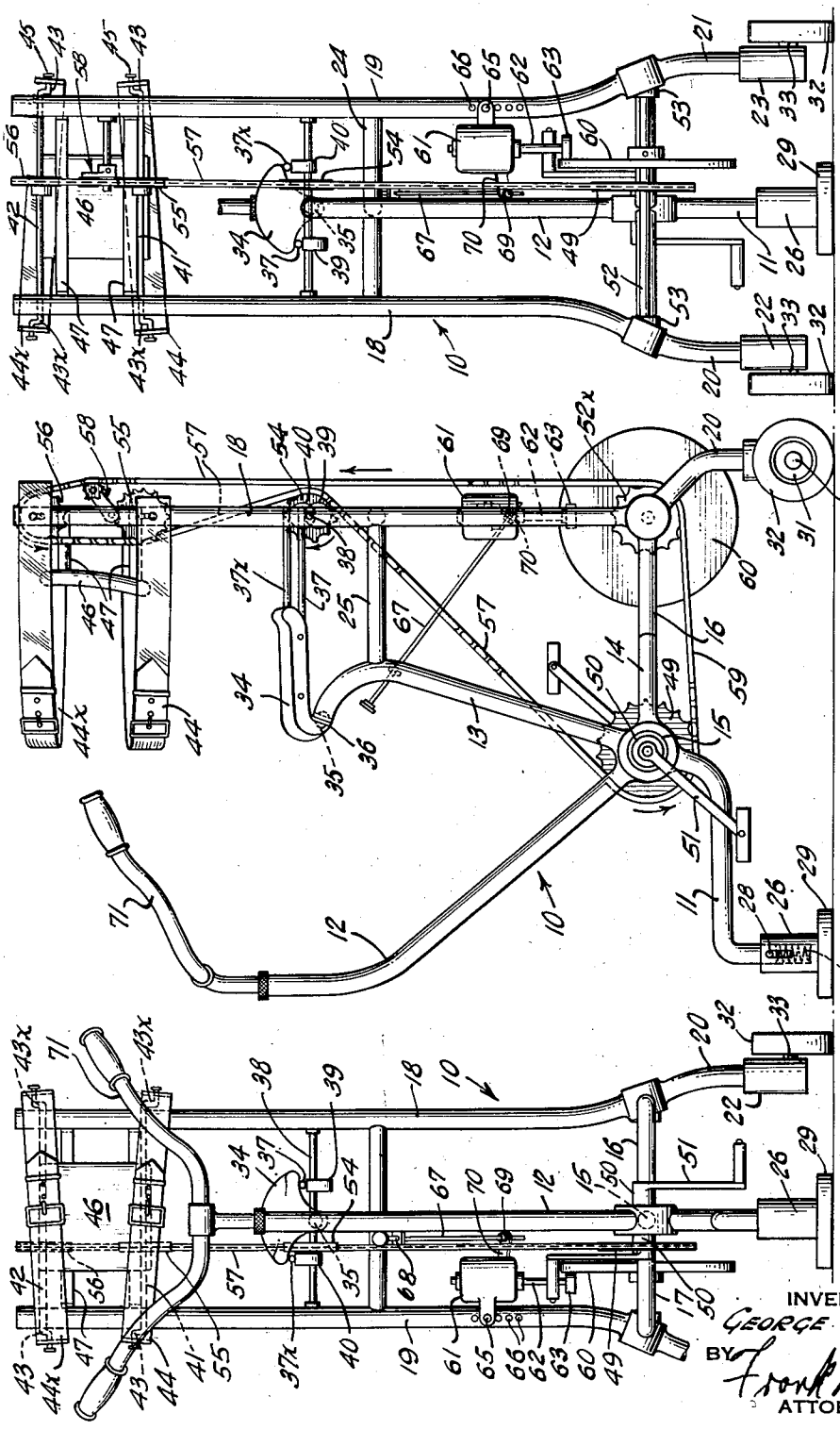
April 30, 1957 G. MAYERS 2,790,439

EXERCISING APPARATUS

Filed Dec. 29, 1955 2 Sheets-Sheet 1



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Fig. 4.

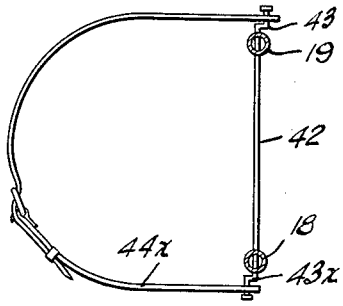


Fig. 5.

