Oct. 2, 1934. M. B. WROBLEY 1,975,382

EXERCISING APPARATUS

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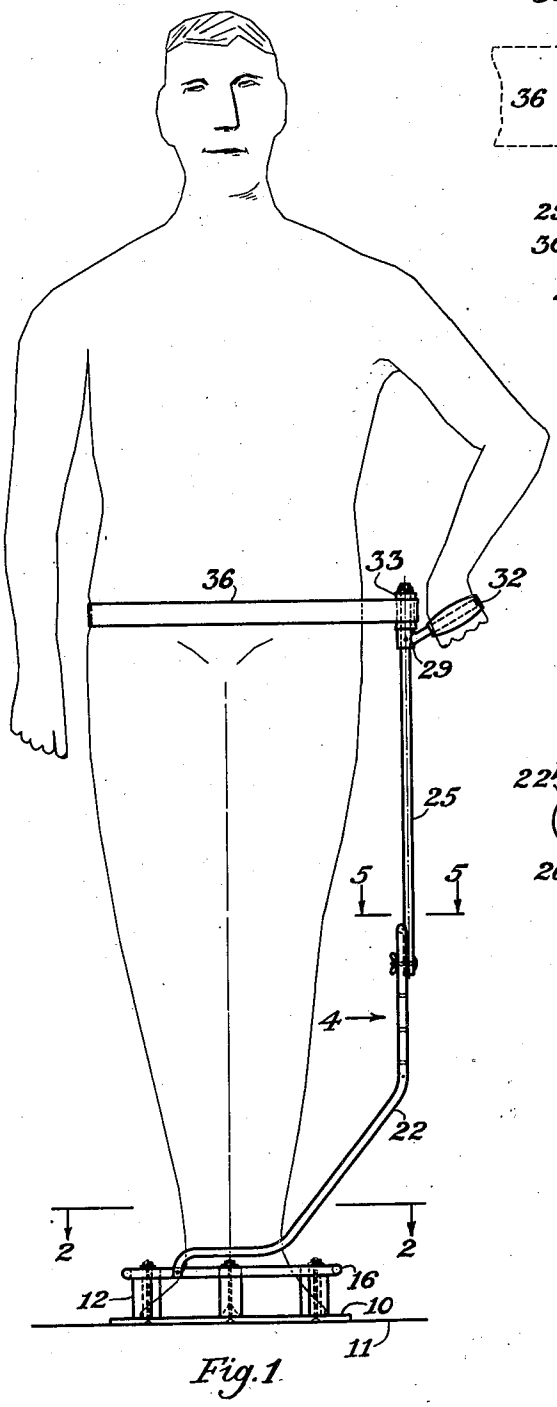


Fig. 1

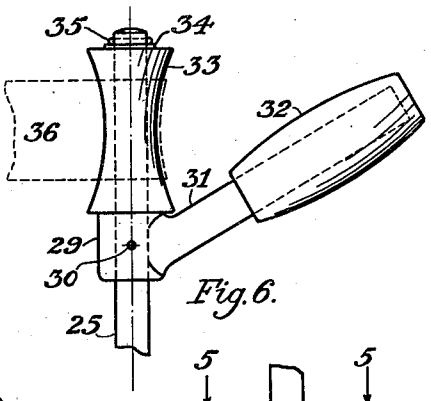


Fig. 6.

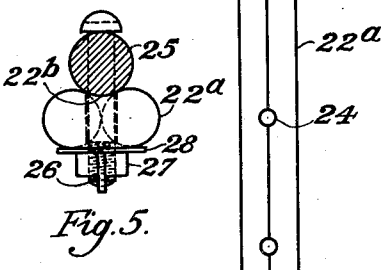


Fig. 5.

Fig. 4.

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EXERCISING APPARATUS

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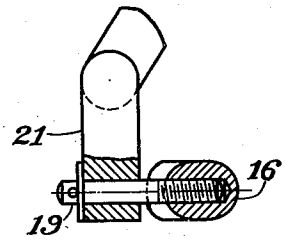


Fig. 7.

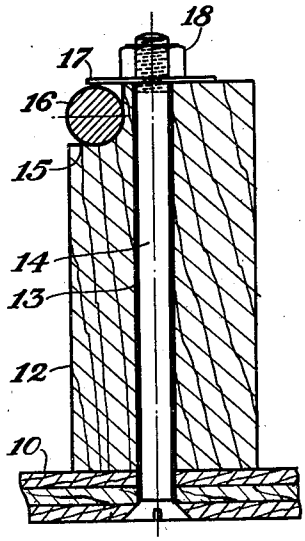


Fig. 8.

