18 which is hinged to one side wall of the box by a pair of hinges 19.

An exercise unit 21 is mounted in the chest and is movable between out-of-the-way and in-use positions as shown

particularly in FIGURE 2. The exercise unit consists of a T-bar assembly 22 which is comprised of two telescoping sections 23 and 24 having a generally square cross-section. The section 23 is mounted within the chest and is pivotally secured relative to the bottom wall 16 of the chest by a pair of brackets 26 mounted adjacent one of the end walls 14. A slot 27 is provided in the adjacent end wall for the section 23 and is formed with an inclined lower surface 28 which provides a support for the T-bar assembly when it is in an in-use position. The telescoping section 22 can be held in a predetermined position with respect to the section 23 by an adjustment knob 31 which is threadably mounted in the section 23 and frictionally engages the section 24.

A pair of transverse rod-like members 32 mounted adjacent the outer extremity of the section 22 extends therefrom at right angles thereto and is provided for a purpose hereinafter described. A cap 33 of suitable material such as rubber is mounted on the outer end of the section 24.

A pedal assembly 36 and a pair of pulley assemblies 37 are mounted on the T-bar assembly and serve as the exercising devices as hereinafter described.

The pedal assembly 36 consists of a pair of supporting plates 39 which are affixed to the section 24. A shaft 41 has portions thereof journalled in the plates 39 and carries a drum 42 which is fixed to the shaft by means of a set screw 43. A pair of crank arms 44 is affixed to the opposite ends of the shaft 41 in such a manner that they are diametrically opposed. Each of the crank arms carries a pedal 46 of conventional construction which is provided with a toe strap 47.

Rotation of the pedal assembly is adapted to be inhibited by a brake band 51 which is carried by a member 52 having one end secured to the member 24 by nuts 53 threaded onto a stud bolt 54. The other end of the brake member 52 is provided with an opening 56 which accommodates another stud bolt 57 also affixed to the member 24. The pressure exerted by the brake band 51 on the brake drum 42 is adapted to be adjusted by means of a knob 58 threadably mounted on the stud bolt 57 and engaging a spring 59 which engages the free end of the brake member 52.

Each of the pulley assemblies 37 consists of a pulley 61 rotatably mounted in a block supported on the arm or transverse member 32 for swivel movement. A cord 63 of suitable material such as nylon has one end affixed to the arm 32 at 64. The cord extends through a pulley and block assembly 64 which is connected to the handle 66 of a weight bag 67 for swivel movement with respect to the handle. The cord extends over the pulley 61 and is provided with a loop 68 which carries a tubular hand grip member 69. The handle 66 and the weight bag 67 can be formed of any suitable material such as a strong fabric. The bag is preferably of such a size that it is adapted to carry a plurality of disc-like weights 71 as hereinafter described.

Means is provided for storing a plurality of the disc-like weights 71 within the chest and consists of a post 72 which is secured to the bottom wall 16 of the chest and upon which a plurality of the weights is mounted as shown in the drawing in FIGURE 2.

To improve the appearance of the chest and to make it suitable for use as a piece of furniture in addition to its use in conjunction with the exercise unit as hereinafter described, it can have its exterior side and end walls covered with a suitable material 76 such as plastic or leather. The legs 17 can be of a highly polished wood provided with brass ferrules 77. The lid 18 is also preferably covered with the same material as the side and end walls. To make use of the exercise apparatus more

comfortable, padding **78** of a suitable type such as foam rubber is provided on the lid.

Operation and use of our exercise apparatus may now be briefly described as follows. Let it be assumed that the exercise apparatus is in the position shown in FIGURE 1 and that it is desired to utilize the exercise apparatus. The lid or cover **18** is lifted and moved from its normal closed position to an open position. The exercise unit is then moved from the out-of-the-way position shown in dotted lines in FIGURE 2 to the in-use position shown in solid lines in FIGURE 2 with the section **23** resting in the slot **27**. The exercise unit is raised as a single unit together with both of the pulley assemblies and the pedal assembly.

