July 19, 1932. C. G. WOODS 1,867,642

EXERCISING APPARATUS

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FIG. 1

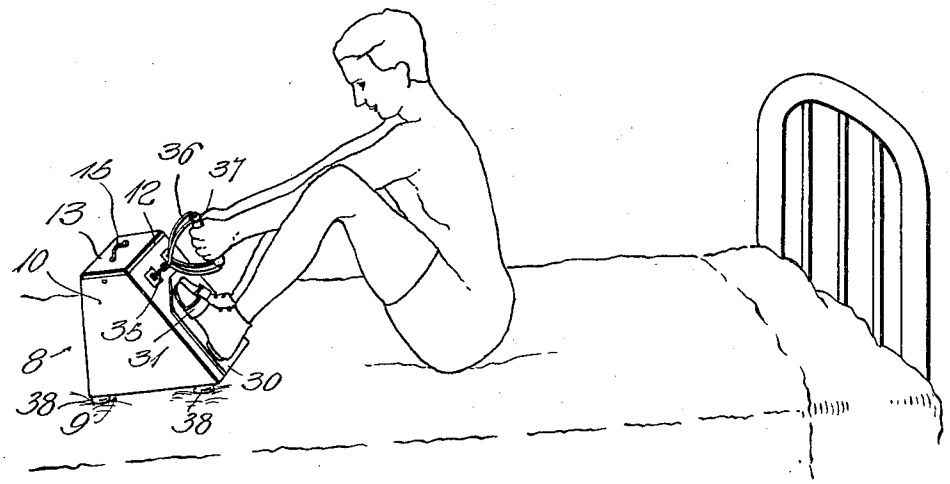


FIG. 2

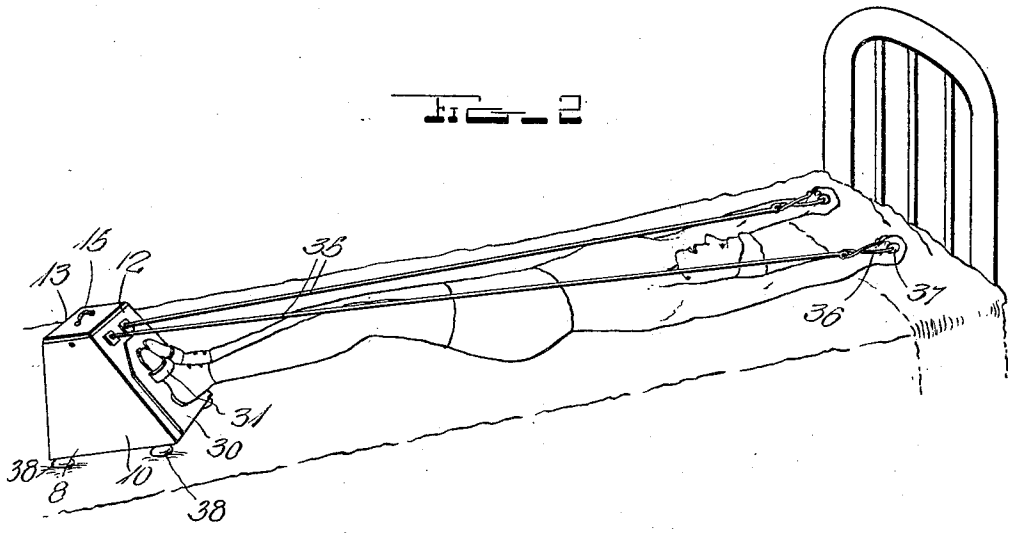
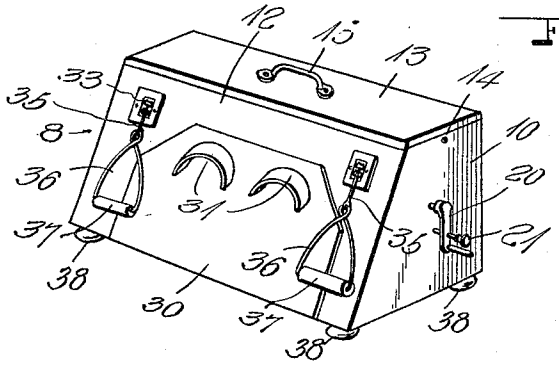


