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R. A. RICHARDSON
CHAIR SUPPORTED EXERCISING DEVICE WITH OVERHEAD BAR
AND LEG EXERCISING MEANS
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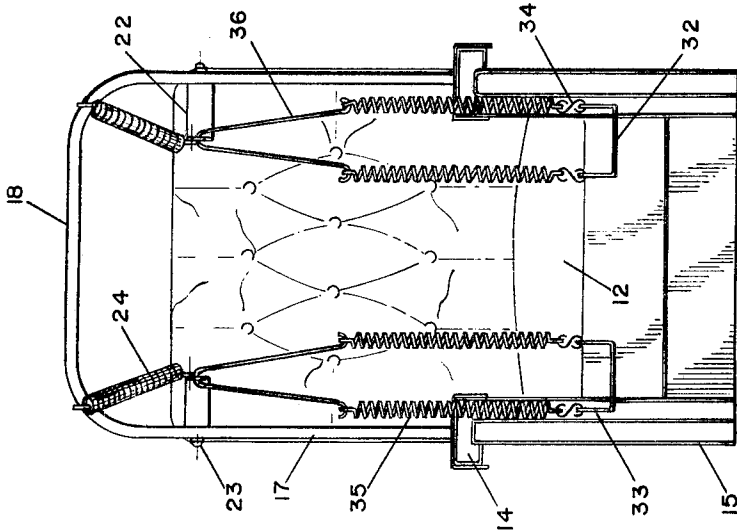


Fig. 2.

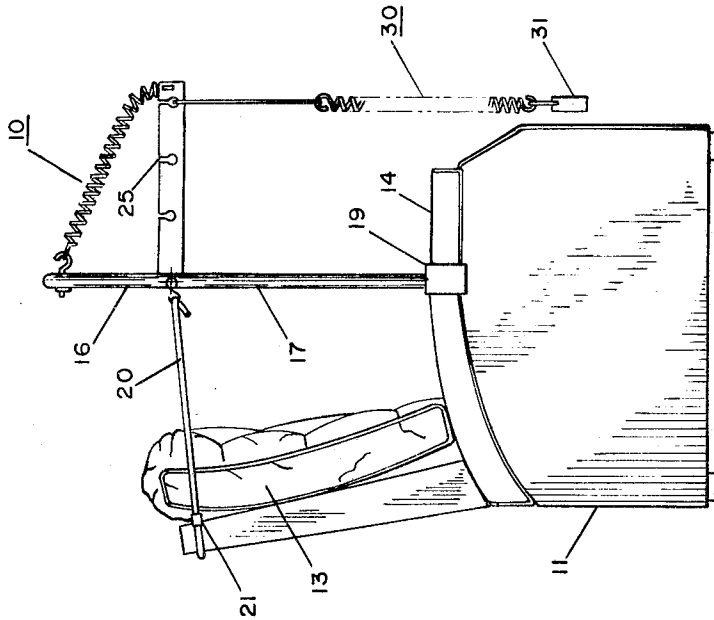


Fig. 1.

INVENTOR.

RAY A. RICHARDSON.

BY

Gregory J. Nelson
ATTORNEY

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**CHAIR SUPPORTED EXERCISING DEVICE
WITH OVERHEAD BAR AND LEG EXER-
CISING MEANS**Ray Alma Richardson, 201 S. Eastbourne Drive,
Tucson, Ariz. 85716

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2 Claims

ABSTRACT OF THE DISCLOSURE

An exercising apparatus adaptable for use from a sitting position in connection with a chair. A frame having a generally horizontal overhead member arranged above the chair seat within easy grasp of the user is affixed to the chair for pull-up exercise. Leg exercises are provided by stirrups adjustably supported by means including springs from members affixed to the frame at their inner ends and spring suspended at their outer ends. These stirrups can be manipulated against the springs to provide a bicycle-like exercise.

The present invention relates to a physical exercising device.

More specifically, the invention relates to a type of exercising device which may be incorporated in or adapted to fit an existing chair to allow the user to exercise from a sitting position.