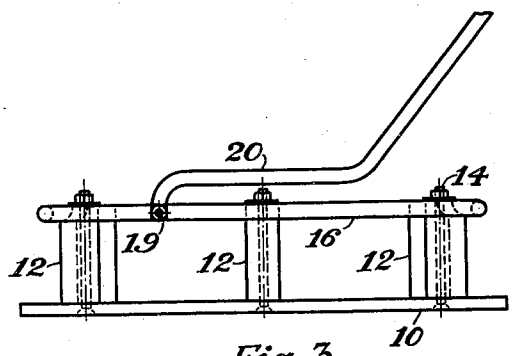


Fig. 3.

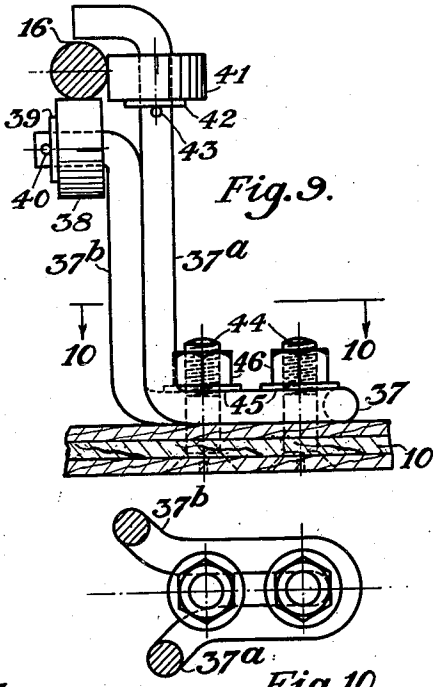


Fig. 9.

Fig. 10.

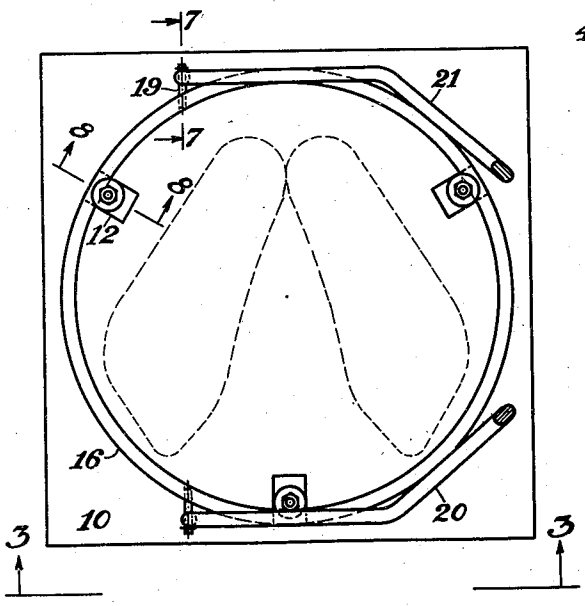


Fig. 2.

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Patented Oct. 2, 1934 1,975,382

UNITED STATES PATENT OFFICE

1,975,382

EXERCISING APPARATUS

Matthew B. Wrobley, Denver, Colo.

Application March 1, 1934, Serial No. 713,440

9 Claims. (Cl. 272—57)

This invention relates to improvements in exercising apparatus. In my Patent No. 1,952,830, granted March 27, 1934, I have described and claimed an exercising apparatus by means of which the exerciser can apply to his body bending forces that tend to flex the body at or about the level of the hips, and which can be turned about the body so as to exercise all of the abdominal, side and back muscles that are brought into play for the purpose of resisting the bending forces produced by means of the device.

It is the object of the present invention to produce a simplified and improved form of apparatus of the type described in the above identified patent, and so designed that it can be manufactured at less cost and still produce the same results.

This invention, briefly described, consists of a base, or support, which is adapted to rest on the floor, and which may be the floor itself. A circular ring is mounted for rotation about its own center and in a horizontal plane. A compression bar has its lower end pivotally attached to the ring so that it can swing in a plane perpendicular to the plane of the ring. The upper end of the bar has a handle that can be grasped by the exerciser and a pulley that engages with an endless belt which surrounds the body of the person exercising.