FIG. 3



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EXERCISING APPARATUS

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FIG. 4

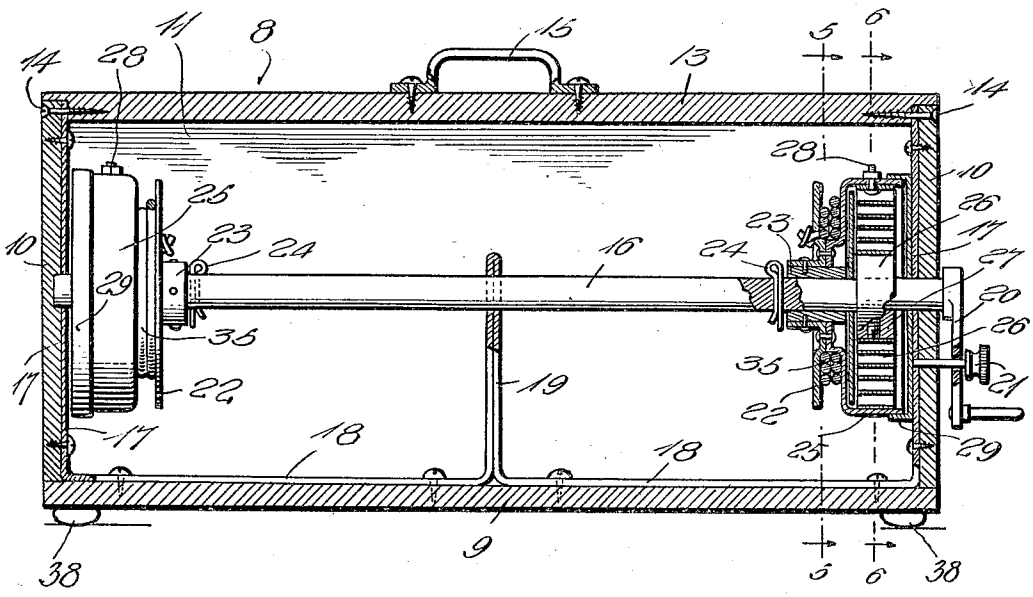


FIG. 5

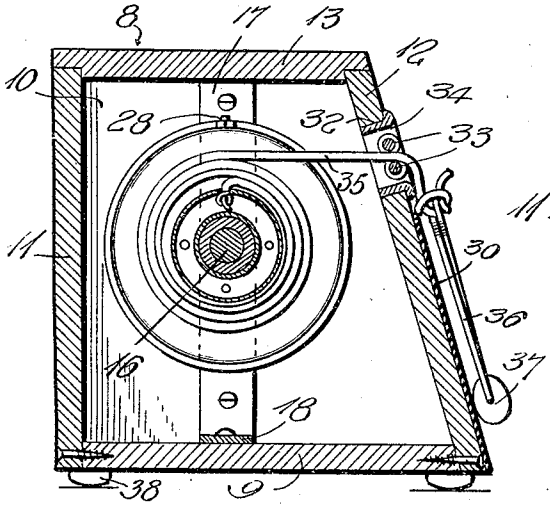


FIG. 6

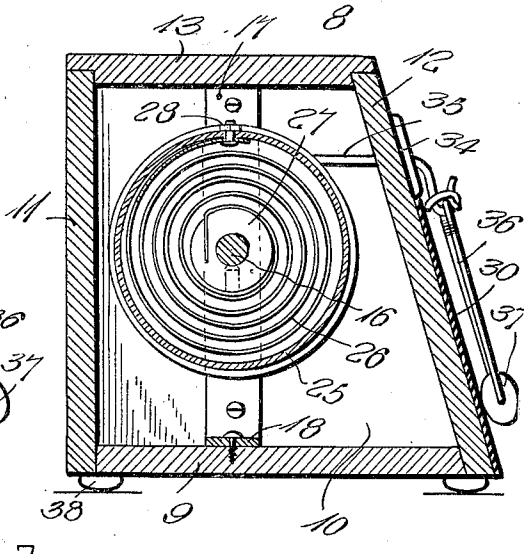
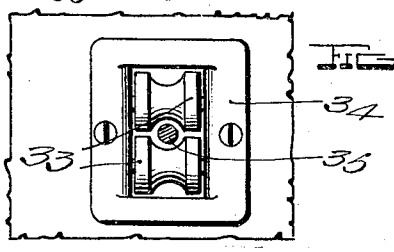


FIG. 7



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Patented July 19, 1932 1,867,642

UNITED STATES PATENT OFFICE

CHARLES G. WOODS, OF GLENDALE, CALIFORNIA

EXERCISING APPARATUS

Application filed June 6, 1930. Serial No. 459,549.

The object of the present invention is to provide a portable exercising apparatus of relatively simple and light construction, particularly adapted for use on a bed though not necessarily limited to that type of use.

In the accompanying drawings:

Figure 1 is a perspective view showing the apparatus and one method of using it.

Figure 2 is a similar view showing a different method of use.

Figure 3 is a perspective view of the apparatus per se.

Figure 4 is a vertical longitudinal sectional view through the same on an enlarged scale.