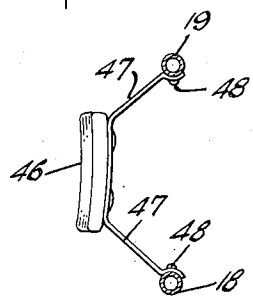


Fig. 6.

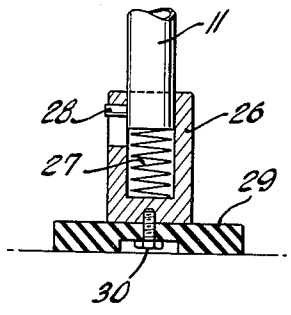


Fig. 7.

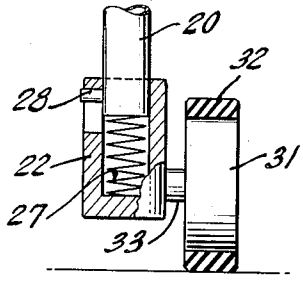
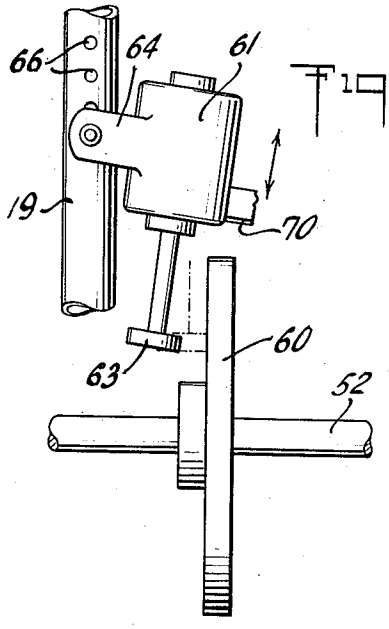


Fig. 8.



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EXERCISING APPARATUS

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Application December 29, 1955, Serial No. 556,353

6 Claims. (Cl. 128—25)

This invention relates to an exercising apparatus and more particularly to an indoor pedal exercising apparatus adapted to massage the stomach muscles.

It is an object of this invention to provide an exercising device or apparatus adapted to massage the stomach muscles of a person simultaneously while being operated by the leg muscles of said person.

It is another object of this invention to provide an exercising device adapted for indoor use and of compact construction.

It is another object to provide an exercising mechanism of simple construction adapted to exercise the muscles of a person's back.

These and other objects of this invention will be apparent upon reading the following description taken in conjunction with the accompanying drawings in which:

Fig. 1 is a front view of the exercising device,

Fig. 2 is a side view of the exercising device,

Fig. 3 is a rear view of the exercising device,

Fig. 4 is a top view of an abdominal belt,

Fig. 5 is a top view of the back rest,

Fig. 6 is a cross-section view of the cushioned front leg support,

Fig. 7 is a section view of a cushioned rear leg support and

Fig. 8 is a detailed view of an auxiliary electrical motor showing the manner of applying electrical energy from the motor to the friction driven flywheel.

The device is particularly useful to people having sedentary positions such as office workers and also to people in general who wish to obtain and then maintain a healthy body of normal weight.

The device is especially useful in slenderizing the abdomen and buttocks of a person due to a massaging effect on these respective parts of the body.

Turning now to the drawing (Figs. 1 to 3), a tubular frame 10 is provided with a front support leg 11, a handle bar support upright member 12, a seat support upright member 13, and a bottom horizontal support member 14 all radiating from and integral with a common housing 15. The member 14 is united integrally as by welding to a pair of obliquely disposed horizontal bars 16 and 17, so that the bottom horizontal connecting structure of members 14, 16 and 17 has a Y-configuration.

The back structure of frame 10 comprises a pair of spaced apart vertically disposed tubular rear members 18 and 19 to the base of which members 16 and 17 are fixedly and respectively secured.

A pair of angularly disposed back support legs 20 and 21 are fixedly secured to the base of the back members 18 and 19 and are provided with a cushion spring receiving housings 22 and 23.

A horizontal spacer bar 24 is disposed between vertical members 18 and 19 substantially in the center thereof and a horizontal re-enforcement bar 25 is disposed between the top of upright seat support 13 and the center of bar 24.

