

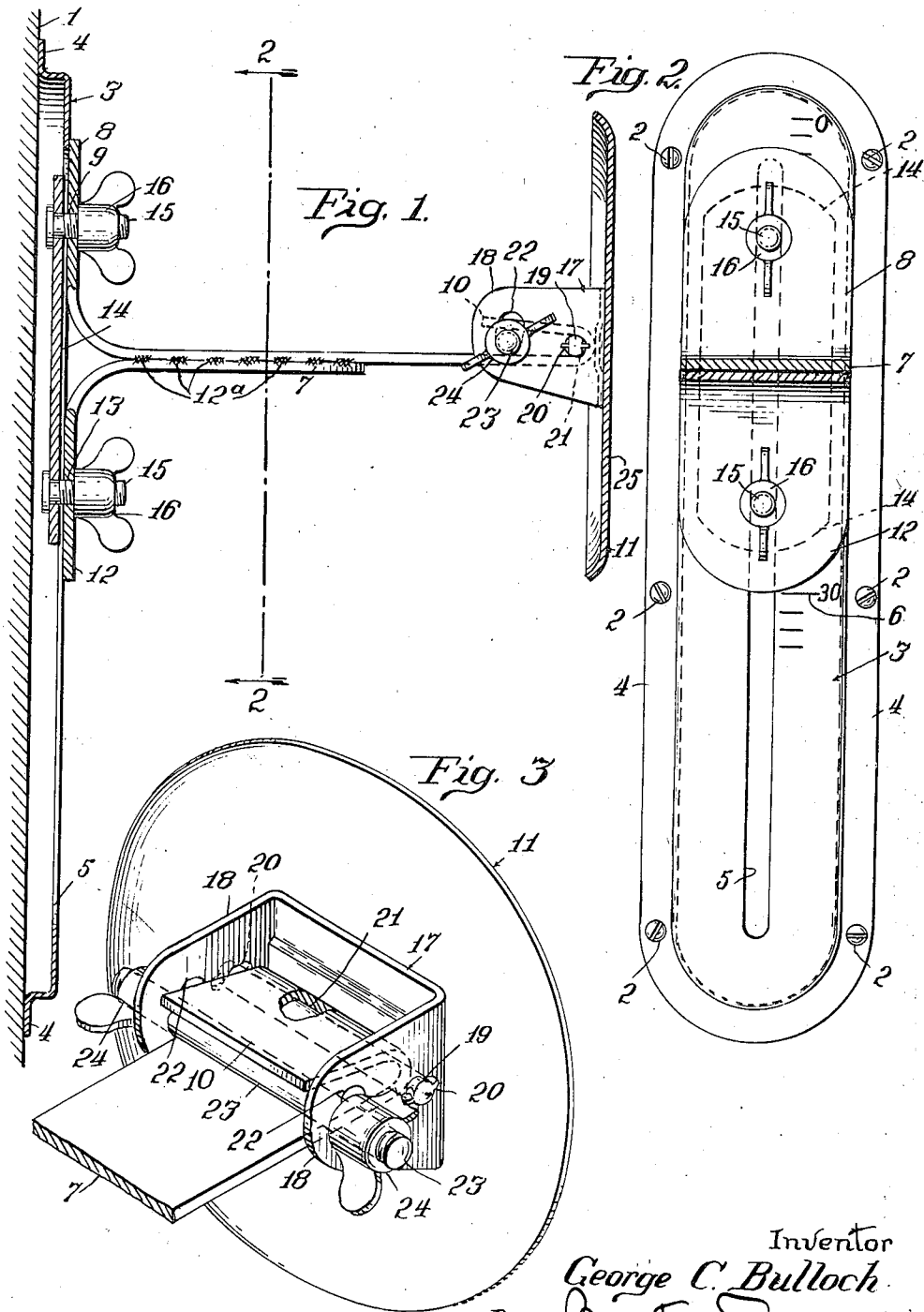
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EXERCISING DEVICE

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EXERCISING DEVICE

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12 Claims. (Cl. 272-57)

This invention is directed to new and useful improvements in exercising device of the type comprising an abdominal contact plate held away from a vertical support and against which the user leans or falls. This invention is directed particularly to an improvement over the exercising device shown and described in my copending patent application Serial No. 356,988, filed September 16, 1939, now Patent No. 2,253,758.

In a device of this type it is desirable to have a slight resiliency or cushion between the contact plate and the support but substantial movement or "give" should be avoided.

It is also desirable to provide an adjustment for the contact plate but the amount of adjustability should be limited.

