MOVABLE PLATFORM EXERCISER

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ABSTRACT

An exercising device for physical fitness training, especially for use as an at-home exerciser. The exercising device is characterized by two double crank arms attached to a frame and revolving around a horizontal axle. Additionally, the inner arms of the two double crank arms are connected with at least one platform on which a user stands. A handle bar is attached for the user on the outer arm of each double crank arm. When the user stands on the platform and grasps the handle bars, by appropriately shifting his body weight, he can cause the platform to go in a circular motion. This movement is opposed by spring attachments which tend to keep the platform in a horizontal attitude throughout its complete motion. The movements carried out by the user are similar to those of skiing.

6 Claims, 5 Drawing Figures
MOVABLE PLATFORM EXERCISER

According to the invention the exerciser is characterized by two double arms attached to a frame and revolving around a horizontal axle, further by the fact that the inner arms of the two double cranks are connected with at least one platform for the user, and that a handle bar is attached for the user on the outer arm of each double crank.

Such an exerciser achieves a uniform workout of all the muscles, especially the arm and leg muscles. It is especially suitable for summer trainings of skiers, because the movements carried out when using this equipment are similar to those of skiing and especially those muscles are developed, which are required when skiing.

One version of this exerciser has both inner crank-handles connected with a common platform.

Another version is equipped with two separate platforms, each of which is connected with one of the two double cranks.

In both versions, each platform consists preferably of a board and a mechanical arrangement is provided which tends to maintain each board in a horizontal attitude.

Examples for versions of the invention are illustrated in the drawings. Shown are:

FIG. 1 is a plan view of the first version of the exerciser.

FIG. 2 is the side view of exerciser in FIG. 1.

FIG. 3 is an enlarged section of a part of the exerciser in FIGS. 1 and 2.

FIG. 4 is a schematic illustration to explain the operation of the exerciser in FIGS. 1 and 2, and

FIG. 5 is the plan view of another version of the exerciser.

The exerciser shown in FIG. 1 consists of a stand, formed by a right-angled frame 2 to which four legs 3 are attached. The legs can be folded inwards against the stand and are, when unfolded, secured in place by braces 4. The frame 2 consists of two longitudinal bars 5 and 6, which are connected by transverse bars 7 and 8. In the center of the longitudinal bar 5, a bearing 9 is attached, in which a rotatable double crank 10 is mounted. The double crank 10 has opposing crank handles 11 and 12, of which the crank handle 11 is positioned on the inside, and crank handle 12 on the outside of the longitudinal bar 5. In the same manner a bearing 13 is attached to the center of the longitudinal bar 6, in which a double crank 14 is mounted, which consists of an inner crank handle 15 and an outer crank handle 16.

The ends of the two inner crank handles 11 and 15 are connected by a cross bar 17, and this crossbar 17 is connected with an approximately square platform 18 approximately at its center. At the free end of each of the crank handles 12 and 16 a handle bar 19 and 20 is connected, which is of such a length that it is easily held by a person standing on the platform 18. For adjustment to different body heights the handlebars 19 and 20 can be made adjustable or exchangeable.

Parallel to the longitudinal bars 5 and 6 are two guide rods 21 which are shorter than the longitudinal bars 5 and 6, and the ends of which are connected by springs 23 with the transverse bars 7 and 8. The platform 18 has guides in the form of tubing 24 along the underside of its two longitudinal edges. The guides 24 accommodate the guide rods in such a manner that the guide rods can move within the tubing.

Consequently, upon the rotation of the two double cranks 10 and 14 the platform completes a full circular motion, sliding meanwhile along the guide rods 21, which it takes along upward and downward during which the spring 23 tends to keep the guide rods 21 and consequently the platform 18 also, in a horizontal attitude throughout the complete motion.

The manner of operation of the exerciser is recognizable in the diagram of FIG. 4: The user stands on the platform 18 and grasps the two handlebars 19 and 20. By shifting the body weight onto the two handlebars 19 and 20, the outer crank handle 12 and 16 are moved downward, so that the platform 18 rises in a circular motion, meanwhile sliding forward on the guide rods 21. Upon reaching the upper dead center, the body weight is shifted again onto the platform 18, which thereby moves forward and down, and raises the handlebars. The springs 23 meanwhile keep the guide rods 21 in a horizontal attitude and simultaneously exert a certain resistance which has to be overcome during the movement out of the middle position. The alternating shift of the body weight to arms and legs, results in a very good workout of all muscles.

In the second version shown in FIG. 5, the stand 1 essentially the same with the rectangular frame 2 of longitudinal bars 5 and 6 and transverse bars 7 and 8, and, attached to the longitudinal bars 5 and 6, the double cranks 10 and 14 with inner crank handles 11 and 15 and outer crank handles 12 and 16, and handle bars 19 and 20 attached thereto. The difference between the version of FIGS. 1 and 2, is the fact that the platform is replaced by two independent footboards 25 and 26, of which footboard 25 is connected with the inner crank handle 11 of the double crank 10, and footboard 26 with the inner crank handle 15 of the double crank 14. For additional support of these two platforms there are provided between them independently revolving support arms 27 and 28, which are located on a central support member 29 of the frame. Each of the two footboards 25 and 26 is equipped with a parallel guide system of its own, consisting of two guide rods 30 which are connected to each other at their ends by cross bars 31, which are connected by springs 32 with the transverse bars 7 and 8. The two platforms 25 and 26 are connected with their guide rods 30 by guides in a manner similar to that shown in FIG. 3.

In this version of the exerciser the user places one foot on footboard 25 and the other foot on footboard 26. Upon grasping the two handles, he can move his legs in a manner similar to that used in bicycle riding. The motion of the arms and legs achieved thereby is similar to that in skiing and especially in climbing.

The exerciser has a compact and flat form permitting convenient storage when the legs 3 are folded against the frame 1.

1. Exerciser comprising a frame, two double crank-arms rotatably attached around a horizontal axle on said frame, two independent handles, each of said handles being connected to an outer crankarm of one double crankarm, two independent footboards, each of said footboards being connected to an inner crankarm of one double crankarm, and two support arms located between said footboards, each of said support arms being connected with one of said footboards and being
3. The exerciser of claim 2 and wherein said platform means is a one piece platform and the means interconnecting said one piece platform and said handle means is a pair of double crank arms rotatably attached around a horizontal axis.

4. The exerciser of claim 2 and wherein said platform means is a pair of independent footboards.

5. The exerciser of claim 2 and wherein said frame has connected thereto foldable legs.

6. The exerciser of claim 2 and wherein said platform means comprises two footboards and wherein two support means are located between said footboards, each support means being connected to one of the footboards and each support means being capable of rotating independently from the other support means.