

July 5, 1966

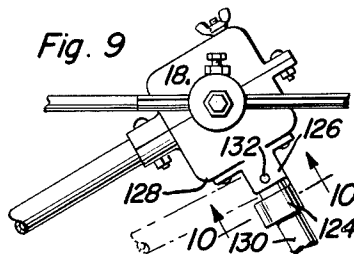
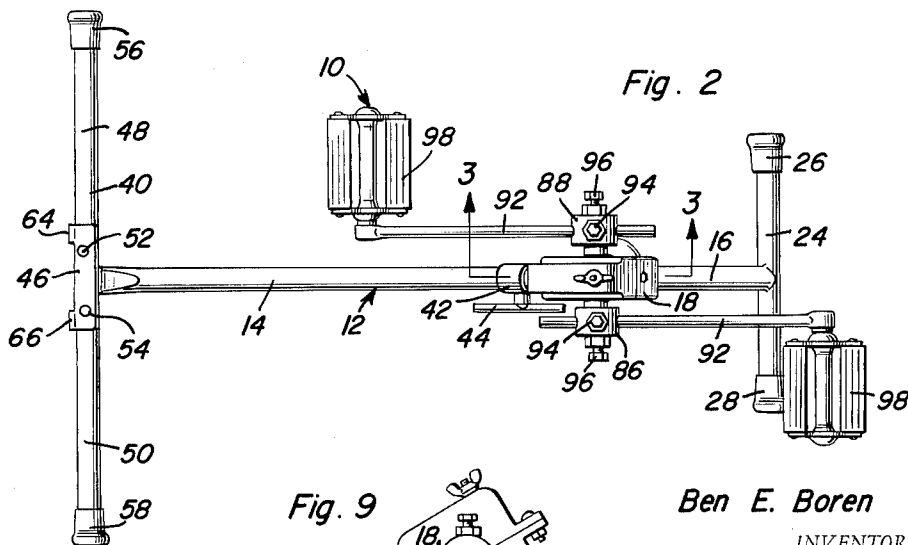
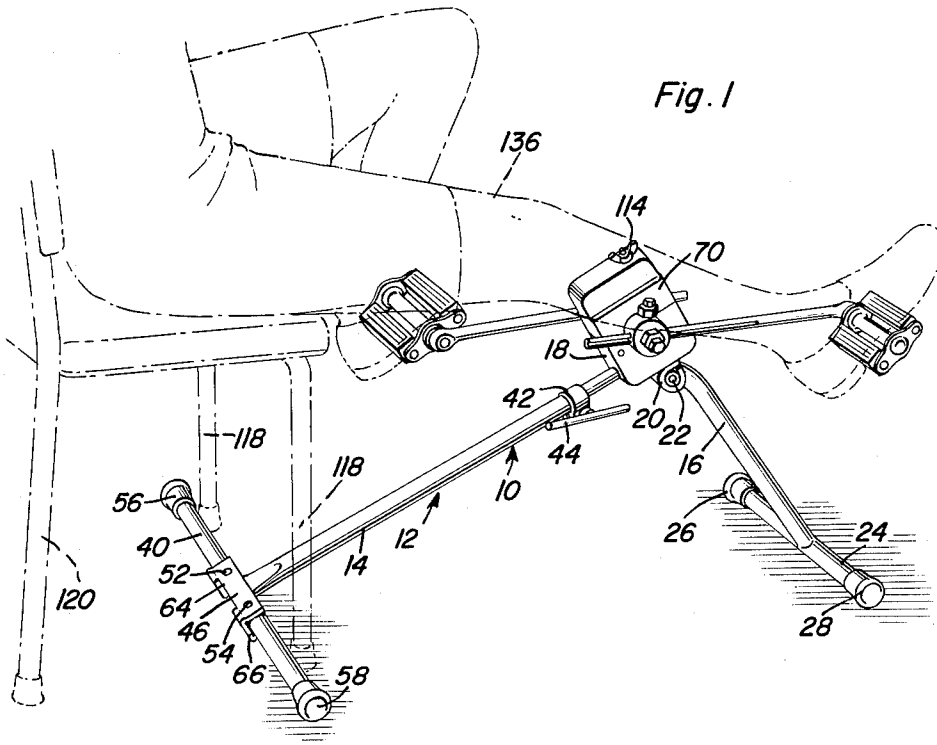
B. E. BOREN