Now assuming that it is first desired to utilize the pedal assembly, the difficulty of rotation of the pedal assembly is adjusted by the knob **58** so that it is sufficiently difficult to operate to give adequate exercise. The lid **18** is then moved to a closed position. The user then lies on the lid face up with the feet facing the pedals. The length of the T-bar assembly is adjusted by means of the knob **31** until the legs are in a comfortable position. Normally, it is desirable for the head to be on one end of the bench opposite the exercise unit and with the feet engaging the pedals of the pedal assembly. The difficulty of the pedaling exercise can be readily adjusted by the knob **58**. It can be adjusted from a free-wheeling position to a position in which it is impossible to turn the pedal assemblies.

Now let it be assumed that it is desired to use the pulley assemblies. The user first places the desired amount of weight in each weight bag **67**. The user then seats himself on the bench either facing towards the exercise unit or facing away from the exercise unit depending upon the type of exercise which it is desired to perform. When facing away from the exercise unit, the triceps, the upper chest muscle groups, and other muscle groups can be exercised by placing the arms in various positions and raising and lowering the weights repeatedly by grasping the handles secured to the cords. Other muscles and some of the same muscles can also be exercised while facing the exercise unit.

When all of the exercising has been completed, the knob **31** is loosened to allow the section **24** to slide to its lowermost position. The lid **18** is then opened and the exercise unit is folded into the out-of-the-way position as shown in FIGURE 2. The weights in the weight bag **67** are, of course, removed and placed on the post **72** within the chest before moving the exercise unit to the out-of-the-way position. As soon as the exercise unit has been moved to the out-of-the-way position, the lid can again be closed.

From the foregoing, it is apparent that we have provided a new and improved exercise apparatus which is particularly adapted for use in the home. The apparatus is of a type which can be easily placed in-use and which can be placed in an out-of-the-way position. When in an out-of-the-way position, the exercise apparatus actually can serve as a piece of furniture and can be used as a bench at the foot of a bed or can be used as a bench in a family room or the like. It is constructed in such a manner that it actually appears to be a piece of furniture so that it harmonizes with the other furniture in the room.

We claim:

1. In an exercise apparatus, a box having side walls and a bottom wall forming a storage compartment with an open top side, one side wall being formed with an open ended recess in the upper portion thereof, lid means serving as a human body support and as a lid for the box, means for mounting said lid means on said box for movement between open and closed positions so that said lid means in a closed position closes said opening and in an open position gives access to the storage compartment, said lid means in a closed position lying in a horizontal plane, and an exercise unit disposed within said storage compartment and movable between in-use and out-of-the-way positions, said exercise unit having one end pivotally secured to said box adjacent said side wall having the recess therein, said exercise unit being movable in an arcuate path through the open top of the box and downwardly into the recess to said in-use position and to a position which permits said lid means to be closed, said exercise unit also being movable into an out-of-the-way position in the storage compartment which permits said lid to be closed.

2. An exercise unit as in claim 1 wherein said exercise unit includes a rigid elongate assembly, a pair of collapsible weight bags, a plurality of weights in each of said bags, a flexible cord secured to each of the weight bags, and pulley means mounted on the rigid elongate assembly, the cords having sufficient length so that they can be grasped while lying on the lid means to permit raising and lowering of the weight bags.

3. An exercise apparatus as in claim 2 wherein said exercise unit includes a pedal assembly mounted on said rigid elongate assembly consisting of a shaft rotatably mounted on said rigid elongate assembly, crank arms secured to opposite ends of the shaft, pedals secured to the crank arms, a drum mounted on said shaft, a brake band having one end secured to the rigid elongate assembly, an intermediate portion of the brake band being adapted to engage the drum, and means secured to the rigid elongate member for increasing and decreasing the amount of pressure applied to the crank drum by the brake band, said last named means including a readily accessible knob to permit easy adjustment of the brake means.

4. An exercise apparatus as in claim 1 wherein said exercise unit includes a rigid elongate assembly having one end pivotally mounted on the bottom wall of said box, an intermediate portion of the rigid elongate assembly being seated within said recess when the exercise unit is in said in-use position, said rigid elongate assembly being inclined upwardly from the horizontal when the intermediate portion of the elongate assembly is positioned in said recess.

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