

[54] WHEEL SUPPORTED EXERCISING DEVICE

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a part interest

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272/79 R, 80

[56] References Cited

UNITED STATES PATENTS

2,069,384	2/1937	Ogden.....	272/57 D
2,645,482	7/1953	Magida	272/57 D
1,997,139	4/1935	Gardener et al.....	272/57 J

1,916,660	7/1933	Duff.....	272/79 R
863,122	8/1907	Weber.....	272/57 R

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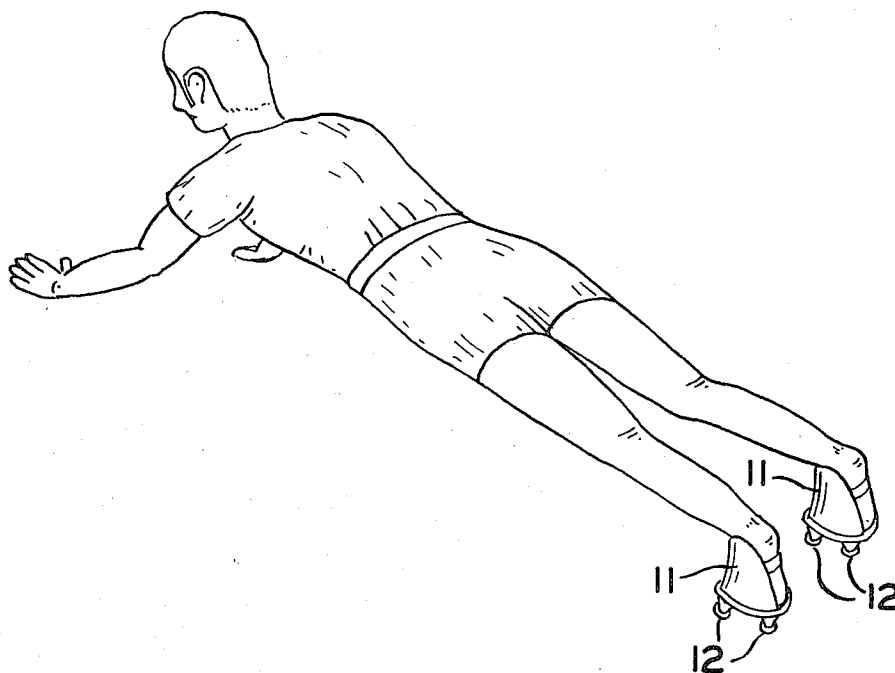
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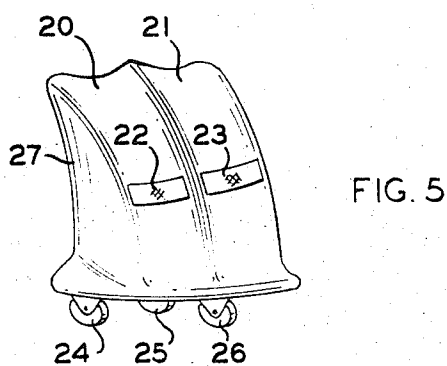
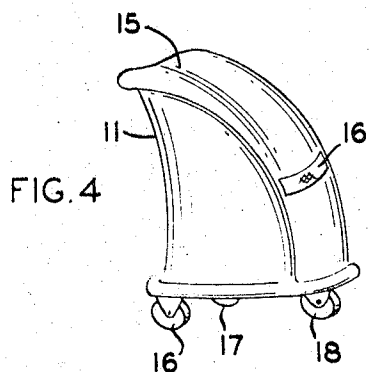
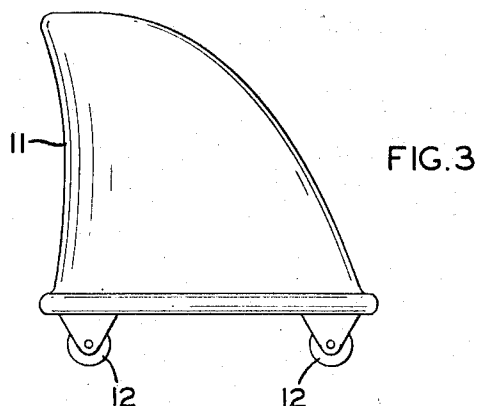
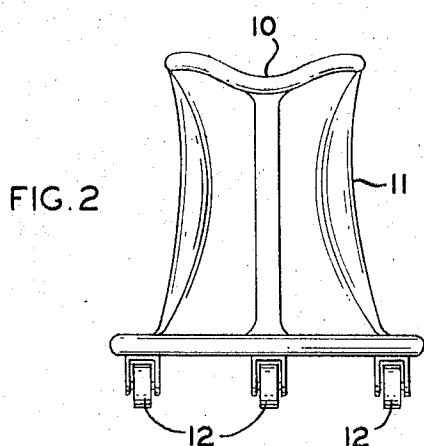
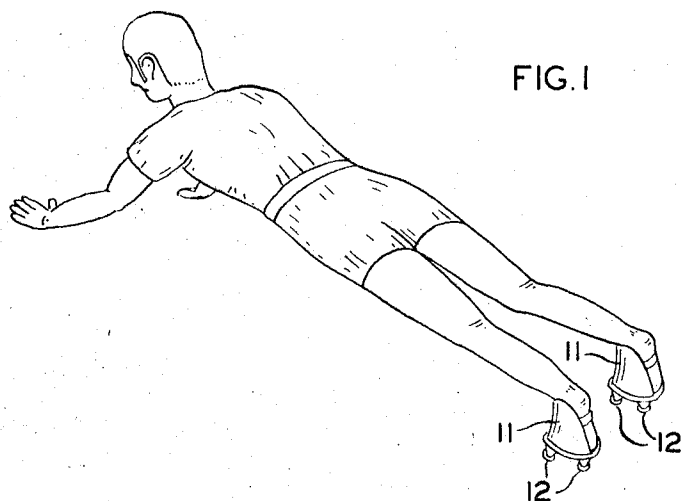
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ABSTRACT