3,259,385

PORTABLE EXERCISING DEVICE

Filed Feb. 27, 1964

2 Sheets-Sheet 1



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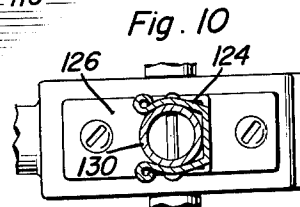
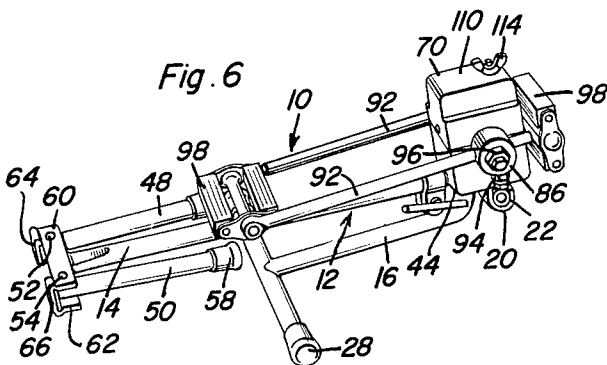
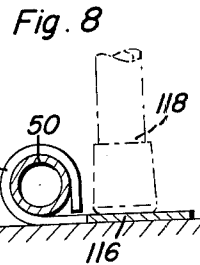
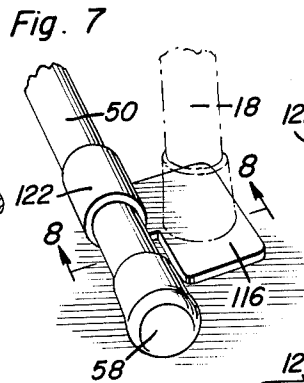
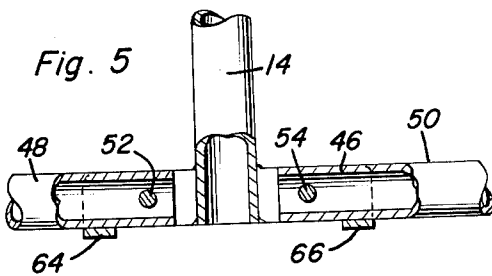
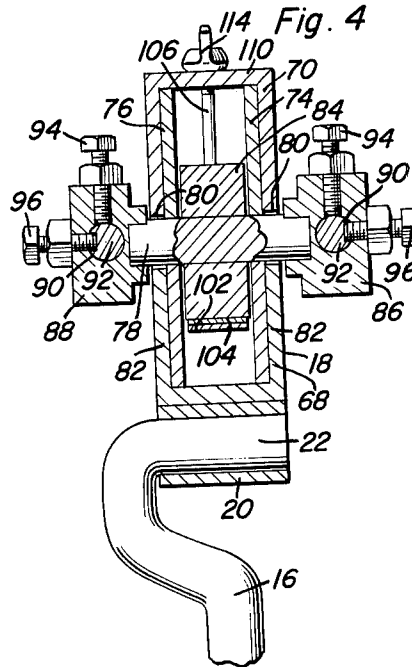
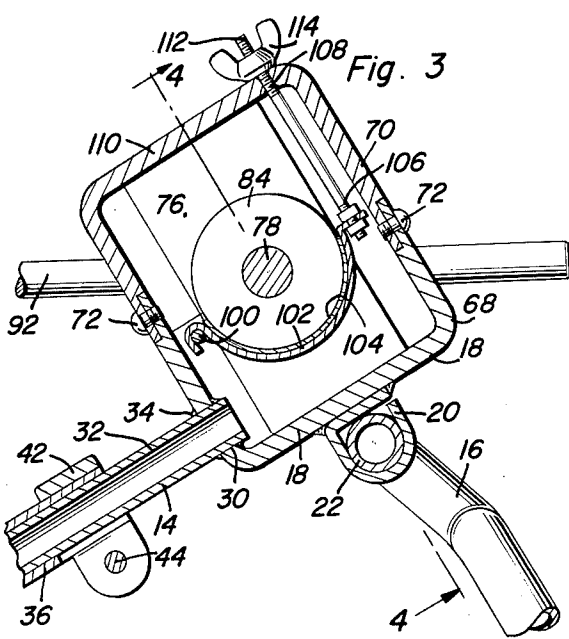
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PORTABLE EXERCISING DEVICE

