April 19, 1927. 1,625,447

T. S. BENICE

EXERCISER

Filed Jan. 19, 1926

Fig. 1.

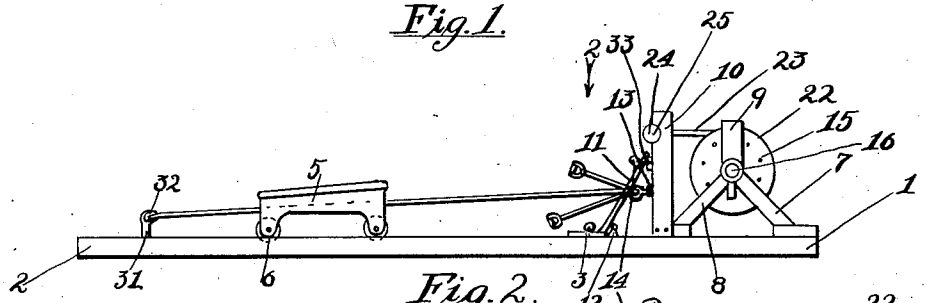


Fig. 2.

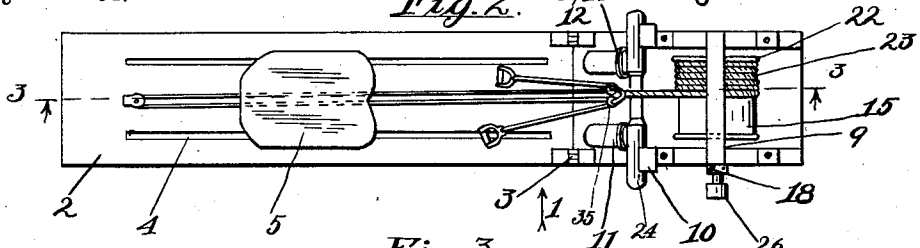


Fig. 3.

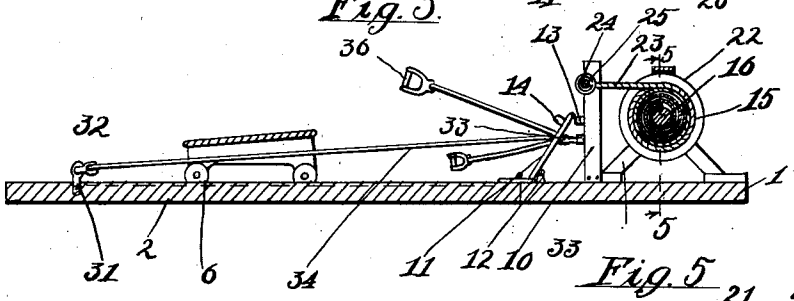


Fig. 4.

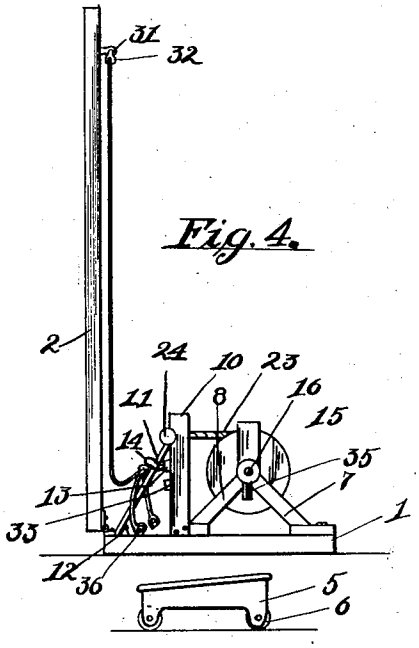
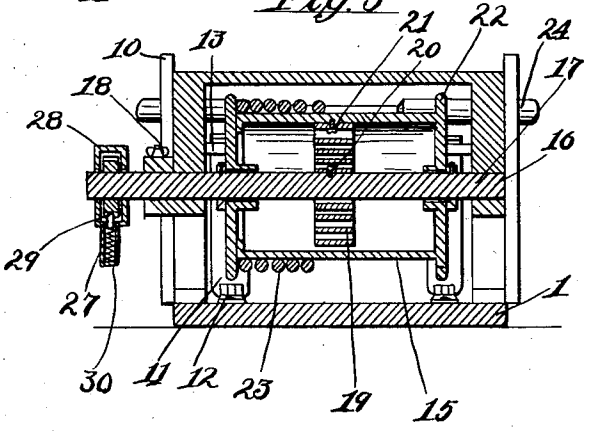


Fig. 5



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UNITED STATES PATENT OFFICE.

