

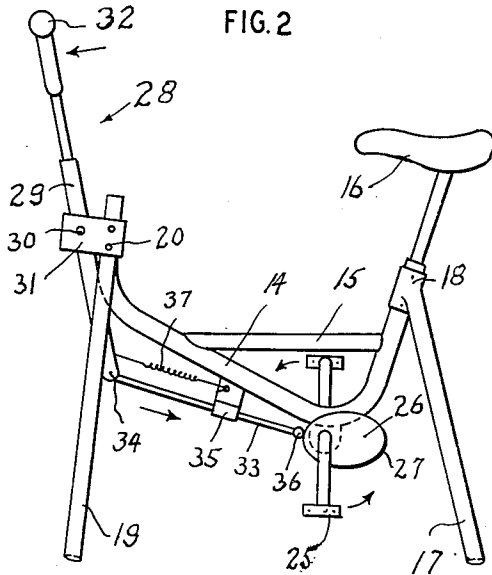
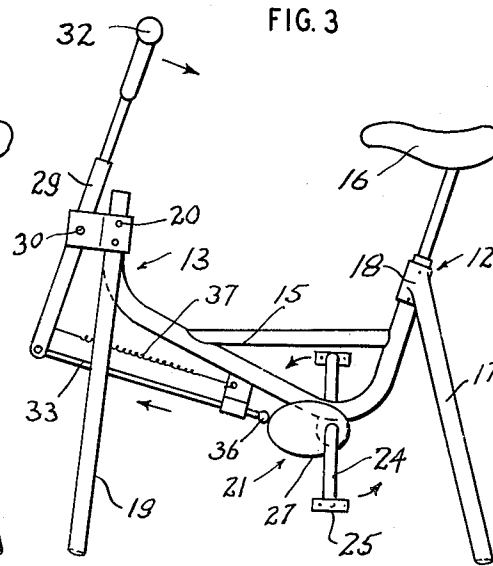
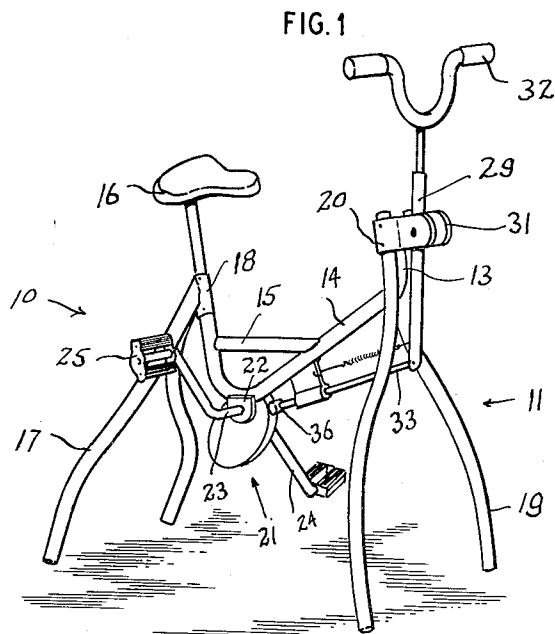
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EXERCISING DEVICE

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EXERCISING DEVICE

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This invention relates to exercising devices, and more particularly, concerns exercising devices, of the bicycle type.

It has been proposed to provide exercising devices wherein a pedal operated portion thereof may be braked to offer regulated resistance to the pedalling effort of the user of the device. In such devices, the exercising action is necessarily limited to the lower body portions of the user, including the legs, thighs and hips, while the upper portions of the body do not benefit from the exercising action.

Accordingly, an object of this invention is to provide an improved exercising device of the bicycle type, wherein means is provided for concurrently exercising the upper and lower body portions of the user.

Another object of this invention is to provide a device of the character described, wherein the handle bars are adapted to be reciprocated by the user so as to exercise the arms and shoulders, while pedalling to exercise the lower body portions, the pedalling action being correlated to the movement of the handle bars whereby the operation of one in effect regulates the operation of the other.

Yet another object of this invention is to provide a bicycle type exerciser of simple construction and minimum number of components parts to materially reduce the manufacturing costs thereof, yet being effective to provide close regulation of the exercising action of the device, by the user.