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2 Sheets-Sheet 2



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3,259,385

PORTABLE EXERCISING DEVICE

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4 Claims. (Cl. 272-73)

This invention relates to a novel and useful portable exercising device and more specifically to an exercising apparatus including a rotatable pedal assembly analogous to a portion of a bicycle. The portable exercising device of the instant invention is, in that it includes a pedal assembly, similar to numerous types of exercising devices presently commercially available but which are far more expensive in that they include a frame for supporting the person using the exercising device, normally being provided with a saddle-type seat.

The portable exercising device of the instant invention includes a rotatable pedal assembly and a support frame therefor. However, the support frame for the pedal assembly is quite small and inexpensive and merely provides a support for the rotatable pedal assembly and not a support for the person utilizing the exercising device. On the other hand, the small lightweight support frame for the rotatable pedal assembly of the portable exercising device of the instant invention includes means by which a support frame may be engaged with the legs of a conventional chair and held in position while a person seated on the chair utilizes the exercising device. In this manner, the exercising device of the instant invention may be readily manufactured at a reduced cost inasmuch as it is more compact. Further, the portable exercising device of the instant invention may be readily transported from one location to another and utilized by a person desiring physical exercise merely by positioning the frame of the exercising device in engagement with the legs of a conventional chair upon which the person desiring to use the exercising device is seated.

The exercising device further includes brake means of simple construction including means by which a frictional drag may be intentionally applied to the rotatable pedal assembly and may be adjusted as desired so as to provide a predetermined amount of drag. Still further, the exercising device of the instant invention includes a support frame which is adjustable so as to vary the positioning of the axis of rotation of the pedal assembly thereof relative to a chair with which the exercising device is engaged. In this manner, the exercising device is readily adjustable to suit each person who uses it and in addition the rotatable pedal assembly thereof includes crank arms which are adjustable in length thereby enabling the diameter of the circle scribed by each of the pedal portions thereof to be adjusted as desired.

The main object of this invention is to provide a portable exercising device constructed in a manner so as to be readily portable and so as to coact with a conventional four legged chair enabling the person utilizing the exerciser to be supported from the conventional chair in position to use the exerciser.

Yet another object of this invention, in accordance with the immediately preceding object, is to provide a portable exerciser which may be readily folded into a compact state for ease in transportation.

Still another object of this invention is to provide a portable exerciser in accordance with the preceding objects including means by which the position of the axis of rotation of the pedal assembly thereof may be adjusted

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relative to the chair with which the portable exercising device is engaged.

A further object of this invention is to provide a portable exercising device including a rotatable pedal assembly having crank arms which may be varied in length.

Still another object of this invention is to provide a portable exercising device in accordance with the preceding objects including adjustable brake means for effecting a variable drag on the rotatable pedal assembly thereof.

A final object of this invention to be specifically enumerated herein is to provide a portable exercising device in accordance with the preceding objects which will conform to conventional forms of manufacture, be of simple construction and easy to use so as to provide a device that will be economically feasible, long-lasting and relatively troublefree in operation.

These together with other objects and advantages which will become subsequently apparent reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming a part hereof, wherein like numerals refer to like parts throughout, and in which:

FIGURE 1 is a perspective view of the portable exercising device of the instant invention shown operatively associated with a conventional form of four-legged chair, the chair and the lower portion of a person seated on the chair being shown in phantom lines;

FIGURE 2 is a top plan view of the exercising device;

FIGURE 3 is an enlarged fragmentary vertical sectional view taken substantially upon the plane indicated by the section line 3-3 of FIGURE 2;

FIGURE 4 is a fragmentary transverse vertical sectional view taken substantially upon the plane indicated by the section line 4-4 of FIGURE 3;

FIGURE 5 is a fragmentary elevational view of one foot portion of the support frame of the exercising device with portions thereof being broken away and shown in section;

FIGURE 6 is a perspective view of the exercising device in a folded condition;

FIGURE 7 is a fragmentary perspective view of another portion of the foot assembly illustrated in FIGURE 5 of the drawings and showing the manner in which anchoring tabs may be mounted on the foot portion for engagement by the lower ends of the legs of the chair with which the exercising device is operatively associated;

FIGURE 8 is an enlarged sectional view taken substantially upon the plane indicated by the section line 8-8 of FIGURE 7;

FIGURE 9 is a fragmentary side elevational view of a modified form of exercising device illustrating a second manner in which one leg or the support frame may be pivotally secured to the brake housing; and

FIGURE 10 is an enlarged fragmentary sectional view taken substantially upon the plane indicated by the section line 10-10 of FIGURE 9.

