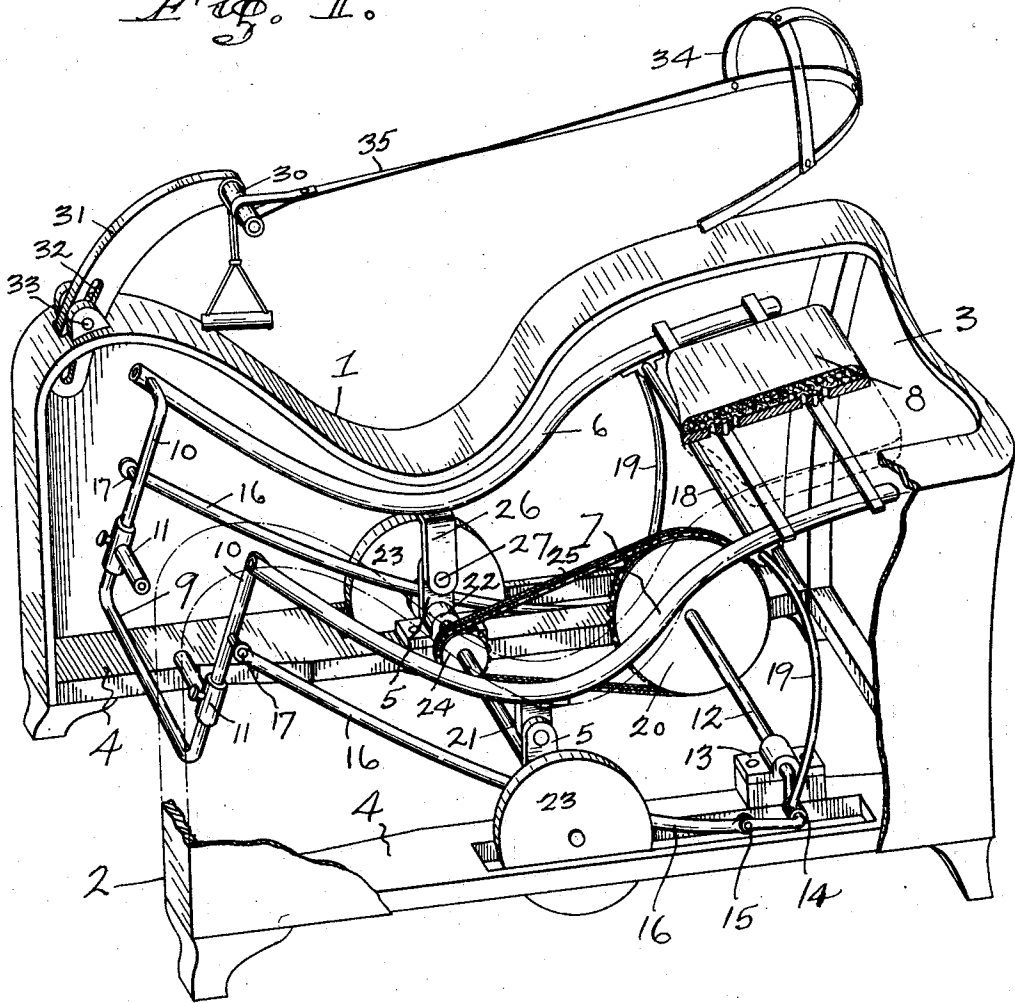


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EXERCISING MACHINE
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Fig. 1.



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EXERCISING MACHINE

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This invention relates particularly to an apparatus for exercising the human body and which will promote movement of the muscular system of the body and induce a greater than normal circulation of the blood stream throughout the body, whereby any undernourished part or portion of the body will be stimulated to activity and a resultant healthful up-building of the body.

An object of the invention is to provide an exercising device, shaped somewhat like a chair, and having a pair of spaced supports for the buttocks and feet, which support is adapted to be rocked in a vertical plane about a horizontal axis by movement of the body, and the rocking movement of the support is transmitted through a system of interconnecting links and levers to a fly wheel structure which, when rotated, will accumulate sufficient momentum to continue rocking movement of the support for a short period of time after the person seated on the support has ceased rocking movement.

A further object of the invention is to provide in an exercising machine, a rocking support which is operatively connected to a rotating structure, which is adapted to be actuated by the shifting of the weight of a person on the seat, in conjunction with a flexible support for holding the head of a person in a selected position, to prevent movement of the person's head rearwardly of a certain point as the legs are moved forwardly to accomplish rocking movement of the seat.

Other objects and advantages are to provide an exercising apparatus that will be superior in point of simplicity, inexpensiveness of construction, positiveness of operation, and facility and convenience in use and general efficiency.

In this specification and the annexed drawing, the invention is illustrated in the form considered to be the best, but it is to be understood that the invention is not limited to such form, because it may be embodied in other forms; and it is also to be understood that in and by the claims following the description, it is desired to cover the invention in whatsoever form it may be embodied.

In the accompanying one sheet of drawing:

Fig. 1 represents a perspective view of an exercising machine constructed in accordance with my invention, partly broken away to illustrate the interior construction thereof.

In detail the construction illustrated in the drawing comprises a pair of spaced parallel side members 1 and 2 connected across the rear end thereof by a back 3, the sides and back thus described being shaped somewhat the same design as an "easy" chair. A base 4 is provided along the bottom of each of the side walls 1 and 2. A bearing support 5 is provided on the upper side of each of the bases 4, at corresponding points thereon.