Figures 5 and 6 are cross sectional views taken respectively on the line 5—5 and 6—6 of Figure 4.

Figure 7 is a detail view in elevation of the anti-friction devices for the pulling cables.

In the embodiment disclosed a casing 8 is employed, consisting of a bottom 9, vertical end walls 10, a vertical rear wall 11, and a front wall 12 that is preferably inclined rearwardy. A detachable top 13 is provided which is preferably held in place by screws 14 passing through the end walls 10 and entering the ends of the top. This top may have a handle 15.

Within the casing is located a longitudinally disposed horizontal shaft 16 having its ends journaled in the end portions 17 of a reenforcing strap 18 located against the inner sides of the end walls 10 and secured to the bottom 9. This strap preferably has an intermediate portion doubled, as shown at 19, forming a journal box for the central portion of the shaft 16. One end of the shaft projects beyond one of the end walls 10 and is provided with an exposed handle crank 20, by means of which the shaft may be rotated. A pin 21, engaged with the crank 20, detachably engages the end wall 10 and serves to hold the shaft 16 against rotation.

Journaled on the end portions of the shaft 16 within the casing and adjacent to the end walls 10 are winding drums 22 having hubs 23 that are rotatable on the shaft 16, said hubs and drums being held against inward movement of the shaft by cotter pins 24 or other suitable devices. One of the side walls of each drum 22 is outwardly turned, as shown at 25, forming a casing within which is located a coiled spring 26. This spring is secured at its inner end to a hub 27 fast to the shaft 16. Its outer end is fastened, as shown at 28, to the flange 25. Preferably an outer casing wall 29 is employed for forming a complete housing for said spring 26. It will be understood that the two drums are independently rotatable.

The front wall 12 of the casing is provided with a pad 30 forming a foot rest, as shown in Figures 1 and 2, and this pad preferably has holding loops or straps 31.

At the opposite sides of the foot rest or pad 27, the wall is provided with outlet openings 32, in which are anti-friction rollers 33. These rollers are journaled in bushings 34 fitted into the said openings. Pull cables 35 pass between the anti-friction rollers 33 and wrap upon the winding drums 22. The outer ends of the cables are secured to suitable handle loops 36 having hand grips 37. Preferably the case has sliders 38 on its underside so that it will readily move on the surface on which it is placed.

The apparatus may be used in various ways. It being a light portable device, it can be placed, for example, on a bed, as shown in Figure 1, and the person using the same, places his feet against the foot rest 30 and under the straps 31. He thus secures the device and by pulling on the handles, can secure a resistance through the winding up of the spring drums, giving a beneficial exercise. In this connection it will be evident that the handles may be pulled together or each separately or alternately and the resistance to the movement can be readily varied by turning the shaft 16 in one direction or the other and again fastening it by the device 21. More than that if the legs are to be exercised, the case or cabinet will also move and can be moved back and forth by sliding it through the bending and the straightening of the legs. The legs and arms can thus be exercised either separately or together.

The user may also lie prone upon the bed, as illustrated in Figure 2 and operate the handles according to inclination.

Obviously the device can be readily carried about and used wherever found desirable, so that it constitutes a self-contained entity, particularly useful in the home.

From the foregoing, it is thought that the construction, operation and many advantages of the herein described invention will be apparent to those skilled in the art without further description, and it will be understood that various changes in the size, shape, proportion and minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

What I claim, is:

1. An apparatus for exercising purposes comprising a portable enclosing casing having one of its walls forming an abutment for the feet of the operator, spring drum mechanism within the casing, and pull handles having connections with the drum mechanism and passing through the said abutment wall.

2. An apparatus for exercising purposes comprising a portable enclosing casing having one of its upstanding side walls providing a foot rest abutment, pull handles outside the casing, and flexible connections between the handles and drum mechanism passing through the abutment walls on opposite sides of the foot rest.

3. An apparatus for exercising purposes, comprising a portable casing having an upstanding abutment wall providing between its ends and on its outer side a foot rest for the operator, a shaft journaled in the casing and having an operating crank, and means engaged with the crank for holding said shaft against rotation, a plurality of winding drums journaled on the shaft and separately rotatable, coiled springs connecting the drums and shaft, pull handles outside the casing, and flexible cables slidably passing through the abutment wall on opposite sides of the foot rest and respectively wound upon the drums.

4. An apparatus for exercising purposes comprising a portable casing having enclosing walls including a front upwardly and rearwardly inclined wall providing on its outer face an abutment foot rest for the feet of the operator, spring drum mechanism within the casing behind said wall, and pull devices connected to the spring drum mechanism and slidably extending through the front inclined wall on opposite sides of the foot rest.

In testimony whereof, I affix my signature.

CHARLES G. WOODS.