The construction of the above-described frame may be varied somewhat within the scope and spirit of this invention.

The front leg 11 is provided with a removeably secured tubular and apertured housing 26 having a resilient coil spring 27 in the housing cavity upon which the base of the angularly disposed front leg member 11 is placed. The leg 11 is held in housing 26 by a removable pin 28 disposed through the aperture of the housing.

A resilient pad 29 preferably of rubber is secured to the bottom of housing 26 by means of a screw 30.

Thus the front leg 11 of the frame 10 is provided with resiliency so that a smooth movement of the frame is produced.

Similarly, the back tubular apertured housings 22 and 23 are provided with a coil spring 27 and locking pins 28. However, housings 22 and 23 are preferably provided also with wheels 31 having rubber tires 32 said wheels 31 being journaled to the respective housing 22 or 23 by means of an axle 33.

As shown in Figs. 1 to 3 the vertical back frame members 18 and 19 extend in spaced relationship to the seat 34. The seat 34 is provided with a conventional universal ball joint 35, the ball being adapted to mate lockingly with a conventional ball receiving socket 36 disposed in the top of tubular frame member 13.

A pair of spaced apart seat support rods 37 and 37X are secured to the bottom of the seat by conventional means at respective sides thereof and extend rearwardly and horizontally from said seat 34.

A seat activating axle 38 is journaled into vertical members 18 and 19 rearwardly of seat 34. A pair of cams 39 and 40 are fixedly secured to the axle 38 by conventional set screws or by press fitting thereto. The cams 39 and 40 are spaced on axle 38 so as to receive a rod 37 and 37X respectively.

As shown in Figs. 2 and 3 one cam 39 is disposed downwardly when the other cam 40 is disposed upwardly or 180° apart. Rotation of axle 38 causes simultaneous rotation of cams 39 and 40 resulting in a side to side movement of seat 34 thereby massaging the buttock muscles of a person.

The top section of vertical members is provided with a pair of abdominal belt activating axles 41 and 42 having eccentric cranks 43 and 43X on the axle ends. The cranks 43 on any axles 41 and 42 are disposed 180° apart so that when one crank 43 is disposed downward the other 43X is disposed upward.

Moreover, the axles 41 and 42 are selectively set in opposition to one another. An adjustable belt 44 and 44X is respectively secured to axles 41 and 42 by having the horizontal terminal member of crank 43 and 43X pass through an aperture in the belts 44 and 44X provided thereof. Preferably the cranks 43 and 43X are provided with end flanges 45 to secure the belt to the respective crank. The end flanges 45 may be conventionally threaded and removably secured to crank 43 and 43X ends having mating screw threads.

Inasmuch as the cranks 43 and 43X of axles 41 and 42 are set in opposition to one another the belts 44 and 44X move toward and away from one another at their respective ends so that a massaging effect is produced on the abdominal muscles.

A back rest 46 preferably of sponge rubber is suitably disposed relative to the seat 34 and is secured to vertical members 18 and 19 by means of a pair of support pieces 47 by conventional means such as metal screws 48.

The motivation of the belts 44 and 44X as well as of

seat 34 may be entirely by mechanical means and/or optionally by electrical auxiliary means.

In the mechanical means for actuating or motivating the massaging elements viz. belts 44, 44X and seat 34, a sprocket wheel 49 is secured to an axle 50 disposed conventionally in housing 15 and pedal members 51 are fixedly secured by conventional means to said axle 50. A bottom rear axle 52 is secured in a pair of axle housings 53 disposed in the base of vertical member 18 and 19. A sprocket 52X suitably positioned is conventionally secured to axle 52.

A sprocket wheel 54 is secured to axle 38. Also sprocket wheels 55 and 56 are secured to belt motivating axles 41 and 42 respectively. All the sprocket wheels 49, 52X, 54, 55 and 56 are actuated by a chain 57 and are disposed in planar relationship and the sprocket wheel diameters are such as to produce a pleasant massaging effect by the belts 44 and 44X and by seat 34.

As shown in Fig. 2, a conventional chain tensioning guide 58 may be provided, however where the sprocket wheel 52 is of suitable diameter, or where the outward extension of leg support 20 and 21 are altered or where the frame 10 construction is modified suitably, the use of a tensioning guide 58 is obviated.