The device supports the user's feet and ankles when the user is in the prone position. The device is structured to move across a flat surface on wheels. The upper portion is shaped to receive the ankle, instep and foot of the user, with a retainer to hold the foot in place. The wheels are preferably caster wheels to provide for movement in any direction. In use, the device is a means for body-building, exercise, or play.

9 Claims, 5 Drawing Figures





WHEEL SUPPORTED EXERCISING DEVICE

BACKGROUND OF THE INVENTION

This invention relates to an exercising device, normally used in conjunction with the ankle, instep and foot of a human being. In use, the device normally supports the lower part of the shin, ankle, and foot when the body is in a prone position with the back straight and the remaining body weight supported on the hands. By "walking" with the hands or "scissoring" the legs, vigorous exercise is provided for the arms, shoulders, abdomen, back and legs.

Somewhat related are the hand-held wheel devices, which, however, support the forward portion of the body, and with which the motion of the arms is limited. In use, the hand-held wheels normally are moved back and forth parallel to the body line, and the feet are stationary.

SUMMARY OF THE INVENTION

Briefly described, the device of the invention is comprised of four elements acting in combination to provide a novel apparatus for exercise or play. The elements are a receiver, a retainer which cooperates with the receiver, a frame capable of supporting the receiver and retainer, and two or more wheels beneath the frame.

The receiver has at least one saddle-shaped arcuate member with two parallel upwardly and outwardly extending lips. The retainer is generally horizontal, intersects the lips of the arcuate member, and is attached to the lips.

In its preferred form, the arcuate portions of the receiver are shaped to conform to the front of the ankle, the instep and the foot. The device is meant to support a portion of the user's body weight.

The device can be used in the following manner: a person places his feet into the receiver-retainer opening while his body and legs are held straight and almost parallel to the ground. The remaining body weight is supported on the hands, much as in the "push-up" exercise position. The wheels allow the device (and hence the feet) to move freely along the floor as the user "walks" with his hands. Alternatively, the hands can be kept in place and the legs "scissored" to open and close them. As a further optional use, the heels of the user are placed on the retainer, as he supports his upper body with his hands, in a supine position. For exercise in this position the knees can be flexed, or the legs scissored.

The value of the device is apparent as an aid to exercise and muscle development. Also, if several persons are equipped with the devices, races between them can provide competitive games, as in school physical education classes.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a perspective view of a person employing two devices embodying the invention.

FIG. 2 is a front elevation of the device.

FIG. 3 is a side elevation of the same device shown in FIG. 2.

FIG. 4 is a perspective view of the same device shown in FIGS. 2 and 3.

FIG. 5 is a perspective view of another embodiment of the invention.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

While the device of the invention can be so shaped as to accommodate both feet, the preferred device will accept only one foot, and is thus preferably used in pairs, one for each foot.