THEODORE S. BENICE, OF LOS ANGELES, CALIFORNIA.

EXERCISER.

Application filed January 19, 1926. Serial No. 82,228.

My invention is an exerciser of the rowing type, in which an action simulating that of rowing may be had.

An object of my invention is to devise a simple type of exerciser which may be utilized to simulate the action of rowing and thus secure the benefits of rowing exercises.

A further object of my invention is to utilize a coil spring to give a resistance to the action and by means of a rope attached to a cross or handle bar to actuate the spring by tensioning and releasing and thus securing the rowing exercise.

A further object of my invention is to form a compact rowing type of machine with rails having a sliding seat thereon, the drum having the springs being supported on a base and a track being hinged thereto so that the device may be conveniently placed in a closet or the like.

In the construction of my invention I utilize a frame having a drum mounted therein, this drum being rotatably mounted on a fixed axle. A coil spring wound on the axle engages the drum and the tension of the spring may be varied to tighten or loosen as desired. A rope is wound on the drum and has a handle attached to the end, this handle being utilized to grasp in the rowing exercise.

A pair of vertical standards engage the handle when out of use and also form a limit to one of the rowing motions. A track is pivotally connected to the base carrying the drum and has a sliding seat thereon so that a person exercising may utilize the seat either sliding or stationary.

Another feature of my invention is securing an elastic exerciser to the base or track which may be used separate or in connection with my rowing apparatus and is particularly adapted for one arm exercising or as a simplified form of a rowing machine exerciser.

My invention will be more readily understood from the following description and drawings, in which;

Figure 1 is a side elevation of my invention in the rowing position as if taken in the direction of the arrow 1 of Fig. 2.

Fig. 2 is a plan of my invention as if taken in the direction of the arrow 2 of Fig. 1.

Fig. 3 is a longitudinal section on the line 3—3 of Fig. 2.

Fig. 4 is a side view of my rowing exerciser in folded position for storage in a closet.

Fig. 5 is a transverse section of the drum and coil spring on the line 5—5 of Fig. 3.

The general construction of my rowing exerciser is illustrated particularly in Figs. 1, 2 and 3, in which a fixed base 1 is adapted to rest on the floor and a hinged track base 2 is connected thereto by hinges 3. This track base has tracks 4 on which the sliding seat 5 having rollers 6 may slide. The fixed base has a frame 7 rigidly secured thereto, this frame having legs 8 and a cross piece 9 at the top. Standards 10 extend upwardly from the fixed base. Foot rests 11 are secured to the base by a bracket 12 and are attached to a cross bar 13; thus rigidly bracing the standards 10. These foot rests have adjustable straps 14 to secure to the foot.

The spring actuating mechanism is shown particularly in Figs. 3 and 5 and comprises a drum 15 rotatably mounted on a shaft 16; this shaft being mounted in journals 17 in the frame 7 and held from rotation by a set screw or the like 18 through one of the journals. A spiral coil spring 19 is secured at one end to the shaft 16 as indicated by the numeral 20 and the other is secured to the inner surface of the drum as indicated by the numeral 21. The drum is provided with side flanges 22 and the exercising rope 23 is wound several or more times around the drum, being secured thereto and having a rowing handle 24 attached to the free end of the rope. This handle when the exerciser is in disuse rests in sockets 25 in the upper end of the standards 10.

A pawl and ratchet device 26 is secured on one end of the shaft and comprises a ratchet wheel 27 and a housing 28 having a double pawl 29 therein actuated by a handle 30. This may be of any ordinary construction. When it is desired to tension the spring or to release the tension the set screw 18 would be loosened and the pawl and ratchet device operated in either direction to turn the shaft. As this shaft will turn relative to the drum, the spring may thus be tightened or loosened, thus increasing or decreasing the tension on the exercising rope and varying the exercise.

