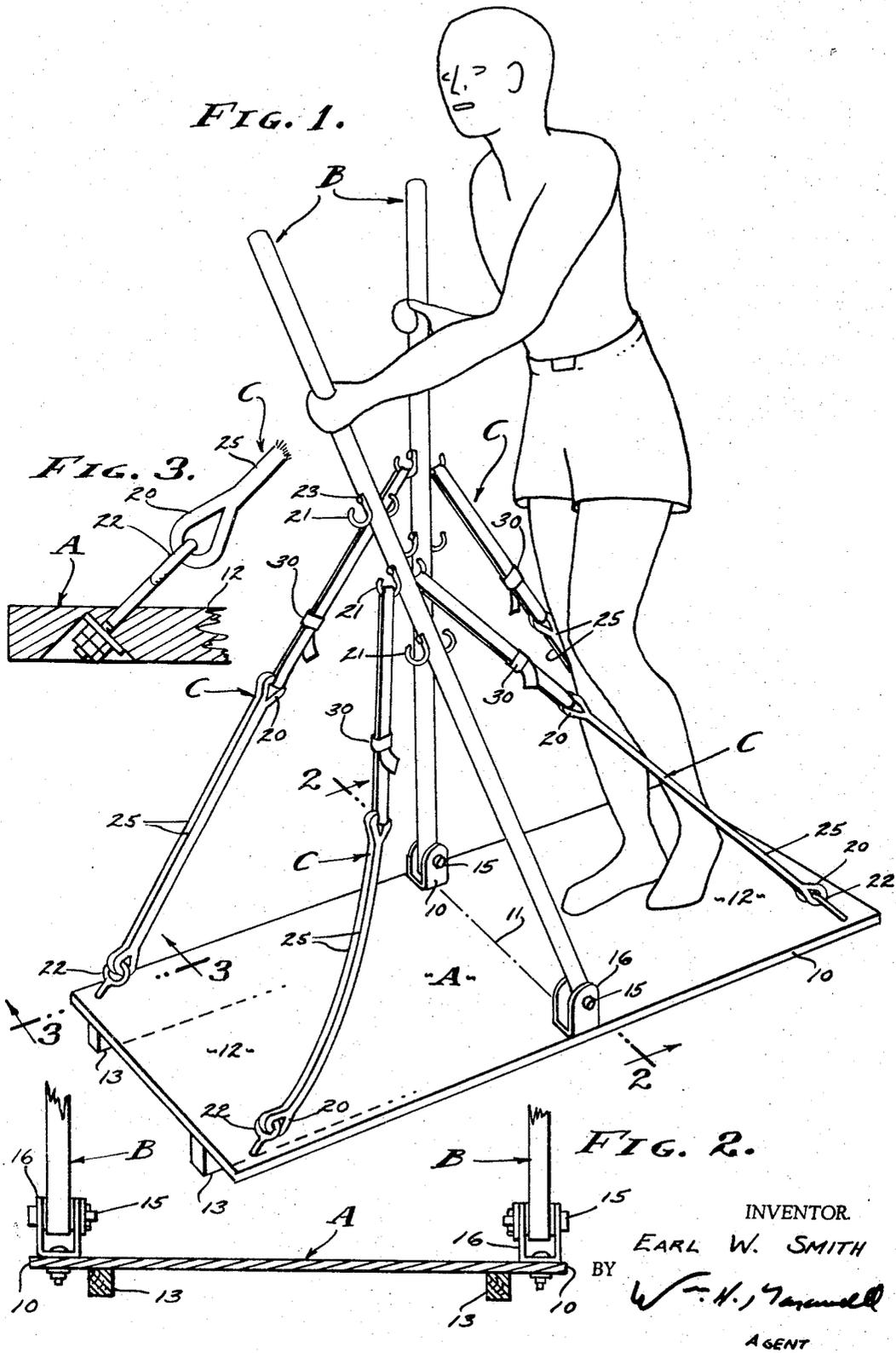


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SUPPORTING BASE AND PIVOTED POLE
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EXERCISER WITH ELASTIC ELEMENTS CONNECTING SUPPORTING BASE AND PIVOTED POLE

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This invention relates to apparatus for exercising the human body when disposed in a natural standing posture, it being a general object to provide an exerciser which is adapted to require natural flexing and reflexing of the muscles to any degree which may be within the capability and desirability of the particular person exercising thereon.

Many types of exercising machines have been devised and for the most part each one is limited in respect to ultimate overall muscle flexure. That is, a given exercising machine is usually good for exercising certain muscles only, and even then the mode of exercising is not always normal. For example, a classical gymnasium exerciser is the flexible cord, pulley and weight arrangement which necessitates pulling only and wherein the person cannot also push, unless he turns around 180° in which case he cannot pull. Furthermore, these machines are usually constructed against a standard or against a wall, which is in itself an obstacle. The fact that force can be exerted in one direction only is a limiting factor in the ordinary exerciser and this prevents many of the natural body movements.