However, and preferably the chain 57 may be disposed to the left of both sprocket wheels 55 and 56 so that the sprocket wheels 55 and 56 rotate in the same direction giving another and preferred unique massaging motion to belts 44 and 44X.

The device of this invention is preferably provided with a suitable flywheel 60 secured to axle 52 by a set screw or other conventional means to produce smooth operation of the belts 44 and 44X.

An auxiliary electrical motor 61 may be provided and is pivotally secured to vertical back leg 19. The motor is provided with a rotor shaft 62 to the end of which is fixedly secured a friction disc 63. As shown in Fig. 8 the motor is provided with a pair of flanges 64 which straddle support 19 and are secured pivotally to support 19 by a removable hinge bolt 65 disposed selectively in one of a plurality of apertures 66 located in support 19. Thus the speed of the flywheel 60 may be selectively made by moving motor 61 to a selected aperture 66.

The movement of the friction disc 63 toward or away from the flywheel 60 may be done in many ways but for purposes of illustration a manual movement of the motor and its attached rotor and friction disc is shown. To this end a push-pull rod 67 is slidably secured in an apertured support flange 68 fixed to frame member 13 and secured at its bottom by means of a conventional swivel joint 69 to flange 70 integral with motor 61.

The combination exerciser-massager of this invention may be modified considerably within the scope of the invention, however all obvious modifications are intended to be embraced within the claims herein. Thus handlebars 71 may be secured to frame member 12 or a wheel may be substituted for the handle-bars. Also the belts 44 and 44X may be of leather, plastic or rubber.

I claim:

1. A massaging device comprising a frame support having a seat frame member and a pair of vertical back support members disposed behind the seat a universal ball joint mechanism disposed on said seat frame member, an oscillatory seat disposed on said ball joint mechanism of said seat member, a rotatable seat motivating axle secured between said vertical members and in planar relationship to said seat, a pair of spaced-apart offset cams secured to said axle, a pair of lateral bars secured to the sides of said seat and disposed on said cams whereby rotation of said seat axle effects an oscillatory side to side motion and power means for rotating said axle.

2. A massaging device for abdominal muscles comprising a frame support having a seat adapted to support a person thereon and having a front frame support member and a pair of vertical back frame support members disposed in parallel spaced apart relationship behind and above said seat a universal ball joint mechanism disposed contactingly beneath said seat and upon said frame support, a pair of belt motivating rotatable axles each having belt cranks at each axle end journaled in spaced-apart relationship in the top of said back frame support members above said seat, a pair of belts each secured to each end of each axle and adapted to embrace the abdomen of a person seated upon said seat, each of said axles having the belt cranks of the ends thereof disposed in offset relationship, said axles being disposed in opposition whereby simultaneous movement of said belts effects movement of the belts toward and then away from one another, and power means for motivating said axles.

3. A massaging device comprising a frame support having a seat frame member and a pair of vertical back support members disposed behind the seat a universal ball joint mechanism disposed on said seat frame member, a seat disposed on said universal ball joint mechanism of said seat member, a rotatable seat motivating axle secured between said vertical members and in planar relationship to said seat, a pair of spaced-apart offset cams secured to said axle, a pair of lateral bars secured to the sides of said seat and disposed on said cams whereby rotation of said seat axle effects a side to side motion, a pair of belt motivating rotatable axles each having belt cranks at each axle end journaled in spaced-apart relationship in the top of said back frame support members above said seat, a pair of belts each secured to each end of each axle and adapted to embrace the abdomen of a person seated upon said seat, each of said axles having the belt cranks of the ends thereof disposed in offset relationship, said axles being disposed in opposition whereby simultaneous movement of said belts effects movement of the belts toward and then away from one another, and power means for motivating said axles.

4. The device of claim 2 wherein the power means comprises a sprocket pedal driven wheel, a sprocket wheel on the seat motivating axle, a sprocket wheel on each of the belt motivating axles, and a sprocket chain disposed in planar relationship about all of said axles.

5. The apparatus of claim 4 having a motor secured to said frame and adapted to motivate said sprocket chain.

6. The apparatus of claim 4 having cushioning means between the frame support and the foundation upon which the frame rests.

References Cited in the file of this patent

UNITED STATES PATENTS

2,259,551	Burke	Oct. 21, 1941
2,278,861	Burke	Apr. 7, 1942