Other objects of this invention will in part be obvious and in part hereinafter pointed out.

In the drawing, FIG. 1 is a perspective view of an exercising device embodying the invention;

FIG. 2 is a side elevational view thereof showing the reciprocatory handle bar in its forward position; and

FIG. 3 is a view similar to that of FIG. 2, showing the handle bar in its retracted position.

Essentially the exercising device of the instant invention comprises a bicycle frame arranged for stationary disposition on a supporting surface while in use. The frame has the usual seating means for the user and a handle bar assembly arranged for reciprocatory movement towards and away from the seating means. Pedal means is mounted on the frame and braking means is provided for adjusting the resistance to be offered to the pedalling action, together with a connection between the braking means and the reciprocatory handle bar assembly to allow the user to control the braking means.

Thus, as shown in FIG. 1, 10 designates an exercising device embodying the invention. The same takes the form generally of a bicycle frame formed of tubular metal parts, including a rearwardly disposed, upstanding seat supporting portion 12, a forwardly disposed upstanding handle bar portion 13 and a generally horizontally disposed pedal assembly mounting portion 14 which interconnects the seat supporting portion 12 and the handle bar supporting portion 13 at the lower ends thereof.

A horizontally disposed reinforcing bar 15 extends forwardly from a lower portion of seat supporting portion 12 to a forward portion of the pedal assembly 14. A conventional seat member 16 is adjustably mounted on the upper end of seat supporting portion 12. Frame 11 is supported on a suitable supporting surface such as a floor or the like, by a pair of downwardly divergent

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legs 17 which are affixed at their upper ends to a split bracket 18, which in turn is secured to seat supporting frame portion 12.

A second pair of downwardly divergent legs 19 are secured at their upper ends to the upper end of handle bar supporting frame portion 13 by cross pins 20. A pedal assembly, generally indicated at 21, is mounted on frame portion 14. Assembly 21 includes a bearing bracket 22 secured at the juncture of seat supporting frame portion 12 and frame portion 14. A pedal crank shaft 23 is rotatably mounted on bearing bracket 22, with crank arms 24 extending from the crank shaft 23. The usual pedals 25 are mounted on the extremities of crank arms 24.

Means is provided for braking the pedal assembly 21 in the form of a braking disc 26 having an elliptical outline edge 27 and eccentrically affixed to crank shaft 23. Disc 26 is engaged by a braking member actuated by a handle bar assembly generally indicated at 28. Assembly 28 is mounted on handle bar supporting frame portion 13 and arranged for reciprocatory movement toward and away from seat 16.

Handle bar assembly 28 includes a vertically disposed lever member which is pivotally mounted about a horizontal axis as at 30 between split bracket members 31 which are affixed to frame portion 13 by cross pins 20. Handle bars 32 are mounted on the upper end of lever member 29, while the lower end of said lever member 29 is pivotally connected to a reciprocatory arm 33 as at 34. Arm 33 is supported by a drop bracket 35 affixed to an intermediate portion of frame portion 14.

A brake roller 36 is mounted on the rear end of arm 33 and bears on the edge 27 of disc 26. A spring 37 connected at one end to a lower portion of lever member 29 and at the other end to bracket 35, biases arm 33 to maintain roller 36 in contact with disc edge 27 in all positions thereof.

It will be apparent that the user of device 10, when sitting on seat 16, with his feet on pedals 25 and his hands grasping handle bars 32, can operate the device in a manner to control the braking action on the pedal assembly 21, by regulating the forward thrust on said handle bars, which determines the pressure applied by roller 36 on disc 26, through lever 29 and arm 33.

Thus, the exercising effect attainable with device 10 is applied to the arms and shoulders, as well as to the legs, thighs and hips of the user, with full control of the extent of exercise by way of handle bars 32. Furthermore, the rotary speed of pedal assembly 21 will in turn, determine the rate of reciprocation of handle bars 32 and the resultant effect on the upper body portions of the user.

It is understood that the outline of disc 26 may be varied to adjust the extent of the reciprocatory movement of handle bars 32 as well as the rate of movement within the cycle.

