

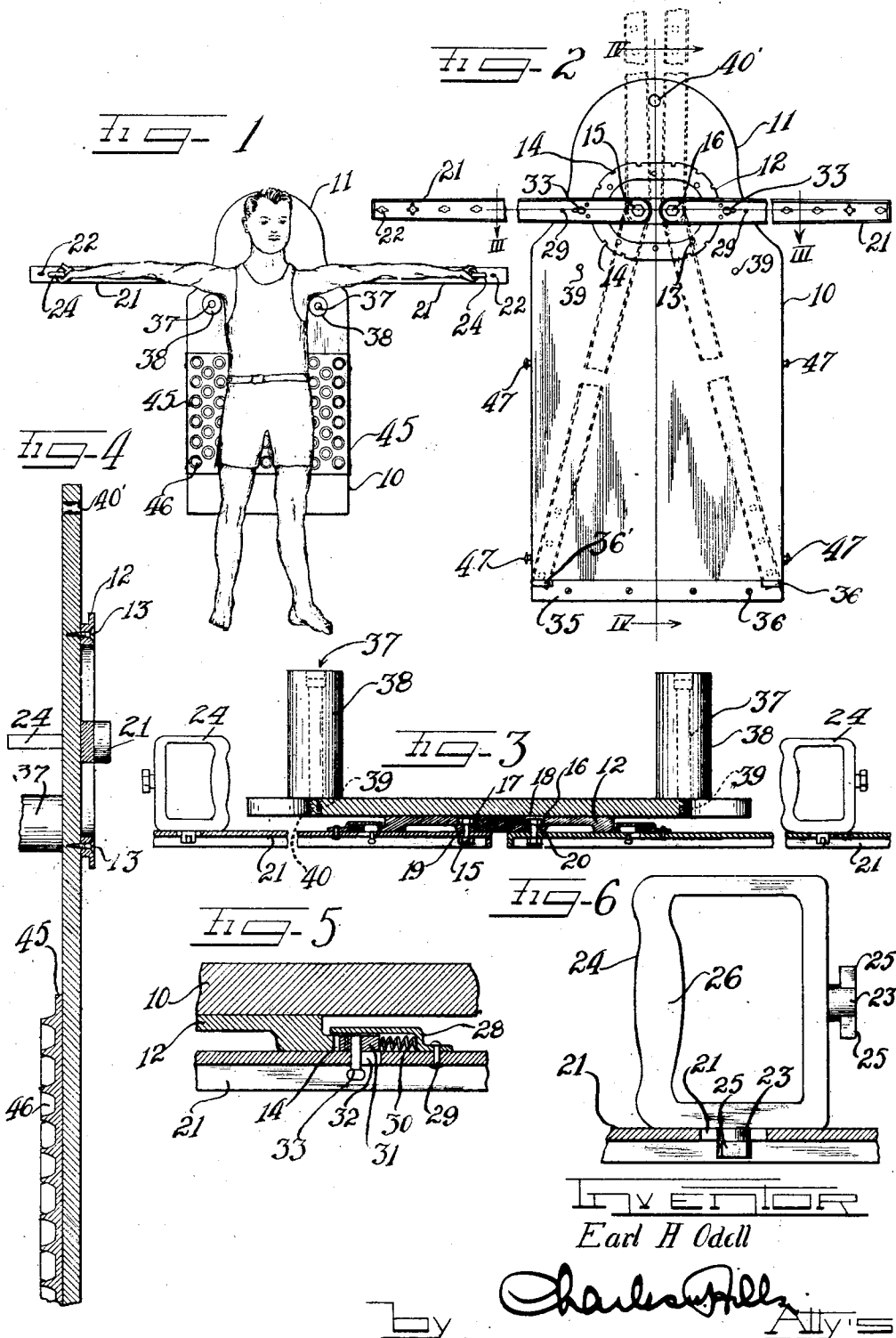
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EXERCISE APPARATUS

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UNITED STATES PATENT OFFICE.

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EXERCISE APPARATUS.

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My invention pertains to gymnastic apparatus, and more particularly to a calisthenic device especially adapted for use in connection with a systematic course of exercises.

It is at present common practice to massage and manipulate the limbs of ailing persons, with a view of promoting the blood circulation and relieving the nerves of undue strains and pressure. The exercises performed are such that the limbs of the patient are pulled and stretched, so as to elongate the muscles in the limbs, and to segregate the fatty tissues. These exercises are designed primarily to promote health, or body development, and symmetry. Obviously, these treatments cannot ordinarily be practiced by the patient himself without the aid of another person.

The object of the present invention is to provide gymnastic or calisthenic apparatus by means of which a person may thoroughly stretch, twist, exercise and develop various muscles in his body, without the aid of another person.

