March 6, 1934. J. B. HARRISON 1,950,174

EXERCISING MACHINE

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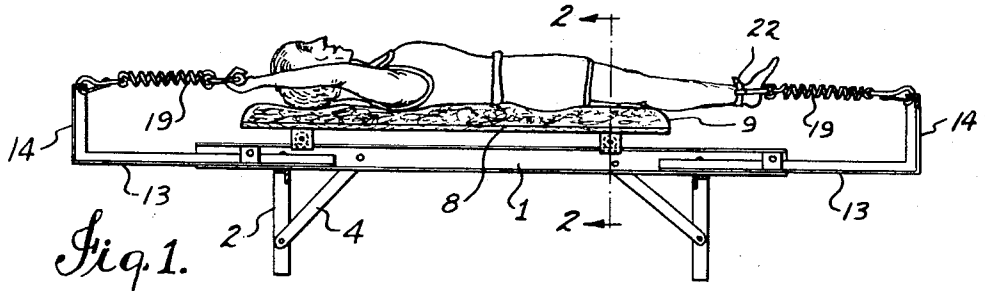


Fig. 1.

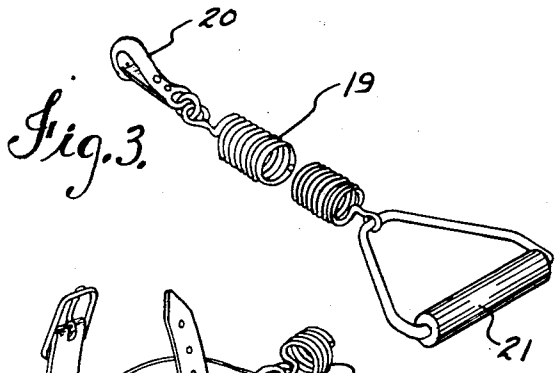


Fig. 3.

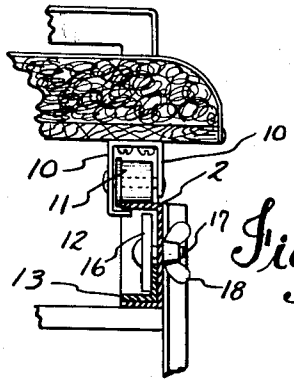


Fig. 2.

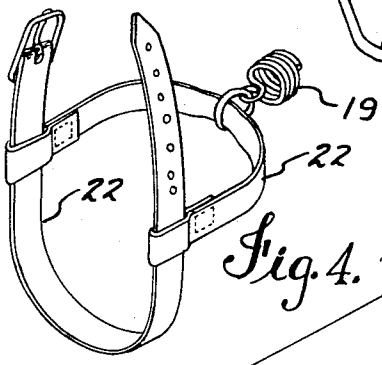


Fig. 4.

Fig. 5.

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EXERCISING MACHINE

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6 Claims. (Cl. 272—80)

My invention relates to exercising machines and particularly to a novel type of exercising machine so constructed and arranged that in its use all the bodily muscles are developed at the same time, and in which the extent of the exercise of the various muscles can be controlled by the person using the machine.

Rowing machines in which the person exercising sits in a sliding carriage, and in which the arm and leg muscles are developed by going through the ordinary motions of rowing, are old and well known. In the use of rowing machines ordinarily the arm muscles may be tensioned and flexed and the leg muscles tensioned and flexed in only set of exercising movements.

It is the object of my invention to provide an exercising machine in which the person using it assumes such a position that regardless of what muscles they desire to exercise, there is a corresponding development of practically all the other muscles of the body, together with the opportunity for complete relaxation between bodily movements.

It is further an object of my invention to provide a machine which can be used to develop the muscles, for example, of one leg or one arm without it being necessary to unduly strain the muscles of the other leg or arm.

It is an object of my invention to provide an exercising machine in which the person exercising normally lies on his back, so that in addition to the flexing of the muscles in the movement of the various members of the body there is a tendency to stretch the arms and legs and to develop chest expansion, due to the position which the person exercising assumes on the machine.

Another object of my invention is to provide an exercising machine on which one can get as vigorous exercise as they desire in a remarkably short time, and in one series of muscular movement secure as much development as would require the long use of different types of exercising machines.

Structurally it is my object to provide a frame for supporting a sliding carriage which will be adjustable so that it may be folded up like a cot, and which will also have tension members which may be adjusted for use by persons of different height or different muscular strength.

Referring to the drawing:—

Figure 1 is a side elevation of the exercising machine showing an imaginary user in the position normally assumed in the use of the machine.

Fig. 2 is a detail sectional view taken along the lines 2, 2 of Fig. 1.

Fig. 3 shows one type of resilient muscle-tensioning member.

Fig. 4 is a perspective view of a strap for quickly securing the feet in exercising position in the machine.

Fig. 5 is a perspective view of the machine with the tensioning members removed so that the construction of the framework can be more readily understood.

Referring first to Fig. 5, I have shown the channel members 1 provided with channel legs 2 which, as indicated, are pivoted at 3 and have straps 4 pivoted at 5, to the members 2, and with openings 6 at their ends, which may be secured over studs 7 in the sides of the channels 1, thus holding the frame in solid position on the floor.

An elongated pad member has a plate 8, having a padded cushion-like support 9 thereon. Channel members 10 secured at the sides of the plate 8 journal caster wheels 11, and outwardly turned flanges 12 interlock underneath the top flanges of the channel members 1 so that when the carriage is mounted in position on the frame it will be free to slide lengthwise, but will be restrained from widthwise motion, or from tipping over when the person using the machine sits on the side of the pad.