The manner of using my exerciser is substantially as follows:

A person sitting on the seat with his feet secured in the ordinary manner may use it as a stationary seat exerciser or sliding

seat and by gripping the handle bar 24 may take exercise similar to that of rowing a boat. The adjustable arrangement for tensioning the spring gives a varying tension on the rope as desired.

As an auxiliary exerciser I secure an eye 31 to the track base, this having a pulley block 32 secured thereto. A cross bar 33 is secured to the standards and elastic exercising cords 34 are roved through the pulley 32 and through pulleys 35 secured to the cross bar 33; handles 36 being secured to the free end of the elastic exerciser. This elastic exerciser may be utilized in connection with my rowing machine for taking arm exercises sitting down by pulling on either or both of the handles and may also be utilized in other exercises in which it is desired to pull the ends past the body with the handle 36. It is only intended that the handle 24 be drawn to the body in simulating the rowing exercise.

It is apparent that this elastic cord exerciser may in some cases be substituted for other spring tensioned types and would probably be suitable for children and people having insufficient strength to operate the coil spring type of exerciser, although it is intended that the latter be readily adjustable to secure the proper tension.

Although my invention is of a simple character, nevertheless, it will be apparent that it may be considerably modified in general construction or in specific details to adapt it to different purposes and that the folding feature indicated in Fig. 4 may also be considerably modified. For instance, the device could be constructed with the tracks resting directly on the floor instead of on the base board as illustrated; these tracks being hinged to the relatively fixed base 1, such changes being within the spirit of my invention as set forth in the description, drawings and claims.

Having described my invention, what I claim is:

1. An exerciser comprising in combination, a frame, a shaft rotatably mounted therein, a clamping means to secure the shaft to the frame to hold same stationary, a drum rotatable on the shaft, a tension spring secured between the drum and the shaft, a rope connected to the drum and wound thereon, a handle on the rope, a pawl and ratchet device connected to the shaft and disconnected from the frame or other stationary structure, said pawl and ratchet device being operable to rotate the shaft relative to the drum on unclamping the shaft to vary the tension of the spring.

2. An exerciser comprising in combination, a fixed base, a frame, a shaft rotatably mounted in the frame, a clamping means to secure the shaft stationary in the frame, a drum rotatable on the shaft, a tension spring secured between the drum and the shaft, a rope connected to the drum and wound thereon, a handle on the rope, a standard extending upwardly from the fixed base positioned to engage the handle and limit the inward winding of the rope, and means on the shaft disconnected from the frame or other stationary structure to rotate the shaft to vary the tension of the spring after loosening the clamping means.

3. An exerciser comprising in combination, a frame having journals therein, a shaft mounted in said journals, means to clamp the shaft in stationary relation to the journals, a drum on the shaft, a coil spring surrounding the shaft, having one end connected thereto and the other end to the drum, a rope wound on the drum, a handle connected to the rope, a fixed structure to engage the handle, a ratchet attached to the shaft, a housing surrounding the ratchet and rotatably mounted on the shaft, and disconnected from a fixed structure, and a double acting pawl mounted in the housing having a spring pressing same against the ratchet, whereby on the means clamping the shaft being loosened, the housing may be turned to rotate the shaft in opposite directions to tighten or loosen the drum spring.

4. An exerciser comprising in combination, a fixed base, a frame connected to the base, a standard extending upwardly from the base, a shaft journaled in the frame, means to clamp the shaft, a drum rotatable on the shaft, a spring interconnecting the drum and the shaft, a rope connected to and wound on the drum, a handle being adapted to engage the standard, a foot rest secured to the base and the standard, a seat on the base, and means on the shaft disconnected from the frame or a fixed structure to rotate the shaft on loosening the clamping means to vary the tension of the spring.

5. An exerciser comprising in combination, a fixed base, a track hingedly connected to the fixed base, a seat on the track, a frame on the fixed base, a shaft journaled therein, a clamping means in the frame for the shaft, a drum rotatable on the shaft, a tension spring between the shaft and the drum, a rope wound on the drum having a handle, a standard extending upwardly from the fixed base to be engaged by the handle when the rope is wound in, a foot rest connected to the fixed base and the standard, and means disconnected from the base or a fixed structure to rotate the shaft to vary the tension of the spring.

In testimony whereof I have signed my name to this specification.

THEODORE S. BENICE.