This invention relates to a push and pull exercising device.

Various devices have been made for exercising and developing the muscles of the human body but such devices with which applicant is aware use springs or friction discs or sliding bars for providing the resistive force to the movement of the limbs of the body. In the devices wherein springs are used, it is difficult to properly regulate the tension of the springs and such springs tend to lose their tension during use. Furthermore, the tension of a particular spring is not likely to meet the needs of different individuals. Devices embodying friction discs and sliding bars provide only a limited range of benefits.

It is the principal object of the present invention to overcome the shortcomings of the prior devices as above pointed out.

Another object of the present invention is to provide a push and pull exercising device that can be used to perform a group of exercises to develop and strengthen the muscles in many parts of the human body.

A further object of the invention is to provide a push and pull exercising device that may be moved in any direction and that provides a large range of beneficial effects and that may be easily adjusted without the use of tools to meet the strength or requirements of any individual.

A specific object of the invention is to provide a push and pull exercising device in which a hand grip is grasped by the user and pushed or pulled against resistive force to exercise and develop the muscles of the body.

It is also an object to provide a push and pull exercising device in which the resistive force adjusting means can be secured in adjusted position so that there is no likelihood of the same working loose during use.

Still another object is to provide a push and pull exercising device that can be effectively used by children and adults and by persons of different strengths, in which the resistive force in the movement is always under control of the user and can be changed instantly to provide resistive force which will promote optimum benefit.

Yet another object is to provide a push and pull exercising device that is simple in construction, that takes up a minimum of storage space, that is easily manipulated, that is portable and that can be manufactured and sold at a reasonable cost.

For further comprehension of the benefits and advantages of the invention, reference will be had to the following description, the appended claims and to the accompanying drawing forming a part of the disclosure and wherein:

FIG. 1 is a perspective view of a push and pull exercising device embodying my invention in the hands of a user showing one way in which it can be used.

FIG. 2 is a perspective view of the device showing another way in which it can be used, parts being broken away.

FIG. 3 is a cross-sectional view taken through the handle bar intermediate its ends, parts being omitted.

FIG. 4 is a view looking along the line 4—4 of FIG. 3.

Referring in detail to the drawing, a push and pull exercising device embodying my invention is shown in FIG. 1 and comprises an elongated round bar 10, constituting a handle bar. The handle bar is composed of wood, plastic or any other suitable material. The bar is preferably slightly longer than the width of the shoulders of an adult as shown in dot-dash lines in FIG. 1. A flat board constituting a base board 14 of similar length and material is also used. A rope 16 connects the handle bar and base board. One end of the rope is anchored or fixed to the handle bar 10 by means of a fastening member including 18 split loop portion 18 encircling the bar and seated in an annular groove 20 midway the ends of the bar to prevent displacement therealong. One end of the loop portion terminates in an eye 22 disposed underneath the bar and its other end terminates in a U-shaped hook 24 depending from the bar. The hook has closely spaced arms 26, 26 and opens upwardly. Said one end of the rope is threaded through the eye 22 and looped and is secured in looped formation by a metal sleeve 28.

The other end of the rope extends through a hole 30 in the base board 14, midway its ends, extending a short distance along the under surface of the bar longitudinally thereof and then extends upwardly through a hole 32 in the base board closely spaced from hole 30, the upper protruding end of the rope being knotted as indicated at 34 to prevent withdrawal of the end through the hole 32.

In accordance with the invention, the rope 16 is knotted at spaced intervals thereafter as indicated at 36. Preferably a rope 16 approximately six feet in length is used so that the exercising device may be used by persons of all sizes including those having an exceptionally large reach when the arms are fully extended upwardly. The rope 16 is of high tensile strength that will effectively resist longitudinal stress.

The exercising device just described may be used to perform a group of exercises to develop and strengthen the muscles in many parts of the human body. One exercise may be performed in a standing position in which the legs of the user stands on the base board 14 on opposite sides of the rope 16. The hands of the user grasp the handle bar 10 on opposite sides of the rope 16, preferably adjacent the ends of the bar, and the arms are then extended upwardly above the head to fully extended position as shown in FIG. 1. When the arms are so extended, an upward push is exerted upon the handle bar, which upward pushing pressure is counteracted by a downward pushing pressure on the base board by the legs of the user, this pressure being continued preferably for about six seconds time whereby the upper muscles and the lower muscles of the body are brought into play and exercised. The pressure may be gradually exerted.

Another exercise may be performed by shortening the length of the rope 16 by looping a length thereof as indicated at 38, inserting the rope at the end of the loop into the hook 24 and catching the knot thereat between the arms 26 of the hook as shown in FIG. 2. When the device is thus shortened, the user stands on the base board 14 as shown in FIG. 1, bends over and grasps the handle bar 10 in the hands and by means of the arms exerts an upward pulling pressure on the handle bar. At the same time a downward pressure is exerted by means of the legs. This pressure is preferably continued for approximately six seconds whereby the muscles of the arms, legs, back and other parts of the body are exercised and strengthened to a degree equivalent to the beneficial effects of exercising with other devices for a much longer time.

When the exercising device is shortened as shown in FIG. 2, the device can be used, for example, by sitting down or lying down on the floor or the like, resting the base board 14 on its long edge, placing the feet on the board on opposite sides of the rope, grasping the handle
bar 10 on opposite sides of the rope and pulling with the arms on the handle bar, which pulling pressure will be counteracted by a pushing pressure by the legs upon the base board. A continuance of this pressure for approximately six seconds will exercise and strengthen the muscles of the upper and lower parts of the body to a degree corresponding to a much longer time with prior devices.

The foregoing exercises it will be understood are only illustrative of the many forms of exercises which may be performed by the exercising device.

It will also be appreciated that the exercising device embodying my invention may be used by a class in a gymnasium or in the home or in most any place and that it can be used to provide a wide range of beneficial effects. When the device is not in use, the rope can be coiled around either the handle bar or base board and the bar and board positioned side by side so that a device of small area results which takes up a minimum of storage space.

While I have illustrated and described the preferred embodiment of my invention, it will be understood that changes in details of construction might be made without departing from the principle of the invention and I desire to be limited only by the state of the prior art and the appended claim.

What I claim and desire to secure by United States Letters Patent is:

An exerciser comprising a bar, a generally flat rigid member, a substantially nonelastic and flexible elongated member fastened to the flat member, foot supporting portions incorporated in the flat member on both sides of the fastening point of the flexible member to the flat rigid member, a U-shaped hook attached to the bar, the U-shaped hook extending from the center of the bar and opening towards the bar, hook engaging elements incorporated in the flexible member selectively engageable with the hook to fasten the flexible member securely to the bar against forces urging the flat rigid member and the bar apart, the hook engaging elements enabling adjustment of the distance between the bar and the flat rigid member.

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