End bars 13 have upturned outer end portions 14, which are joined together by cross bars 15. The bars 13 are held in adjustable position by means of plates 16, having threaded studs 17, which may be clamped down by means of wing nuts 18. Thus the attaching devices comprising these members 13, 14 and 15 may be extended out from the main frame and adjust for different sized persons or degrees of tension to the tension members for the same person, which will now be described.

A preferred type of tension member consists of springs 19, 19*a*, having clips 20 at their ends which are secured in apertures 21 in the pieces 15.

Figure 3 shows the resilient members 19 provided with hand holding pieces 21. Figure 4 shows a foot strap piece 22 which, as indicated, is secured at the end of the spring member 19*a*.

In using the exerciser, the person assumes a position lying down with the back on the pad 9.

Assuming that it is desired to exercise one arm vigorously and the other arm and the legs less vigorously, by flexing the right arm the spring 19, of which the handle 21 is in the right hand, will be expanded. This will cause the carriage to move toward the support for the spring 19.

At the same time the springs 19a, holding the foot straps 22, are placed under tension so that the muscles of the legs are also placed under a pulling tension. At the same time the abdominal muscles, the hip muscles and the muscles of the chest are brought into play, so that regardless of how strenuously the right arm is exercised, all the other body muscles are exercised at the same time. This is, of course, due to the fact that the carriage rolls back and forth on its rolling support, and as the exerciser pulls the right arm up the carriage bearing the weight of the body tensions the springs to which the feet and the other arm are secured.

If the person exercising, while holding the spring members, attempts to sit up, the carriage again moves slowly forward, causing tension on the abdominal muscles and also on the leg muscles.

By bringing up the knees in sequence, first one and then the other, and at the same time bringing up first one arm and then the other, a movement similar to that which one takes when running is obtained.

Boxers and prizefighters who have trained on my machine explain that in five minutes time, using the running movement, their muscles are as well exercised as in running for many miles.

For some reason, when the arms and legs are flexed in pulling in on the resilient members, the complete relaxation and the stretching tendency to all the body muscles between exercising movements prevents a period of extreme fatigue after using the machine, so that while four or five minutes of extreme exercise causes considerable fatigue, the fatigue disappears very quickly after the person exercising discontinues his exercise, and the efficiency of the exercise is thereby greatly increased.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent, is:—

1. In an exercising machine, a support, a body carrier movable lengthwise of the support, attaching devices fixed near opposite ends of said support substantial distances out from the limits of travel of the carrier, a pair of hand engaging means near one end of said support, a pair of foot connecting means near the opposite end of said support, and connections, one from each hand engaging means and one from each foot connecting means to the adjacent attaching device, said connections extending inwardly toward and being yieldable inwardly toward said body carrier, for the purposes set forth.

2. In an exercising machine, a support, a body carrier movable lengthwise of the support, attaching devices fixed near opposite ends of said support substantial distances out from the limits of travel of the carrier and extending transversely of the machine, a pair of hand engaging means near one end of said support, a pair of foot connecting means near the opposite end of said support, and connections, one from each hand engaging means and one from each foot connecting means to a respective one of two transversely spaced portions of the adjacent attaching device, said connections extending inwardly toward and being yieldable inwardly toward said body carrier, for the purposes set forth.

3. In an exercising machine, a support, a body carrier movable lengthwise of the support, attaching devices fixed near opposite ends of said support substantial distances out from the limits of travel of the carrier and extending up therefrom above the top plane of the carrier, a pair of hand engaging means near one end of said support, a pair of foot connecting means near the opposite end of said support, and connections, one from each hand engaging means and one from each foot connecting means to the adjacent attachment device above said plane, said connections extending inwardly toward and being yieldable inwardly toward said body carrier, for the purposes set forth.

4. In an exercising machine, a support, a body carrier movable lengthwise of the support, attaching devices each comprising a pair of bars straddling the support near each end of the support and extending out past the respective ends, clamps releasably clamping said bars to said support for adjustment of the bars to greater or less extension of the bars from the support, a pair of hand engaging means near one end of said support, a pair of foot connecting means near the opposite end of said support, and connections, one from each hand engaging means and one from each foot connecting means to the outer portion of the adjacent attaching device, said connections being yieldable inwardly toward said body carrier, for the purposes set forth.

5. In an exercising machine, a support, a body carrier movable lengthwise of the support, attaching devices each comprising a pair of bars straddling the support near each end of the support and extending out past the respective ends, clamps releasably clamping said bars to said support for adjustment of the bars to a greater or less extension of the bars from the support, and transverse bars connecting the outer end portions of the bars of the respective attaching devices, a pair of hand engaging means near one end of said support, a pair of foot connecting means near the opposite end of said support, and connections, one from each hand engaging means and one from each foot connecting means to a respective one of two transversely spaced portions of the transverse bar of the adjacent attaching device, said connections being yieldable inwardly toward said body carrier, for the purposes set forth.

6. In an exercising machine, a support, a body carrier movable lengthwise of the support, attaching devices each comprising a pair of bars straddling the support near each end of the support and extending out past the respective ends, clamps releasably clamping said bars to said support for adjustment of the bars to a greater or less extension of the bars from the support, said bars having upturned outer end portions extending above the top plane of said carrier, and transverse bars connecting the upturned outer end portions of the bars of the respective attaching devices, a pair of hand engaging means near one end of said support, a pair of foot connecting means near the opposite end of said support, and connections, one from each hand engaging means and one from each foot connecting means to respective one of two transversely spaced portions of the transverse bar of the adjacent attaching device, said connections being yieldable inwardly toward said body carrier, for the purposes set forth.

JAMES B. HARRISON.