Having thus briefly described my invention it will now be described in detail and for this purpose reference will now be had to the accompanying drawings, in which it has been illustrated in its preferred form, and in which:

Fig. 1 is a side elevation of the device in operative position,

Fig. 2 is a sectional top plan view taken on plane 2—2, Fig. 1,

Fig. 3 is a side elevation, looking in the direction of arrows 3—3 in Fig. 2,

Fig. 4 is a fragmentary side elevation looking in the direction of arrow 4 in Fig. 1,

Fig. 5 is a section, taken on line 5—5, Figs. 1 and 4,

Fig. 6 is a fragmentary side elevation of the upper end of the compression bar, showing the handle and the pulley in position thereon,

Fig. 7 is a section taken on line 7—7, Fig. 2,

Fig. 8 is a section of a ring support, taken on line 8—8, Fig. 2,

Fig. 9 shows a modified form of ring support, and

Fig. 10 is a section taken on line 10—10, Fig. 9.

In the drawings numeral 10 designates the base, which is preferably formed from a piece of plywood, and which is adapted to be supported by the floor 11. It should be understood, however, that the floor itself may be the base. Extending upwardly from the upper surface of the base are three supports 12, which may be hickory blocks. The supports are provided with longitudinally extending openings 13 for the reception of bolts 14, by means of which the blocks are secured to the base. Each block is provided at its upper end with a notch 15 in which is located a circular ring 16. A washer 17 is clamped between the upper end of each block and the nut 18, and projects over the ring to hold it in position, as shown in Fig. 8. The ring is mounted loosely in the notches 15, and is preferably made of cold rolled steel rod, in order to slide smoothly upon the blocks 12. The ends of the rod forming ring 16 are united by being welded together. Extending outwardly from the ring are the axially aligned trunnions 19. These trunnions are shown located to one side of a diameter, but may be located on a diameter, if desired.

Attached to the trunnions are the forked ends 20 and 21 of the compression bar 22. The compression bar is preferably made of steel rod, doubled up at the upper end of the compression bar, as shown in Fig. 4. The lower ends of the parallel portions are connected by a rivet 23. A number of holes 24 are provided in the section 22*a*, extending from the top of the bar 22 to the rivet 23. An extension bar 25 is provided with a bolt 26, that extends through any one of the holes 24, and is provided with a winged nut 27, that serves to clamp the extension bar 25 to the section 22*a*. A washer 28 is provided between the nut and the section 22*a*, as shown in Figs. 4 and 5. A notch 22*b* is ground into the rod 22*a*, in order to admit the extension bar 25 into the groove formed by the parallel portions of the section 22*a*. It is evident that adjustment can be made by moving the bar 25 so that the bolt 26 will engage the hole 24 that gives the desired length.

The upper end of extension bar 25 has secured to it a casting 29, that is held in place by a rivet 30. The part 31, which projects outwardly, has a handle 32 that can be grasped by the exerciser in the manner shown in Fig. 1. A roller, or pulley 33 is mounted for rotation on the upper end of bar 25 and is supported on the casting 29. A washer 34 and a pin 35 serve to hold the pulley in place. An endless belt 36 encircles the pulley and the body of the exerciser, as shown in Fig. 1.

In Figs. 9 and 10 a modified construction is

shown. In this modification the blocks 12 have been replaced by a bracket 37, formed from a rod bent into a horizontal base portion, as shown in Fig. 10, and projecting upward in two branches 37*a* and 37*b*. Branch 37*b* is bent at right angles, as shown in Fig. 9, and it mounts a roller 38, which is held in place by a washer 39 and a pin 40. A roller 41 is mounted on the branch 37*a* and is held in place by a washer 42 and a pin 43. The portion of the branch 37*a* projecting above the roller 41 is bent over the ring 16. Bracket 37 is made firm on base 10 by the screws 44, the washers 45 and the nuts 46.

Where the device is to be used in a gymnasium the base 10 can be dispensed with and the supporting blocks 12 or brackets 37 bolted to the floor, which then takes the place of the base 10.

Let us now assume that the parts have been assembled as described and shown. A person, which has been referred to as the exerciser, steps on the base 10, as shown in Figs. 1 and 2. The belt 36 is placed about the body at the height of the hips and is also placed about the pulley 33. The height of the pulley 33 is adjusted so as to bring it to the position nearest to that desired for the belt. The exerciser now grasps the handle 32, with the palm down, and while exerting a slight downward and outward pressure, moves his arm back and forth in a semi-circle on the side of the body; after changing hands he repeats the operation on the opposite side of the body; this adjusts the position of the belt on the pulley 33. The exerciser now proceeds to exercise by oscillating the parts in the manner just described, but exerting a definite amount of pressure upon the handle 32.

The pulley 33, which cooperates with the belt, has a concave face, as shown in Fig. 6, as this shape has been found to be desirable in serving to adjust the belt, and it does not wear the edges of the belt as flanged pulleys do.

