E. B. BARNHILL.

EXERCISING DEVICE.

APPLICATION FILED JAN. 29, 1916.

1,205,426. Patented Nov. 21, 1916.

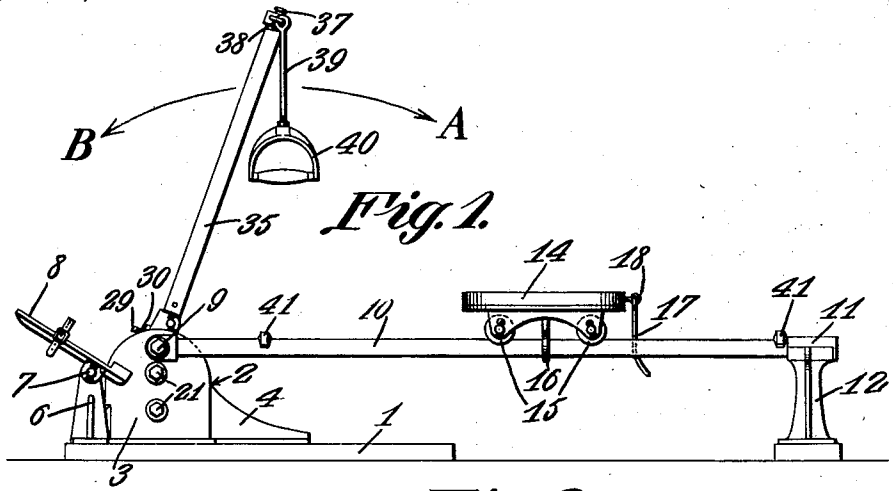

Fig. 1.

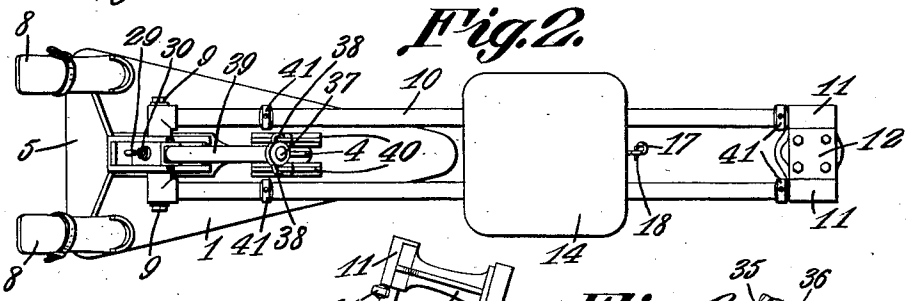

Fig. 2.

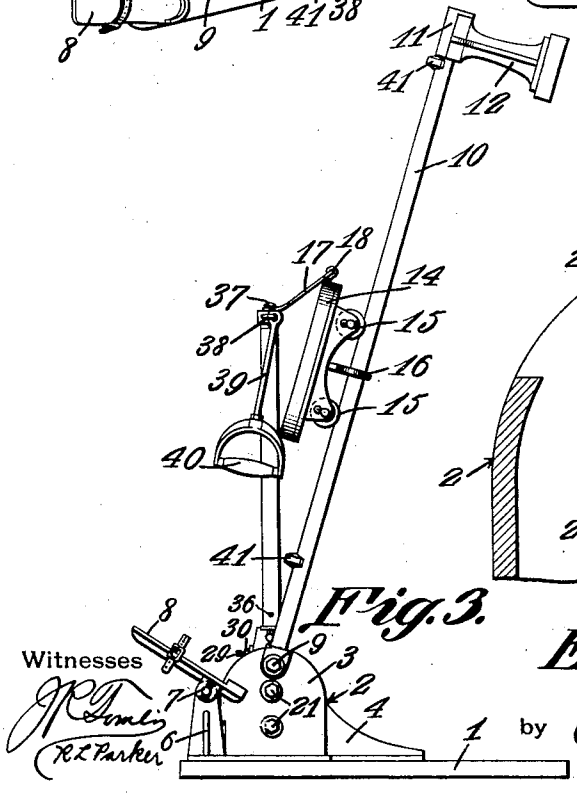

Fig. 3.