An object of this invention is to provide a completely portable exerciser of light weight construction, and one which is simple and rugged and devoid of complexity.

Another object of this invention is to provide an exerciser upon which the person exercising stands in order to establish the ballast for the stabilized platform.

It is an object of this invention to provide an exerciser with dual manual elements, each of which can be pulled or pushed independently of the other.

It is also an object of this invention to provide an exerciser of the character thus far referred to wherein the erected device will stand alone, and wherein the dismantled device can be stored within a minimum space.

The various objects and features of this invention will be fully understood from the following detailed description of the typical preferred form and application thereof, throughout which description reference is made to the accompanying drawings, in which:

FIG. 1 is a perspective view of the exercising apparatus and the manner of use thereof.

FIG. 2 is a sectional view taken as indicated by line 2-2 on FIG. 1.

FIG. 3 is an enlarged section taken as indicated by 3-3 in FIG. 1.

In the drawings I have illustrated a preferred embodiment of the present invention and which involves generally, a base A, a pair of upstanding poles B, and pressure exerting means C yieldingly preventing displacement of said poles from the said normal positions thereon. The said means A, B and C can be supplied in a disassembled knock-down condition (not shown) wherein the said poles B lie adjacent the base A and wherein the elements of means C are disconnected and lie at random upon said base A. It will be apparent that the parts as shown can be disassembled and shipped or stored in a relatively flat condition and/or container, all as may be required.

The base A is a flat element of relatively stable construction adapted to lie upon a floor or the like. In accordance with the invention the base A is approximately the width of the human pectoral girdle, for example 18 inches in width, and it is preferably rec-

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tangular in plane view and of about 6 foot in length. The said dimensions can vary as circumstances require, the base A establishing a platform upon which a person can stand, at one or both ends as shown. In practice, the base A is made of plyboard or the like covered with an anti-skid coating or covering, the base A being characterized by parallel sides 10, a transverse center line 11 and by opposite end standing portions 12 upon which a person can locate himself. In the case illustrated the base A is reinforced by a pair of underlying stringers 13 that are fixed in place as shown.

The pair of upstanding poles B are provided for manual working engagement by a person who wishes to exercise, it being a feature of the present invention that the person exercising must exert force to the degree which he or she may desire. The poles B are alike and each is a straight rod-like element normally disposed in a vertical disposition from the center line 11 of the base A. Thus, the two poles B normally extend upwardly in a plane perpendicular to the plane of the base A and coincidental with the center line 11. In accordance with the invention the poles are pivoted at the plane of the base A so that they swing independently to and from the opposite end portions 12. The two poles B swing in a plane approximately coincidental with the two sides 10 respectively, and they are pivoted or hinged on a common axis 11, on pins 15 removably inserted into and carried by brackets 16 supported on the top face of the base A. Therefore, the two poles are capable of swinging to and fro, each in the plane of a side 10.

As it is clearly shown, the poles B are of substantially the same height as a person who is to exercise on the apparatus. The pins 15 are fixed on horizontal axis by the brackets 16 so that the poles are confined to swing in said fore-and-aft plane and whereby they are held erect for operation when the means C is installed.

The pressure exerting means C is provided to yieldingly resist displacement of the poles B, and the means C is applied identically to the two poles in order to exert resistance to movement of the poles when they are forced from the normal upright positions. There are various ways in which this may be accomplished, however, a most desirable way is as shown and whereby the weights and strengths of the parts involved are minimized. In practice, substantial resistance is exerted by the pressure exerting means C, in which case it has been found to be most practical to utilize elastic members 25 trained from the standing portions 12 to a substantial height on the poles B. As is clearly shown, each pole B is combined with pressure exerting means C comprising a pair of oppositely extending elastic members, each trained from the pole B about midway of its height and oppositely to the remote end of the base A.

The elastic members 25 which comprise the pressure exerting means C are commonly referred to as "shock-cords" and are usually made of a bundle of longitudinally disposed elastic strands encased in an extensible sheathing. Each end of the elastic member is provided with an eye 20 for anchoring purposes. Therefore, an anchor 21 is provided at the pole B and an anchor 22 is provided at the standing portion 12, each anchor involving a hook member or the like adapted to receive an eye 20. In practice, the anchors 21 are fastened to opposite sides of pole B by a through fastener 23 with the hook faced upwardly, while the anchors 22 are angularly disposed on axes extended toward the area of the said hook anchors 21. Depending upon the desired elasticity of means C the elastic members 25 comprising the same can be used singularly or in multiples as shown. Thus, the pressure exerting function of the exerciser can be varied as circumstances require.