The receiver portion is preferably curved so as to conform, at least partially, to a person's ankle, instep, and foot. Although it is possible that a single standard configuration of the receiver would be usable by all; if desired, the receiver can be sized so that, for example, a smaller model would be available for children. Alternatively, the receiver could be adjustable, as by bending, to conform more exactly to an individual's ankle and instep.

The materials of construction of the device are not critical, and wood, metal, plastics and the like can be used, so long as the device is sufficiently strong to support the load placed upon it. Padding can be employed in the receiver portion, if desired, for greater comfort.

The retainer portion can be a rigid member, such as a bar, or it can be a flexible strap. Its primary function is to keep the foot in place so that it does not slide downward or backward. The retainer can be a separate piece, secured to the receiver in any convenient way, or it can be integral with the receiver. If the retainer is a strap it can be adjustable in length so as to provide further flexibility as to size.

The frame portion serves to unite the receiver and retainer portions with the wheels, and to distribute the load placed on the receiver to the wheels. Its upper shape will be dictated primarily by the shape of the receiver, and its lower shape by the spacing of the wheels.

At least two wheels are required in the device, to assure comfort and control. It has been found preferable that three wheels should be provided, for best operation, and they are most preferably located at the apices of an equilateral triangle. Maximum comfort and stability are attained by positioning one wheel beneath the retainer (at the toe portion of the receiver), and the other two symmetrically on either side of the center line, beneath the ankle portion of the receiver.

The wheels can be of any convenient size and type; however, caster wheels are preferred for ease of mobility in all directions. If the device is to be used, for example, on a gymnasium floor, a mar-proof substance, such as nylon, for example, should be used for the wheels, or the portion thereof which is in contact with the floor. Caster wheels which are swiveled on ball bearings are recommended for optimum flexibility of movement; however, any type of structure which allows 360° movement with minimum friction can be used, such as freely rotating spheres set in sockets, for example.

A better understanding of the device can be obtained by reference to the accompanying drawings, which depict a preferred embodiment of the device.

FIG. 1 shows a man wearing one of the devices on each foot. The devices support a portion of his body weight, and his remaining weight is supported on his hands. In this position, the legs can be moved open and closed while the hands are kept stationary. Alternatively, by "walking" with his hands, he can propel his body across a surface.

In FIG. 2, the device is shown in front elevation. The forward portion 10 of the receiver is shaped and posi-

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tioned to hold the ankle. The frame 11 supports the receiver, and wheels 12 support the frame.

FIG. 3 is a side elevation of the same device. In this view, the concave surface of the receiver is hidden by the frame 11. The wheels 12 are again shown supporting the frame 11, with two forward wheels at left, and one centered wheel supporting the rear portion at right.

FIG. 4 is a perspective view of the same device, with the receiver indicated generally at 15 and the retainer 16 attached thereto. The two forward wheels 16, 17 and the rear wheel 18 are supporting the frame 11.

FIG. 5 shows a variation of the device, in which two receiver means 20, 21 are used, with retainers 22, 23 attached to each. The forward wheels 24, 25 and rear wheel 26 are attached to the bottom of the frame 21, in a similar manner.

The foregoing descriptions and drawing show examples of several modes of the device of the invention and are not meant to be limiting as to the scope of the invention, which is set forth in the following claims.

I claim:

1. An exercising device comprising, in combination, receiver means capable of supporting a load placed thereon comprising at least one saddle-shaped arcuate member shaped to conform to the frontal ankle, instep, and foot of a human being, said arcuate member having two parallel upwardly and outwardly extending lips, retainer means comprising an elongated member dis-

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posed generally horizontally intersecting and attached at each of its ends to the lips of each of said arcuate members at a zone intermediate the ends of said arcuate members,

frame means located beneath the receiver means capable of supporting the receiver means and a load placed thereon,

and wheel means located beneath the frame means supporting the frame means and comprising a plurality of wheels.

2. The device of claim 1, wherein two parallel, contiguous arcuate members are present.

3. The device of claim 1, wherein the retainer means comprises a flexible strap.

4. The device of claim 1, wherein the wheel means comprises three wheels.

5. The device of claim 4, wherein the three wheels are located at the apices of an equilateral triangle.

6. The device of claim 5, wherein one apex of the triangle is positioned directly beneath the retainer means.

7. The device of claim 1, wherein the wheels are caster wheels.

8. The device of claim 1, wherein the receiver means, retainer means and frame means are all contained in one integral molding.

9. The device of claim 1, wherein the arcuate member is padded.

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