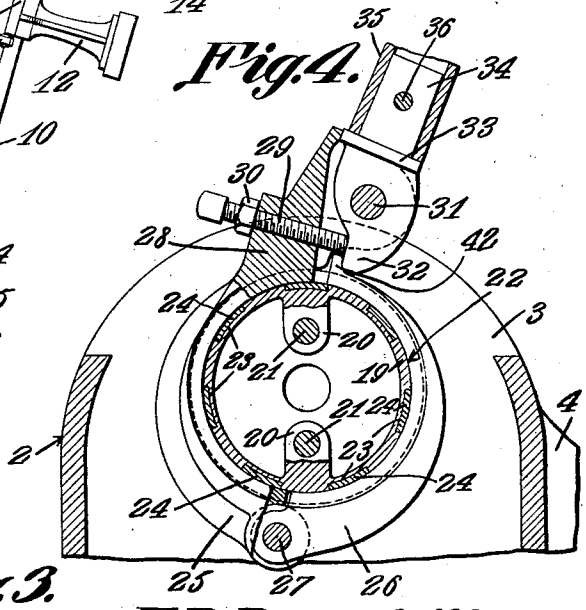

Fig. 4.

Witnesses

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EXERCISING DEVICE.

1,205,426. Specification of Letters Patent. Patented Nov. 21, 1916.

Application filed January 29, 1916. Serial No. 75,061.

To all whom it may concern:

Be it known that I, EDWARD B. BARNHILL, a citizen of the United States, residing at Marion in the county of Grant and State of Indiana, have invented a new and useful Exercising Device, of which the following is a specification.

The device forming the subject matter of this application is an exerciser adapted to enable the operator to secure benefits incident to rowing a boat.

One object of the invention is to provide novel means whereby the necessary friction may be given to a lever which the operator moves.

Another object of the invention is to provide novel means whereby the friction above described may be regulated.

A further object of the invention is to provide novel means whereby the structure may be held in a small compass when not in use.

It is within the province of the disclosure to improve generally and to enhance the utility of devices of that type to which the present invention appertains.

With the above and other objects in view which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of the invention herein disclosed can be made within the scope of what is claimed, without departing from the spirit of the invention.

In the accompanying drawing: Figure 1 shows in side elevation, an exercising device embodying the present invention, the structure being in the position which it will assume when in use; Fig. 2 is a top plan of the structure shown in Fig. 1; Fig. 3 is a side elevation showing the structure in the position it will assume when not in use; Fig. 4 is a fragmental vertical section showing the clutch mechanism whereby the desired degree of friction is imparted to the lever which is moved by the operator.

In carrying out the present invention there is provided a base 1 on which is mounted a casing 2 embodying side walls 3, the casing 2 being sustained by a rear brace 4. The forward end of the casing 2 carries a cross plate 5 having standards 6 on which are pivoted as shown at 7, pedals 8. The side walls 3 of the casing 1 carry pivot elements 9 on which are mounted to swing vertically, tracks 10 secured at their rear ends in sockets 11 constituting a part of a leg 12 which, when the structure is in position for use, as shown in Fig. 1, serves to hold the tracks 10 in a horizontal position. A seat 14 is adapted to traverse the tracks 10, the seat 14 carrying wheels 15 coöperating immediately with the tracks. The seat 14 is held to the tracks 10 for sliding movement by means of guide eyes 16 which, depending from the seat, receive the tracks 10 slidably. Mounted on the tracks 10 adjacent the forward and rear ends thereof are stops 41 which, coöperating with the wheels 15 of the seat 14, limit the forward and rearward movements of the seat along the tracks 10. A hook 17 or like securing device is pivoted as shown at 18 to the rear end of the seat 14, the function of the hook 17 being made manifest hereinafter. The seat 14 and the tracks 10 may be described as coöperating elements and it is to one of these coöperating elements that the hook 17 is pivoted.

Located between the side walls 3 of the casing 2 is a friction drum 19 having ears 20 through which pass securing members 21, the securing members 21 being terminally mounted in the side walls 3 of the casing 2. The drum 19 is provided with a circumscribing tread groove 22 crossed by seats 23 retaining friction blocks 24 which may be made of fiber or any other suitable material.

Surrounding the drum 19 and operating in the tread groove 22 thereof is a strap composed of rigid arcuate members 25 and 26 united adjacent their lower ends by a pivot 27. The member 25 of the strap is provided adjacent its top with a lug 28 through which is threaded a stop screw 29 held in adjusted positions by means of a lock nut 30 engaging the lug 28. The lug 28 carries a pivot element 31 on which is mounted to swing an actuating member 32 including a shoulder 33 and a stem 34, the actuating member 32 constituting a part of a tubular lever 35 seated on the stem 34 and held thereto by a cross pin 36. The upper end of the tubular lever 35 carries a projection 37 adapted to coöperate with the hook 17 in a manner to be set forth hereinafter. Pivoted as shown at 38 to the upper end of the lever 35 are rigid handles 39 provided with grips 40.