An object of my invention is to provide an exercising device which allows the user to exercise lightly or moderately.

Another object of my invention is to provide an exercising apparatus which allows the user to do pull-ups or bicycle leg exercises, or a combination of both, from a sitting position.

Another broad object of my invention is to provide a physical exercising apparatus which may be used by young and old, as well as the semiinvalid.

My unique device is also adapted for use by the physically incapacitated who are unable to participate in usual forms of exercise, thus helping to prevent muscular atrophy.

Another object of my invention is to provide an exercising device which is removable from the chair to which it is affixed and which may be easily and conveniently stored out of sight.

A still further object of my invention is to provide an exercising device which is inexpensive and which may be adjusted to the physical needs and size of the particular user.

A number of exercising devices which allow the user to physically exercise from a sitting position are available commercially. These devices are inadequate in that they allow only limited physical activity or else are expensive and cumbersome. For example, exercising chairs having foot pedal devices which act against spring tension are well known. These devices allow the user to push in and out with his legs from a sitting position, providing some exercise.

It is also well known to provide springs or tension members with handle grips which the user grasps to manipulate and exercise against the spring tension. These exercises, while beneficial, do not provide an adequate variation of exercises. Further, the leg exercisers limit the user to a push and pull exercise whereas a rotary bicycle movement, which simulates the riding of a bicycle, is thought to be more beneficial as it utilizes more muscles.

My novel exercising apparatus overcomes the aforementioned inadequacies and allows the user a greater leg

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movement of the bicycle type, while also allowing pull-ups from a sitting position. Also, the user may exercise his arms and upper body against a spring tension.

Further, my apparatus allows a complete exercise, either strenuous or light, for all parts of the body in a single, simple device which can be adjusted to fit the size and physical requirements of the individual user.

Other objects and advantages of the invention will be apparent from a consideration of the following detailed specification and the accompanying drawings:

FIG. 1 is a side elevational view of the exercising device of the present invention shown mounted on a conventional chair of the recliner type; and

FIG. 2 is a front elevational view further illustrating the construction of the apparatus.

Referring to the drawings, the numeral 10 designates generally the exercising device of the invention, which is shown affixed to an existing chair 11. The chair, although shown in the preferred embodiment as a recliner type with a movable back section, may be of any suitable configuration having a seat 12, back 13, arms 14, and support frame 15.

The exercising device 10 is provided with an overhead generally U-shaped frame 16 which extends between the arms 14 of chair 11 in a generally vertical plane above the seat portion 12. The frame may be of any material of adequate strength, but for appearance, durability, and ease of fabrication I have used chromium plated steel tubing. The frame 16 has vertical side bars 17 and horizontal overhead bar 18. The overhead bar 18 is located at an elevation and position within easy reach of the user when the user is in a sitting position in chair 11.

The vertical side member 17 are provided at their lower ends with clamps 19 which are secured to the arms 14 by bolts or screws fastened in the metal or wooden chair frame. A rope tether 20 extends from side members 17 around the back 13 of chair 11 to provide additional support. Also, the rope, when the device is used with a recliner type chair, prevents reclination of the chair during exercising use. A retaining rope 21 extends between the chair padding and back to prevent tether 20 from slipping.

Extending substantially horizontally outward from vertical members 17 are brackets 22, which are affixed to members 17 by a bolt or rivet 23, allowing the bar 22 to rotate in a pivotal fashion. These brackets angle inwardly from members 17 to provide convenient placement of the leg-exercising devices, which are supported from brackets 22. Retaining springs 24 extend from frame member 16 at an elevation above brackets 22 and inboard of members 17 and are affixed to the outer ends of brackets 22, limiting the downward pivotal movement of brackets 22 as well as angularly securing the brackets. A series of notches 25 are provided in the upper edge of brackets 22 to provide adjustability for the leg-exercising devices, as will be seen later.