Tension adjustment is provided for in one or two ways, it being preferred to provide a plurality of hook anchors 21 and to provide pre-tensioning means 30 for the elastic members 25 which comprise the pressure exerting means C. The plurality of hook anchors 21 are each placed at a strategic station vertically of the poles B, and it is therefore a simple matter to select an anchor 21 which creates the desired amount of pressure when the poles B are displaced. The pretensioning means 30 is essentially an element which is variable in length and it is shown as a strap and adjustable buckle which is trained from the one end of the elastic members 25 to one of the anchors 21 or 22. In the case illustrated, the strap of means 30 is laced through the uppermost eyes of the elastic members 25, in which case the strap of means 30 is extended to the elastic hook anchor 21. Thus, the degree of pretensioning is controlled as well as controlling the amount of force to be exerted from and upon movement of the poles B from a normal vertical position.

From the foregoing, the simple and practical nature of the exerciser should be readily seen wherein but a few simply formed elements are involved and are easily combined. In order to employ the exerciser, a person stands upon one end portion 12 of the base A with the pair of poles B before him and with a virtually unobstructed area before him for manipulating said poles. The utility of the exerciser resides in itself stability even though lightly constructed wherein the weight of the person standing upon the one end portion 12 in itself establishes a firm platform, and wherein the two poles are then adapted to be forced to and from the said person. As a result, the exercising action is resolved into opposed flexure of the body muscle accompanied by the inherent requirement that the person exercising maintain his balance. That is, the person must exert force in order to displace the poles B from their normal erect positions, and in doing so the person must keep a firm footing upon the standing portion 12. There are, of course, various combinations of movement to be practiced in the course of exercising with the apparatus, and for example when forcing the poles to move oppositely the muscles throughout the body are flexed so as to oppose the twist or torsional effect which is imposed through the person's arms and to his shoulders. Without going into detail, it is apparent that the torsion as imposed at the person's shoulders is transmitted through his torso, hips, and legs, and to his feet which frequently engage upon the standing portion 12. Further, it will be apparent that the said twist or torsional effect is reversed by alternately pushing and pulling the poles B and with any amount of force which may be desired.

Having described only a typical preferred form and application of my invention, I do not wish to be limited or restricted to the specific details herein set forth, but wish to reserve to myself any modifications or variations that may appear to those skilled in the art and fall within the scope of the following claims.

Having described my invention I claim:

1. Exercising apparatus comprising:

- (a) a flat horizontally disposed base member with opposite sides spaced substantially the same as the width of a person's shoulders, and having a transverse hinge line extending between the sides and having opposite portions remote from said line and at least one of said portions being a standing portion;
- (b) a pair of individual and entirely independently operable disposed poles, each with its lower end pivoted to the base at said hinge line and at opposite sides of the base and each aligned with a shoulder of the person respectively;
- (c) and pressure exerting means comprising elastic elements and each trained from opposite sides of each individually operable pole substantially above the

base respectively and to the remote positions of the base member respectively, whereby a person standing upon the base establishes a stable platform thereof and can flex his body muscles by both pushing and pulling independently upon the two individual poles.

2. Exercising apparatus comprising:

- (a) a flat horizontally disposed base member having a middle portion with a transverse hinge line and with opposite standing portions remote from said line;
- (b) An individual normally vertically disposed and manually engageable pole with its lower end pivoted to the base at said hinge line;
- (c) and independently operable pressure exerting means and each comprising an elastic element trained from an opposite side of the pole substantially above the base and to an opposite remote standing portion, respectively whereby a person standing upon the base establishes a stable platform thereof and can flex his body muscles by both manually pushing and manually pulling on the pole.

3. Exercising apparatus comprising:

- (a) a flat horizontally disposed base member having a middle portion and with opposite sides spaced substantially the same as the width of a person's shoulders, and having a transverse hinge line extending between the sides and having opposite standing portions remote from said line;
- (b) a pair of individually operable normally vertically disposed poles, each with its lower end pivoted to the base at said hinge line and at opposite sides of the base and each aligned with a shoulder of the person respectively;
- (c) and pressure exerting means comprising an elastic element trained from each opposite side of each individually operable pole substantially above the base and to each opposite remote standing portion respectively, whereby a person standing upon the base establishes a stable platform thereof and can flex his body muscles by both pushing and pulling independently upon the two individual poles.

4. Exercising apparatus comprising:

- (a) a flat horizontally disposed base member having a middle portion and with opposite sides spaced substantially the same as the width of a person's shoulders, and having a transverse hinge line extending between the sides and having opposite standing portions remote from said line;
- (b) a pair of individually operable normally vertically disposed poles, each with its lower end pivoted to the base at said hinge line and at opposite sides of the base and each aligned with a shoulder of the person respectively;
- (c) and pressure exerting means comprising an elastic element trained from each individually operable pole substantially above the base and to the opposite remote standing portions respectively, said elements being adjustably coupled to a series of vertically spaced hooks positioned along said poles respectively, whereby a person standing upon the base establishes a stable platform thereof and can adjustably flex his body muscles by both pushing and pulling independently upon the two individual and adjustably coupled poles.

References Cited

UNITED STATES PATENTS

2,223,309 11/1940 Swanson ----- 272—83
2,921,791 1/1960 Berne ----- 272—67 X

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