In practical operation, the operator occu-

pies the seat 14 and connects his feet with the pedals 8. He grasps the grips 40 and swings the lever 35 backwardly and forwardly in the direction of the arrows A and B of Fig. 1, the seat 14 reciprocating upon the tracks, as is common in devices of this type. When the operator swings the lever in the direction of the arrow A, the lever 35 and the actuating member 32 which forms a part of the lever, will swing on the pivot pin 31, the lower end of the actuating member 32 bearing against a finger 42 which constitutes a part of the member 36 of the strap. By this operation, the strap is tightened around the drum 19 but rotates thereon, when the lever 35 is swung in the direction of the arrow A. The strap composed of the members 25 and 26, being tightened down onto the blocks 24 of the drum 19, produces the necessary amount of friction. When the lever 35 is swung in the direction of the arrow B, by means of the rigid handles 39, the hold of the actuating member 32 on the finger 42 is loosened, and as a consequence, the strap 25—26 may rotate with comparative freedom on the relative drum 19. The frictional hold of the strap 25—26 on the friction drum 19 may be adjusted by moving the screw 29 longitudinally and by holding the screw in adjusted positions by means of the lock nut 30, it being observed that one end of the screw 29 is adapted to cooperate with the actuating member 32. When the occasion for the use of the structure has passed, the tracks 10 are swung upwardly on the pivot elements 9. The hook 17 on the seat 14 is then engaged with the projection 37 on the upper end of the lever 35. It is to be observed that when the tracks 10 are upturned in the position shown in Fig. 3, the weight of the tracks will be transmitted to the lever 35 by means of the hook 17. As a consequence, the strap 25—26 is tightened around the drum 19 and the lever 35, together with the tracks 10 will not swing downwardly from the position of Fig. 3 into a horizontal position.

For convenience in claiming the invention, the base 1 and the casing 2 may be referred to as a supporting structure, the parts 25 and 26 of the strap or clutch being denominated clamps adapted to coöperate with the fixed wheel 19.

The device forming the subject matter of this application will be found efficient for affording physical exercise, muscular development and for reducing flesh.

Having thus described the invention, what is claimed is:—

1. In a rowing exerciser, a supporting structure including a track; a seat mounted to reciprocate on the track; a lever mounted to swing vertically in a direction parallel to the line of reciprocation of the seat; hand-grips pivoted to the lever adjacent its upper end; and a clutch forming an operative connection between the lower end of the lever and the supporting structure.

2. In a rowing exerciser, a supporting structure including a seat; a lever mounted to swing in a vertical plane toward and away from the seat; a handle pivoted to the upper end of the lever; and a clutch forming an operative connection between the lower end of the lever and the supporting structure.

3. In a rowing exerciser, a supporting structure; a track; a seat mounted to move along the track; a drum fixed to the supporting structure; a pair of pivotally connected clamps surrounding the drum; a lever fulcrumed on one clamp and adapted to be actuated by an operator occupying the seat, the other clamp having means wherewith the lever engages to tighten the clamp about the drum when the lever is swung in one direction; and an adjustable element carried by the clamp whereon the lever is fulcrumed, the adjustable element coöperating with the lever to limit the tightening of the clamps about the drum.

4. In a rowing exerciser, a supporting structure; a track pivoted to the supporting structure and adapted to be swung upwardly; a seat mounted to move along the track; a drum fixed to the supporting structure; a lever adapted to be actuated by an operator occupying the seat; a clutch member carried by the lever and surrounding the drum; and a connection between the seat and the lever, the connection constituting a means for holding the track in an upturned position, whereby the weight of the track will actuate the lever to a limited extent and cause the clutch member to coöperate with the drum, thereby preventing the lever from swinging, and rendering the lever efficient in combination with the connection, as a means for holding the track in an upturned position.

5. In a rowing exerciser, a supporting structure; coöperating elements comprising a track pivoted to the supporting structure, and a seat mounted to move along the track; a lever adapted to be actuated by an operator occupying the seat; a clutch mechanism operatively connecting the lever with the supporting structure; and a detachable connection uniting one of said coöperating elements with the lever, to hold the track in an upturned position, whereby the weight of the track will actuate the lever to a limited extent and operate the clutch mechanism, thereby to hold the lever rigid and to render the lever efficient, in combination with the connection, as a means for holding the track in an upturned position.

6. In a rowing exerciser, a supporting

structure including a track; a seat mounted to reciprocate on the track; a lever mounted to swing in a vertical plane parallel to the track; and a clutch forming an operative connection between the lower end of the lever and the supporting structure.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

EDWARD B. BARNHILL.

Witnesses:
HENRY L. CLEUME,
E. B. SMITH.