Referring now more specifically to the drawings the numeral 10 generally designates the portable exercising device of the instant invention.

The exercising device 10 comprises a support frame generally referred to by the reference numeral 12 including first and second legs 14 and 16 and a brake housing 18. The brake housing 18 includes a journal member 20 which rotatably receives the right angulated upper end portion 22 of the leg 16. The lower end of the leg 16 is provided with a transversely extending foot portion

24 which extends transversely of and projects outwardly on opposite sides of the leg 16. The opposite ends of the foot portion 24 are provided with diametrically enlarged anti-skid cups 26 and 28.

The housing 18 has a bore 30 formed therein and it may be seen that a first section 32 of the leg 14 has one end secured in the bore or opening 30 in any convenient manner such as by welding 34. The free end of the section 32 is telescoped within the upper end of a second section 36 of the leg 14 and it may be seen from FIGURES 1 and 2 of the drawings that the lower end of the section 36 has a transversely extending foot portion 40 secured thereto. Further, from FIGURES 1 and 3 of the drawings it may be seen that a bifurcated clamp 42 is carried by the longitudinally slotted upper end portion of the section 36 and includes a threaded actuator 44 for causing the clamp 42 to urge the upper terminal end portion of the section 36 into tight clamping engagement with the section 32 so as to retain the leg 14 in adjusted extended positions.

The transversely extending foot portion 40 includes a fixed channel member 46 which extends transversely of the lower end of the section 36 and projects outwardly from opposite sides thereof. A pair of elongated extension members 48 and 50 have one pair of corresponding ends pivotally secured to the opposite end portions of the channel member 46 by means of pivot pins 52 and 54. The free ends of the extension members 48 and 50 are also provided with diametrically enlarged anti-skid cups 56 and 58. From a comparison of FIGURES 2 and 6 of the drawings it may be seen that the extension members 48 and 50 may swing from the operative aligned positions illustrated in FIGURES 1 and 2 of the drawings to the collapsed positions generally paralleling the section 14 illustrated in FIGURE 6 of the drawings.

From FIGURES 5 and 6 of the drawings it may be seen that the fixed channel member 46 includes a pair of opposite side flanges 60 and 62 which are interconnected at opposite ends by a pair of partial bight portions 64 and 66. It may be seen from FIGURE 5 of the drawings that the pivot pins 52 and 54 are spaced inwardly of the partial bight portions 64 and 66 and therefore that the ends of the extension members 48 and 50 remote from the anti-skid cups 56 and 58 will engage the adjacent surfaces of the partial bight portions 64 and 66 when the extension members 48 and 50 are pivoted to the collapsed positions illustrated in FIGURE 6 of the drawings. In addition, it may be seen that the extension members 48 and 50 also engage the inner surfaces of the partial bight portions 64 and 66 when the extension members are in the fully extended positions illustrated in FIGURES 1, 2 and 5 of the drawings.

From FIGURE 3 of the drawings it may be seen that the housing 18 includes a lower portion 68 from which the legs 14 and 16 are supported and an upper half or section 70. The upper half 70 may be secured to the lower half 68 by means of suitable fasteners 72. A pair of journal plates 74 and 76 are disposed within the housing 18 and rotatably journal opposite end portions of a shaft 78 whose opposite ends project through openings 80 formed in the opposite side walls 82 of the housing 18. Further, it may be seen that the shaft 78 includes a cylindrical enlargement 84 which is disposed between the journal plates 74 and 76. The cylindrical enlargement 84 is fixed on the shaft 78 for rotation therewith. A pair of fittings 86 and 88 are mounted on the outwardly projecting ends of the shaft 78 and each fitting has a bore 90 formed therethrough which extends at substantially right angles to and intersects the longitudinal center axis of the shaft 78. Each of the bores 90 has one end of a crank arm 92 secured therein by means of setscrews 94 and 96 and the free ends of the crank arms 92 have pedals 98 rotatably supported therefrom. The pedals 98 project laterally outwardly from opposite sides of the crank arms 92 and are rotatably supported from the free ends of the crank arms

92 for rotation about axes generally paralleling the axis of rotation of shaft 78.