When the pulley 33 is moved about the body, ring 16 turns about its center, and the friction between it and the supports may be reduced by the use of the construction shown in Figs. 9 and 10.

Having described my invention what I claim as new is:

1. An exercising apparatus comprising, in combination, a support on which an exerciser stands, a ring movably mounted on the support to rotate in a plane and about its center, the ring surrounding a center line of the exerciser, a bar having its lower end pivotally connected with the ring to swing in a plane at right angles thereto, a handle adjacent the upper end of the bar, and a pulley rotatably connected with the bar at its upper end and carrying a belt engaging the exerciser.

2. An exercising apparatus comprising, in combination, a support on which an exerciser stands, a ring movably mounted on the support to rotate in a plane and about its center, the ring surrounding a center line of the exerciser, a bar whose lower end is bifurcated, the ring having two axially aligned trunnions, whose axis is a chord, the lower end of each bifurcation being provided with a bearing operatively connected with a trunnion, the upper end of the bar having a handle, and a pulley rotatably mounted on the bar near its upper end, said pulley carrying a belt engaging the exerciser.

3. An exercising apparatus comprising, in combination, a support on which an exerciser stands, a ring movably mounted on the support to rotate in a plane and about its center, the ring surrounding a center line of the exerciser, a bar whose lower end is bifurcated, the ring having two axially aligned trunnions, whose axis is a chord, the lower end of each bifurcation being provided with a bearing operatively connected with a trunnion, the bar having an upper portion adjustably secured to a lower portion, the upper portion having a handle rigidly attached to it, and a pulley rotatably mounted on the upper portion of the bar, said pulley carrying a belt engaging the exerciser.

4. An exercising device comprising, in combination, a base, a plurality of bearing blocks attached to the base and projecting upwardly therefrom, the blocks being arranged in a circle, a ring movably mounted on the blocks for rotation in a plane and about its center, and a bar having its lower end pivotally attached to the ring to swing in a plane at right angles thereto, the upper end of the bar having a handle and a pulley, the latter being rotatable and carrying a belt engaging the exerciser.

5. An exercising device comprising, in combination, a base, a plurality of bearing blocks attached to the base and projecting upwardly therefrom, the blocks being arranged in a circle, a ring movably mounted on the blocks for rotation in a plane and about its center, the ring having two aligned trunnions, whose common axis is parallel to a diameter, a rod having its lower end bifurcated, the end of each bifurcation having a bearing operatively connected with a trunnion, the upper end of the bar having a handle and a pulley, said pulley carrying a belt engaging the exerciser.

6. An exercising machine for exercising the back, side and abdominal muscles while the exerciser stands in an upright position, comprising, in combination, a base on which the exerciser is supported, a ring extending around a center line of the exerciser, means on the base for rotatably supporting the ring in a substantially horizontal plane, a compression bar having its lower end pivotally connected with the ring to swing in a plane at right angles thereto, the upper end of the bar having a handle to be grasped by the exerciser, and a pulley rotatably mounted on said bar near the handle, the pulley serving to engage an endless belt encircling the body of the exerciser in the vicinity of the hips.

7. An exercising device of the class described, comprising, in combination, a base, a plurality of bearings mounted thereon, a ring engaging the bearings and mounted thereon to rotate in a plane and about its center, a compression bar having its lower end hingedly connected with the ring to swing in a plane at right angles thereto, the upper end of the compression bar having a handle, and a pulley rotatively connected with the upper end of said bar and carrying a belt engaging the exerciser.

8. An exercising apparatus comprising, in combination, a support on which an exerciser stands, a ring movably mounted on the support to rotate in a plane and about its center, the ring surrounding a center line of the exerciser, a bar having its lower end pivotally connected with the ring to swing in a plane at right angles thereto, a handle adjacent the upper end of the bar, and a pulley rotatably connected with the bar at its upper end, the face of the pulley being concave and carrying a belt engaging the exerciser.

9. An exercising apparatus comprising, in combination, a support on which an exerciser stands,

a ring extending around a center line of the exerciser, a plurality of mounting means attached to the support and movably mounting the ring to rotate in a plane and about its center, each of said mounting means comprising a roller pivotally mounted and rotatably supporting the ring, a compression member having the lower end pivotally connected with the ring, to swing in a plane at right angles thereto, a handle adjacent the upper end of the compression member, and a pulley rotatably connected with the compression member at its upper end and carrying a belt engaging the exerciser.

MATTHEW B. WROBLEY.