Another object of my invention is to provide a relatively simple and portable exercise device through the use of which one may overcome corpulency. In fact, by using my device in conjunction with the performance of a systematic course of exercises, I find that an adipose person may harden his muscles and reduce considerably in weight in a surprisingly short period of time. Then again an underweight or thin person by using my device may build up and harden the muscles of his body, thus causing him to take on weight. This is all due to the strenuous character of the twisting exercises which the patient is subjected to and must go through.

In accordance with the general features of the invention, I provide a device comprising a flat, board member having adjustably connected thereto a plurality of laterally extending arms. The arms are readily attachable to the board, whereby the device may be assembled with facility. Also, these arms have handle members adjustably secured to them. The board is of such a shape that the patient may lie down on it, and by stretching his arms outwardly, grasp the handle members. The patient may, in gripping these members, slightly twist his arms. Thereafter, by raising his legs upwardly

over his trunk and by twisting his body, it is possible for him to thoroughly stretch the muscles in his body and particularly those surrounding the abdomen.

In accordance with other features of my invention, I provide the supporting board of my device with a roughened or resilient pad preferably comprising a rubber pad equipped with suction cups, whereby the device may be used by an adipose person in connection with exercises devised to remove surplus fat. These cups will function to massage the person's body and to prevent the person's body from sliding on the board.

Other objects and advantages of my invention will more fully appear from the following detailed description, taken in connection with the accompanying drawing, which illustrates one embodiment thereof, and in which:

Figure 1 is an elevation of the device showing the patient in position on the same;

Figure 2 is an enlarged rear view of the device shown in Figure 1 with the resilient suction pad removed therefrom;

Figure 3 is a fragmentary sectional view partly in elevation taken on substantially the line III—III of Figure 2 looking downwardly;

Figure 4 is a sectional view taken substantially on the line IV—IV of Figure 2 looking in the direction indicated by the arrows and showing the resilient suction pad applied to the device;

Figure 5 is an enlarged sectional view illustrating in detail the plunger mechanism used to anchor one of the arms of the device in place, and

Figure 6 is an enlarged view partly in section illustrating the handle member and its mounting.

In the drawing:

The reference character 10 designates generally a substantially flat member, which may be made of any suitable material, such, for example, as a relatively smooth board. The board 10 has one of its ends 11 reduced in size, as clearly shown in Figure 2, in order to enhance the appearance and reduce the weight of the device. Also, the reduced end of board 10 is provided with an opening 40' by means of which the device may be hung on a hook or the like. Connected to the underside of board 10 is a ringlike metallic member or plate 12. This member

may be secured to the reduced end of the board by means of screws 13 (Figure 4). Formed in the periphery of member 12 are a plurality of spaced notches 14, the purpose of which will be more fully explained hereinafter.

Disposed substantially centrally of plate 12 are a pair of pivot bolts 15 and 16. The heads of these bolts are disposed in suitable recesses 17 and 18 in the surface of plate 12. The shanks of the bolts extend through openings 19 and 20 in the plate. Pivotaly connected to each of the bolts 15 and 16 is an adjustable arm 21. Since the arms 21 are identical in construction, it is thought that a description of one will suffice for both.

Each arm comprises a metallic channel beam provided with a plurality of elongated openings 22. Extending into one of the openings 22 in arm 21 is a lug 23 formed integral with the handle member 24. Each lug 23, as shown in Figure 6, has a pair of diametrically opposed lateral projections 25. The handle member 24 may be secured to the arm 21 by first inserting a lug and its lateral projections into one of the elongated openings 22, and by thereafter turning the handle member, whereby the lateral projections are brought out of register with the opening. The handle member 24 comprises essentially a rectangular frame including a grip portion 26. It will be noted that each member 24 has a pair of the lugs 23, whereby the handle member may be secured to the arm in a plurality of different positions. In Figure 6 the grip portion 26 of handle member 24 is shown in a vertical position. If it is so desired, this grip portion 26 may be disposed in a vertical position by disconnecting the handle member from the arm and by bringing the other lug 23 into register with the elongated opening. Also, by providing each arm with a plurality of openings 22, it is possible to adjust the handle bar in accordance with the reach of the patient using the device.