From FIGURE 3 of the drawings it may be seen that an anchor pin 100 is secured between the opposite side walls 82 of the housing 18 and that one end of an arcuate spring 102 is anchored thereto. The arcuate spring or shoe is provided with a lining 104 which is secured to its concave face and the end of the shoe 102 remote from the pin 100 is apertured and has one end of a tension rod 106 secured therethrough. The other end of the tension rod 106 extends through a bore 108 formed through the top wall 110 of the housing 18 and is externally threaded as at 112. A wing nut 114 is threadably engaged with the externally threaded portion of the tension rod 106 and may therefore be utilized to cause the lining 104 to be urged into tight frictional engagement with the cylindrical enlargement 84 carried by the shaft 78.

With attention now directed to FIGURE 7 of the drawings it may be seen that each of the extension members 48 and 50 may be provided with an anchoring tab 116 which is adapted to underlie the corresponding front leg 118 of the chair 120. Each anchoring tab 116 includes a coiled portion 122 which rotatably receives and is slidably disposed on the corresponding extension member.

FIGURES 9 and 10 illustrated a further modified form of the invention including a channel-shaped spring clip 124 which is supported from a fitting 126 secured to the bottom wall 128 of the housing 18. The form of the invention illustrated in FIGURE 9 of the drawings utilizes a leg 130 instead of the leg 16 and it may be seen that the upper end of the leg 130 is pivotally secured within the fitting 126 by means of a pivot pin 132. The channel-shaped spring clip 124 is utilized to yieldingly retain the leg 130 in the position illustrated in FIGURE 9 of the drawings and it is to be understood that the leg 130 may be pivoted from the position illustrated in solid lines in FIGURE 9 of the drawings out of engagement with the channel-shaped spring clip 124.

In operation, the user 136 of the exercise device 10 first places the foot portion 40 of the exercising device 10 as illustrated in FIGURE 1 of the drawings with the free end portions of the extension members 48 and 50 disposed behind the front legs 118 of the chair 120. Then, the leg 14 may be adjusted in length as desired. Thereafter, taking into consideration the length of the legs of the user 136, the crank arms 92 may be adjusted so as to swing the pedals 98 through circles having a predetermined diameter.

The foregoing is considered as illustrative only of the principles of the invention. Further, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact construction and operation shown and described, and accordingly all suitable modifications and equivalents may be resorted to, falling within the scope of the invention as claimed.

What is claimed as new is as follows:

1. A portable exercising device comprising a support frame including first and second upstanding upwardly convergent legs interconnected at their upper ends for relative rotation about an axis extending transversely of the upper ends of said legs, a generally horizontally disposed shaft journaled from the upper end of one of said legs, crank means on said shaft for manually applying torque to said shaft, adjustable brake means mounted on said frame and operable to apply a variable amount of drag on said shaft, elongated transversely extending and generally horizontally disposed floor engaging anchor foot means on the lower end of at least one of said legs extending transversely thereof, the opposite end portions of said anchor foot means including anchor tabs extending outwardly from the adjacent lower surface portions of said foot means and adapted to be disposed between the lower ends of either the front or rear legs of a chair and a supporting surface on which the chair is disposed,

said anchor tabs each being of generally flat and planar configuration and of sufficient dimensions to support said legs when the latter are disposed thereon, said tabs each being rotatably supported on said foot means for rotation about the longitudinal axis of said foot means whereby said tabs may be maintained in positions resting flat on said supporting surface even though the inclination of said one leg relative to said supporting surface is varied.

2. The combination of claim 1 wherein said tabs project outwardly of the side of said foot means adjacent the lower end of the other of said legs.

3. The combination of claim 1 wherein said one leg is longitudinally extendable.

4. The combination of claim 1 wherein said anchor tabs includes means securing said tabs to said foot means for adjustable positioning longitudinally therealong.

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