The primary object of this invention is to provide a contact plate assembly having a limited adjustment.

Another object is to provide an improved cushioning means between the plate and the support.

Still another object is to provide such a device in which the plate is adjustable to different heights in a novel manner.

Still other objects and advantages will be apparent from the following detailed description.

In the drawing:

Fig. 1 is a side elevation partly in section of an exercising device embodying these inventions.

Fig. 2 is a sectional view taken along line 2-2 of Fig. 1.

Fig. 3 is a perspective view of the contact plate assembly looking toward the rear face of the contact plate.

In detail 1 indicates a wall or vertical support to which the exercising device is secured by means of screws 2. The device comprises a main supporting plate 3 provided with an offset flange 4 extending around its edge. This plate 3 is provided with a vertical slot 5 on one side of which appear calibrations 6. The outwardly extending plate supporting arm 7 is formed of flat spring metal and is bent with a gentle curve upwardly at one end to form a securing bracket 8 having a hole 9 and is hooked at its other end as at 10 to provide a seat for the plate 11. A downwardly extending bracket 12 likewise formed of spring metal is welded to arm 7 at 12^a and is provided with a hole 13 to provide a securing bracket similar to portion 8 of arm 7.

A backing plate 14 is positioned to the rear of main supporting plate 3 and is provided with two bolts 15 extending forwardly therefrom through slot 5 and holes 9 and 13. These bolts are welded to the rear of plate 14. Wing nuts 16 are threaded onto the outer ends of bolts 15 and when tightened will clamp the brackets 8 and 12 to plate 3. It can be seen that this assembly permits vertical adjustment of arm 7.

The plate assembly comprises the abdominal contact plate 11 and a U-shaped bracket 17, having two rearwardly extending parallel legs 18, welded to the rear face of plate 11. Extending between and through these legs 18 is a hinge pin 19 which is upset at both ends as shown at 20 to maintain it in position. This pin is positioned in the throat 21 of the hooked end of arm 7. Arcuate slots 22 are formed at the ends of legs 18 and a bolt 23 having a diameter substantially equal to the height of the jaw of the hooked portion of arm 7 at that point extends through the slots and the jaw of the hooked end of arm 7. Wing nuts 24 are threaded onto the ends of bolt 23 and when tightened will cause the legs 18 to press against arm 7 and the hooked portion 10 to hold the plate in adjusted position. When the nuts are loosened the plate may be moved about hinge 19 a limited degree, the amount of movement depending upon the length of the slot.

It will be seen that the slots 22 are so positioned in leg portions 18 that the plate 11 may be adjusted only from vertical position to a position in which the front surface 25 faces upwardly. In the use of this device it is undesirable that the front or contacting surface 25 face downwardly and the stop means is so arranged to prevent any such adjustment.

The calibrations enable the operator or user to know the most efficacious vertical adjustment or permit the user to systematically vary his use of the device.

In assembling the plate 11 on arm 7 the bolt 23 is removed and the plate positioned immediately above and parallel to arm 7 to the rear of hook 10 and then moved outwardly until hinge pin 19 comes in contact with throat 21. The plate is then swung to vertical and the bolt 23 inserted through slots 22 and between arm 7 and its hooked end 10. Nuts 24 are then threaded on the ends of bolt 23.

The flat spring metal construction affords a certain minimum resiliency or cushioning effect and the plate adjustment permits the plate to be positioned so that a slight upward pushing effect may be obtained by the user as well as a horizontal force.

In use the operator adjusts the height of the plate 11 so that it is about level with the operator's abdomen. Then standing a short distance from the plate, for example from two to six inches, the operator allows himself to fall from the perpendicular toward the plate 11 until the plate contacts the abdomen. In this position the operator is off-balance and is leaning toward the wall 1 and is prevented from falling against the wall by the plate 11 pressing against his abdomen. Immediately the fall is thus stopped the operator returns himself to normal, perpendicular position solely by pushing against

plate 11 with his abdominal muscles and by inhaling at the same time, and when he has thus regained perpendicular position he again allows himself to fall against the plate as first described and then at once again pushes himself to normal position and this operation is continuously repeated until the desired exercise has been obtained. Obviously the number of times this can or should be done at one time depends upon the physical condition of the operator as does the frequency of such exercise. It has been determined that from fifty to one hundred times twice a day, before meals, is beneficial, but it is apparent that as the abdominal muscles thus exercised become stronger and the fat reduced, the operator can far exceed these numbers and benefit accordingly. It has been found that the use of this device will cause excess fat to rapidly disappear from the abdominal region and the muscles thereabout to become strong and firm. Obviously the plate 3 is to be moved to different heights to contact different parts of the abdominal region.