I shall now proceed to describe in detail the plunger mechanism for detachably securing each arm 21 to the notched periphery of plate 12. Fastened to an intermediate portion of each of arms 21 is an offset casing member 28 positioned between the board 10 and the arm 21. This casing 28 may be secured to arm 21 by means of a bolt or rivet 29. Disposed in the casing 28 is a compression spring 30 and a plunger 31. The plunger 31 is of such a width as to enable it to mesh with any one of the notches 14 in plate 12. Spring 30 functions to at all times urge plunger 31 toward the notched periphery of plate 12. The portion of arm 21 adjacent plunger 31 is provided with an opening 32 through which extends a pin 33 fastened to plunger 31. This pin 33 comprises releasing means for moving the plunger 31 out of

mesh with the notch 14 in the plate 12. As shown in Figure 5, the head of pin 33 is positioned within the dimensions of arm 21 and is adapted to be manually actuated to overcome the urging tendency of spring 30 and to release the arm 21 from its connection with the periphery of ring 12. After the arm 21 has been thus disengaged from ring 12, it may be swung to any one of a number of positions and thereafter anchored to the notched periphery of ring 12 by releasing the plunger 31. Thus, it will be evident that the two arms 21 may be rigidly connected to the board 10 in a plurality of different positions. This means that the device can be used in connection with many different calisthenic exercises. In order to enable the board to be laid relatively flat on the floor, it is provided with a strip 35 fastened by screws 36 to the lower or square end of the board 10. This strip 35 is of a thickness equal to that of the ring 12 and arm 21, as shown in Figure 3. This strip has a recess 36' at each end for receiving an end of the arm 21 when it is in the lower dotted position shown in Figure 2.

Fastened to the top side of board 10 are a pair of spaced armpit engaging members 37. These members are positioned adjacent the laterally extending arms 21. Each one comprises essentially a cylindrical portion 38 and a threaded portion 39 adapted to be threaded into an opening 40 in the board 10. The use of these members 37 is optional and they may be readily detached from the board 10. As shown in Figure 1, these members 37 are adapted to be embraced by the armpits of the person lying on the board 10. These armpit members not only serve to enable the person to properly position himself on the device, but they also aid in the twisting exercises which the person performs on the device.

Also positioned on the topside of board 10 is a rubber pad 45 having formed therein a plurality of suction cups 46. The edges of this pad 45 are preferably secured to the edges of board 10 by means of a plurality of headed nails or screws 47 (Figure 2). It will thus be evident that the pad 45 may be readily detached from the board 10 and its use in connection with the exercises is optional. This pad also functions to prevent the person's body from sliding relative to the board 10. Of course, it is to be understood that any other resilient and roughened pad may be used in place of pad 45 without deviating from the features of the invention.

The manner in which my device is used is briefly as follows:

The device is first placed on the floor and the patient who is to use it lies down on it as shown in Figure 1. If the handle members 24 are not properly adjusted so as to suit the reach of the person lying on the

device, they may be readily removed and adjusted in a manner previously described.

The person lying on the board 10 grips the portions 26 of members 24 as shown in Figure 1. That is to say, he twists his arms forwardly half a revolution until his thumbs are adjacent the two arms 21 of the device. This means that before he even undertakes any of the exercises, the muscles in his arms are already placed under tensions, due to the twisting of the same. While thus gripping the members 24, the patient begins the exercises by raising his legs upwardly and outwardly away from the board and by bending his trunk. Also, since the person's hands are occupied in gripping members 24, they cannot be used by the patient to aid him in raising his legs. As the exercises progress, the patient may twist his body or trunk from one side to the other while performing the exercises, but without releasing his hold on the grip members. The armpit members 37 will engage the person using the apparatus at his armpits and will prevent him from sliding toward the suction pad 45, due to the leg raising exercises. Then, too, these members 37 will subject the shoulder muscles to pressure and will cause the muscles in the person's arms to be thoroughly twisted. Obviously, each time the man throws his legs outwardly, the muscles in his arms are stretched and twisted to a relatively high degree, thus strengthening the muscles and segregating the fatty tissues. Moreover, with each raising exercise, the muscles in the person's back will be thoroughly stretched and the blood will be caused to circulate freely to all parts of the body.

Of course, it is to be understood that the arms 21 of the device may be adjusted to a plurality of different positions, depending upon the type of exercises to be performed in connection with the device. In Figure 2 I have illustrated by dotted lines another position to which each arm 21 may be moved. When the arms 21 of the device are in these dotted positions, the patient's arms will be disposed substantially parallel with his body and legs. Furthermore, the exercises which he will be compelled to perform when in this latter position will be of a different character than those required of him when he is in the position shown in Figure 1 and will hence act on other muscles of the body.

If the person taking the exercises is corpulent, the board 10 may be provided with the suction pad 45. The suction cups 46 of this pad are especially adapted to react on the hips and abdomen of the person lying on the device to draw the fatty tissues away from the muscles and bone. I have found that an adipose person can lose considerable weight in a relatively short period of time by using the device of my invention and by performing a given set of exercises in connection

therewith. Obviously, however, the use of the pad 45 is optional and may be readily detached from the board 10, if it is so desired.

The device of my invention is not only portable and occupies relatively small space, but the arms 21—21 may be moved with facility to the lower dotted positions shown in Figure 2. Obviously, the arms when in this position are out of the way and the device may be hung on the wall or the like ready for future use.