The leg-exercising portions 30 of my device consist of a stirrup 31 having a footrest portion 32 and side bars 33. A pair of springs 35 are fastened at their lower end to side bars 33 by S hooks 34 and at their upper end to hook means 36. Hook 36 is in the form of an inverted V having springs 35 secured at both terminal ends and being engaged at its upper end in a notch 25 in bracket 22.

It will be obvious that although metal tension springs are shown for elements 24 and 35 any suitable type of tension device, such as rubber or elastic cord, may be used.

Although I have shown the preferred embodiment as being attached to a chair by a permanently affixed clamp 19, a C clamp and set screw is another obvious means of attachment, allowing the device to be easily removed.

Other well-known means of permanent or removable attachment will be obvious to those skilled in the art.

To use my novel exercising device, the user simply assumes a sitting position in the chair 11. To exercise the upper extremity and trunk muscles, the user grasps bar 18 and does full or partial pull-ups, acting against his own weight. For less strenuous exercise of these areas, brackets 22 may be grasped in either hand and a downward force exerted against the tension of springs 24, causing the brackets to pivot slightly.

To exercise the lower extremity, hip and leg muscles, the user places his feet in stirrups 31, after adjusting the length of the leg exercisers 30 by placing hooks 36 in the proper notches 25. The user then begins to rotate his legs in a bicycling-like motion against the tension of springs 35 and 24. It will be seen that this apparatus allows almost complete exercise for all parts of the body for reducing, muscular development, or simple exercise. The individual remains in a comfortable sitting position and may relax in the chair during any part of the exercise routine. Also, it may be desirable to affix my device to a chair having a vibrator massager, whereby healthful exercise and massage may both be had.

All in all, my device provides a healthful, comfortable means of obtaining beneficial exercise. The exercise is varied and allows movement and muscular activity not provided in prior art exercisers. The unit may be easily detached from the chair in a minimum of time, and it is not unsightly when out of use. When the unit is removed from the chair, its construction allows it to be folded by unhooking springs 24 from brackets 22 and pivoting brackets 22 into vertical alignment along bars 17. Clamps 19 are removed from the chair and tether 20 removed. This folding feature allows easy storage as the unit now requires little space.

Various other changes and modifications in the device will be apparent to those skilled in the art.

Having fully described the invention in such manner as to enable those in the art to understand and practice said invention, I claim:

1. An exercising device adaptable to a chair having a seat, back, and supporting frame, said exercising device comprising:

(a) a frame member, said frame member having vertical side members adapted to be secured at their lower ends to said chair and a substantially horizontal overhead member extending between said side members whereby said horizontal overhead member may be grasped by the user when in a sitting position in said chair;

(b) a support member vertically pivotally connected to each of said vertical side members;

(c) a pair of supporting springs, one for each of said

support members, each spring having one end attached to one of said support members and the other to said frame at an elevation above said support member, and

(d) leg-exercising means depending from each of said support members, said leg-exercising means including resilient means secured at one end to said support member and having a foot stirrup at its other end, the two leg-exercising means being positioned whereby the user can manipulate said leg-exercising means in a bicycle riding movement.

2. In combination with a recliner type chair having a seat, back, arms, and support frame, an exercising device comprising:

(a) a generally U-shaped frame having a horizontal member and two vertical depending members, said frame being removably secured at the lower ends of its vertical members to the chair arms whereby the horizontal member may be easily grasped by the user from a sitting position in said chair;

(b) a bracket vertically pivotally affixed to and extending from each of said vertical members, said bracket having at least one notch provided therein;

(c) supporting springs each having one end attached to one of said brackets and the other to said frame at an elevation above said brackets; and

(d) leg-exercising means extending from each of said brackets, said leg-exercising means including:

(1) an inverted V-shaped hook engaging the notch in said bracket;

(2) a pair of springs attached at one end to the terminal ends of said hook; and

(3) a foot stirrup attached to the opposite ends of said springs, whereby the user can manipulate the two leg-exercising means in a bicycle riding movement.

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DELBERT B. LOWE, Primary Examiner

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