While device 10 is shown as being operated by the legs of the user as applied to pedals 25, it is understood that the device may be provided with electric motor means for turning the crank shaft 23, while braking action on disc 26 is controlled by handle bars 32, in the manner described above.

As various changes might be made in the embodiment of the invention herein described without departing from the spirit thereof, it is understood that all matter herein shown or described shall be deemed illustrative and not limiting except as set forth in the appended claims.

I claim as new and desire to protect by Letters Patent:

1. An exercising device comprising frame means having a rearwardly disposed upstanding seat supporting portion, a forwardly disposed upstanding handle bar supporting portion and a pedal shaft supporting portion con-

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necting said seat supporting and handle bar supporting portions, seat means mounted on said seat supporting portion, pedal shaft means independently rotatably mounted on said pedal shaft supporting portion, pedal means on said pedal shaft means, handle bar means mounted on said handle bar supporting portion for independent reciprocatory movement towards and away from said seat means, means for adjustably braking the rotation of said rotary pedal shaft means comprising brake surface means on said pedal shaft means, a braking member in abutting relation with said brake surface means, and means for operatively connecting said braking member and said handle bar means for conjoint movement, said brake surface means having a peripheral outline operative to maintain abutting contact with said braking member in all positions of said handle bar means.

2. An exercising device as in claim 1 wherein said brake surface means is generally elliptical in outline.

3. An exercising device as in claim 2 wherein said handle bars means includes a vertically disposed lever pivotally mounted on said handle bar supporting means, said connecting means comprising an arm pivotally connected at one end thereof to the lower end of said lever, said braking member being mounted on the other end of said arm.

4. A bicycle type exercising device comprising a frame, seat means on said frame, handle bar means mounted on said frame for movement toward and away from said seat means, a pedal assembly rotatably mounted on said frame, said handle bar means and said pedal assembly being independently movable, means fixed on said pedal assembly for braking said pedal assembly, means for controlling the braking action of said braking means including an arm mounted on said frame for reciprocatory movement, means connecting said arm and said handle bar means for conjoint movement, a brake abutment member on said arm, said braking means including a peripheral portion having an outline operative to maintain abutting braking contact with said brake member in all positions of said arm, the braking action on said pedal assembly being proportioned to the forward manual thrust applied to said handle bar means.

5. A bicycle type exercising device as in claim 4 and including spring means for biasing said arm in a direction to maintain said brake member in contact with said braking means.

6. An exercising device as in claim 4 wherein said handle bar means includes a vertically disposed lever member, means for pivotally mounting said lever member on said frame for reciprocatory movement about a

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horizontal axis, and pivot means connecting said arm and the lower end of said lever member.

7. A bicycle type exercising device comprising a frame, seat means on said frame, handle bar means reciprocably mounted on said frame for independent movement toward and away from said seat means, a pedal assembly mounted on said frame for independent rotary movement, and means operatively connected to said handle bar means and said pedal assembly for adjustably braking the rotation of said pedal assembly in response to regulated manual pressure on said handle bar means.

8. A device as in claim 7 wherein said adjustable braking means includes a brake abutment member on said handle bar means and movable in a substantially horizontal path in response to reciprocation of said handle bar means, and brake means rotatable with said pedal assembly, said brake abutment member bearing on the periphery of said brake means, said brake means being eccentrically related to said pedal assembly to maintain peripheral contact thereof with said brake abutment member in all positions thereof.

9. An exercising device comprising a frame, seat means on said frame, a pedal shaft assembly rotatably mounted on said frame, lever means pivotally mounted on said frame, handle bar means on the upper arm portion of said lever means, brake abutment means operatively connected to the lower arm portion of said lever means for movement in a substantially horizontal path in response to movement of said lever means, brake means eccentrically mounted on said pedal shaft assembly for conjoint rotation therewith, said brake abutment means being movable toward and away from said brake means in response to pivoted movement of said lever means, and said brake abutment means being movable into abutting braking contact with peripheral portions of said brake means upon movement of said handle bar means away from said seat means, the resultant braking action being adjusted in accordance with the manual pressure applied to said handle bar means.

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