Now, I desire it understood that although I have illustrated and described in detail the preferred form of my invention, the invention is not to be thus limited, but only in so far as defined by the scope and spirit of the appended claims.

I claim as my invention:

1. In a device of the class described, a support member, a plurality of laterally extending arm elements connected to said support member and constrained to a position parallel therewith, and gripping means carried by each of said arm elements, said gripping means being engageable by the hands of a person lying on said support.

2. In a device of the class described, a support member adapted to support a person in extended position, said support being substantially flat, gripping means carried by the support adapted to be embraced by the hands of the person on the support when the arms of said person are in an extended position, supports for said gripping means constrained to a position parallel with the support member and a pair of armpit members secured to said support and adapted to embrace the armpits of the person thereon.

3. In a device of the class described, a support member adapted to support a person in extended position, said support being substantially flat, gripping means carried by the support adapted to be embraced by the hands of the person on the support when the arms of said person are in an extended position, supports for said gripping means constrained to a position parallel with the support member and a pair of armpit members secured to said support and adapted to embrace the armpits of the person thereon, said armpit members being detachable from said support.

4. In a device of the class described, a support member adapted to support a person in extended position, said support being substantially flat, and gripping means carried by the support adapted to be embraced by the hands of the person on the support when the arms of said person are in an extended position, supports for said gripping means constrained to a position parallel with the support member, said gripping means being adjustably connected to said supports.

5. In a device of the class described, a support member adapted to support a person in

extended position, said support being substantially flat, and gripping means carried by the support adapted to be embraced by the hands of the person on the support when the arms of said person are in an extended position, arm supports swingably connected to said support member and constrained to positions parallel therewith, said gripping means including a pair of hand gripping members each of which may be adjustably connected to said arm supports in a plurality of different positions.

6. In a device of the class described, a support member, a plurality of laterally extending arm elements connected to said support member, and gripping means carried by each of said arm elements, said gripping means being engageable by the hands of a person lying on said support, each of said lateral arm elements being adjustably connected to said support member for movement in a plane parallel therewith, and means whereby said arm elements may be stationarily held to any one of a plurality of positions, depending upon the calisthenic exercise being performed upon the device.

7. In a device of the class described, a substantially flat rigid support member adapted for supporting a person in extended position, lateral arms connected to said support member including hand gripping means engageable by the hands of the person on the support member, when the person's arms are in an extended position, and a resilient pad connected to the topside of the support member below said arms and having a roughened surface for acting upon the fatty tissues of the person on said support.

8. In a device of the class described, a substantially flat rigid support member adapted for supporting a person in extended position, lateral arms connected to said support member including hand gripping means engageable by the hands of the person on the support member, when the person's arms are in an extended position, and a detachable resilient pad connected to the topside of the support member below said arms and having suction cups for acting upon the fatty tissues of the person on said support.

9. In a device of the class described, a support member, a plurality of laterally extending arm elements connected to said support member, and gripping means carried by each of said arm elements, said gripping means being engageable by the hands of a person lying on said support, each of said arm elements being adjustably connected to said support to swing in a plane parallel there-

with and having means to stationarily hold the same in a plurality of positions including a manually releasable plunger.

10. In a device of the class described, a support member, a plurality of laterally extending arm elements associated with said support member, means adjustably connecting said arm elements to the support member adapted to constrain said elements to movement in a plane substantially parallel to the support member, and gripping means carried by each of said elements, said gripping means being engageable by the hands of a person lying on said support member.

11. In a device of the class described, a support member, a plurality of laterally extending arm elements connected to said support member, and gripping means detachably in connection with each of said arm elements comprising a plurality of grip members engageable by the hands of a person lying on said support, each of said grip members including means at two sides thereof for engagement with an arm element whereby it may be reversed in position.

12. In a device of the class described, a support member, a plurality of laterally extending arm elements pivotally connected to said support member to swing in a plane parallel therewith, latch means for stationarily connecting each of said elements to said support member, said latch means being releasable to permit the associated arm element to be swung onto a side of the support member when the device is not in use, and gripping means carried by each of said arm elements, said gripping means being engageable by the hands of a person lying on said support.

13. In a device of the class described, a support member, a plurality of laterally extending arm elements pivotally connected to said support member to swing in a plane parallel therewith, latch means for stationarily connecting each of said elements to said support member, said latch means being releasable to permit the associated arm element to be swung onto a side of the support member when the device is not in use, and gripping means carried by each of said arm elements, said gripping means being engageable by the hands of a person lying on said support and being readily detachable from said arm elements to permit of the device being stored away.

In testimony whereof I have hereunto subscribed my name at Chicago, Cook County, Illinois.

EARL H. ODELL.