The flat spring and curved bracket construction of the illustrated device provides the desired resiliency or cushion.

I claim:

1. An exercising device for the abdomen comprising a vertical support, a flat spring arm extending away from said support, an abdominal contact plate hinged to the end of said arm, and means permitting limited pivotal adjustment of said plate and locking means for holding said plate in adjusted position.

2. An exercising device for the abdomen comprising a vertical support, a flat spring arm extending away from said support and hooked at its outer end, a contact plate pivotally secured to said hooked end, and releasable means holding said plate in fixed position relative to said arm.

3. An exercising device comprising a vertical support, a supporting arm, a contact plate positioned on the end of said arm, flat spring metal bracket portions extending vertically from the other end of said arm, means adjustably securing said bracket portions to said support, a hinge member secured to said plate and bearing on said arm, means permitting limited angular adjustment of said plate relative to said arm about said hinge member as an axis and means for holding said plate in adjusted position.

4. An exercising device comprising a vertical supporting plate provided with a vertical longitudinally extending slot, an outwardly extending supporting arm, an abdominal contact plate on the outer end of said arm, a vertically extending bracket portion at the inner end of said arm, a backing plate positioned behind said supporting plate, bolts extending from said backing plate through said slot and said bracket portion and nuts threaded on said bolts for adjustably clamping said arm to said supporting plate.

5. An exercising device comprising a vertical supporting plate provided with a vertical longitudinally extending slot, an outwardly extending supporting arm formed of flat spring metal, the inner end of said arm being bent at right angles to the arm to form a vertically extending bracket portion joined to the arm by a curved portion, means securing said bracket portion to said supporting plate and an abdominal contact plate on the outer end of said arm.

6. On exercising device comprising a vertical supporting plate provided with a vertical longi-

tudinally extending slot, an outwardly extending supporting arm formed of flat spring metal, the inner end of said arm being bent at right angles to the arm to form a vertically extending bracket portion joined to the arm by a curved portion, a bracket of similar material bent at right angles with connecting curved portion secured to said arm with the vertical portion aligned with but extending in the opposite direction from the vertically extending bracket portion of the arm, means clamping said brackets to the supporting plate and an abdominal contact plate on the other end of said arm.

7. An exercising device comprising a vertical support, a flat spring arm extending away from said support, the inner end of said arm being bent with a curve to form a vertically extending bracket, the other end of said arm being bent to form a hook, means clamping said bracket portion to the vertical support, a contact plate and means clamping said plate to said hooked end of the arm.

8. An exercising device comprising a vertical support, a flat spring arm extending away from said support, the inner end of said arm being bent with a curve to form a vertically extending bracket, the other end of said arm being bent to form a hook, releasable means clamping said bracket to said support to provide vertical adjustment of said arm, a contact plate pivotally mounted on the outer end of said arm, stop members limiting the pivotal movement of said plate on said arm and means for holding said plate to said arm in adjusted position.

9. An exercising device comprising a vertical support, an outwardly extending arm mounted on said support, a contact plate, a U-shaped bracket secured to the inner surface of said plate, a hinge pin positioned in said bracket, means pivotally holding said hinge pin on the outer end of said arm, means for clamping said bracket to said arm and stop means limiting the amount of pivotal movement of said plate relative to said arm.

10. An exercising device comprising an outwardly extending arm, a vertical support to which said arm is secured, a contact plate pivotally mounted on the outer end of said arm, stop means limiting the pivotal movement of said plate between the limits of vertical position and a position in which the outer surface of said plate faces at an angle upwardly from said vertical position.

11. An exercising device comprising an outwardly extending arm, a vertical support to which said arm is secured, a contact plate pivotally mounted on the outer end of said arm, stop means limiting the pivotal movement of said plate so as to prevent the plate to be moved so that the outer surface of said plate faces downwardly.

12. An exercising device comprising an outwardly extending arm, a vertical support to which said arm is secured, the outer end of said arm being hooked, a contact plate, a U-shaped bracket secured to the inner surface of said contact plate and provided with arcuate slots in its leg portions, a hinge pin extending across said bracket and positioned at the throat of said hooked end portion of the arm, a bolt extending through said slots and across and within the jaw of said end portion, and nuts threaded on said bolt for clamping the bracket adjustably to said arm.

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