A pair of U-shaped bars 6 and 7 forming the body support, are connected together at one end by a seat 8 and at the opposite end by a depending U-shaped foot support 9. The bars 6 and 7 have a contour which closely follows that of the upper edge of the side walls 1 and 2 so that said bars might be concealed within the plane of said side walls.

A bracket 26 depends from the underside of each of the side bars 6 and 7 midway between the ends thereof, and each of said brackets is connected by a pivot 27 to each of the bearing supports 5 on the respective side members 1 and 2.

Each of the opposite legs 10 of the U-shaped foot support 9 are pivotally mounted on the ends of the bars 6 and 7 to permit the same to swing. A foot supporting member 11 is adjustably mounted on each leg of the support 9.

A crank shaft 12 is journaled at each of its opposite ends in bearings 13 mounted on the bases 4 of each of the side members. Each end of the crank shaft 12 is formed as an eccentric to provide a pair of crank throws 14 and 15. The outer crank throw 15 is pivotally connected by a link 16 to a pivot 17 on one of the legs of the foot support 9. A sprocket 20 is keyed onto the shaft 12.

A cross bar 18 is journaled transversely between the side bars 6 and 7, adjacent the seat 8, the cross bar 18 having the ends thereof bent down to form vertically disposed legs

19, each of which are journaled to the inner throw 14 of the crank shaft. A shaft 21 is journaled in bearings 22 on the bases 4 forwardly of the crank shaft 12. A fly wheel 23 is fixedly mounted on each of the ends of the shaft 21. A sprocket 24 is provided on the shaft 21 between the ends thereof, and a belt or chain 25 connects the respective sprockets 20 and 24.

10 In operation the person taking exercise, sits on the rocking seat 8 and places the feet upon the cross bar of the foot rest 9. The feet are then shifted forwardly against the foot support, and the weight of the body is also shifted forwardly, so that a downward force is exerted upon the foot bar, which causes the link 16 to be pulled forwardly, and this pull is transmitted to the throws on the crank shaft to cause the crank shaft to be revolved and the fly wheel likewise, to be revolved in unison therewith. The pressure of the feet against the foot bar 9 causes the interconnected side bars 6 and 7 to rock in a vertical direction on the horizontal axis of the pivot pins 27 so that the forward end of the said bars 6 and 7 will move in a downward arc, as the foot supporting bar 9 is urged forwardly. When the foot supporting bar 9 has reached the limit of its forward swinging movement, and the forward end of the rocking bars 6 and 7 have reached the limit of their downward movement, the seat end of the said rocking bar will have reached the limit of its upward movement. At this time 35 the pressure of the feet applied against the foot supporting bar is released and the weight of the person allowed to be directed entirely onto the seat end of the rocking bars 6 and 7, to apply the said persons weight downwardly through the legs 19 onto the throws on the crank shaft and to continue the rotative movement of the crank shaft initiated by the links 16. The rocking action of the side bars 6 and 7 is then continued by repeated and successive applications of foot pressure and weight to the opposite ends of the rocking members. The fly wheels 23 after continued rotation, accumulate sufficient momentum to continue the rocking action of the members 6 and 7, after the individual seated thereon has ceased applying pressure and weight thereto.

A hand grip 30 is mounted on a carrying bar 31 on the forward end of each of the side members 1 and 2. The member 31 is slotted at 32 and slidably mounted on a pin 33 on each side member, so that when in operative use, the hand grip can be raised into an elevated position and when not in operation, can be placed in a position of rest on top of the outside face of each side member. Each hand grip 30 may be used by a person seated on the rocking member for holding the person's body in a fixed position on the seat when applying the foot pressure to the foot sup-

porting bar 9, or the said hand grip 30 may be used as a point to and from which the body may be moved by the arms, either when using the feet to actuate the rocking member or independently thereof.

A flexible support 34 is provided to engage the head of a person seated on the rocking member, said head support being connected by straps 35 to the hand grips 30. The head supporting member 34 has been found to be very effective to maintain the head in a set position against rearward movement as the legs are urged forwardly against the foot supporting bar 9. When the head support 34 is utilized to hold the body in a predetermined position, it is necessary to maintain the muscles of the back, neck and head in a relatively stiff upright position and to resist the strain or pressure created by the feet moving the foot supporting bar 9. This stiffening of the back, neck and head muscles, during the periods when the feet are being moved forwardly, followed by the relaxing of the body, neck and head muscles when the pressure applied through the legs and feet is released, induces an active movement of the muscles and of the blood stream which is highly beneficial to the person operating the apparatus.

The sudden flexing of the muscles throughout the body of a person operating my apparatus, causes a sluggish blood stream to become active and as a result impurities and other toxic conditions in the body and in the blood stream are caused to be eliminated.

Having thus described this invention, what I claim and desire to secure by Letters Patent is:

1. In an exercising device, a member to rock on a horizontal axis and to support a person in a sitting position; means on the member actuated by forward movement of the legs of the sitting person to rock the member on its pivotal axis; and a flexible support associated with a stationary part of the device to engage the head of a person sitting on the member to hold the head against rearward movement as the legs are moved forwardly.

2. In an exercising device, a seat frame adapted to be alternately raised and lowered in an arcuate path; a support for the feet swingingly secured to the forward end of the seat frame; means actuated by swinging movement of said foot support to raise and lower the seat frame; and a flexible head support associated with a stationary part of the device to hold the head in a set position against rearward movement as the feet push the foot support forwardly to raise the seat frame.

3. An exercising machine including a base; a pair of bars arranged in spaced parallel relation on said base; means pivotally connecting the base to the bars at a point mid-

way between the ends thereof; a seat connecting the pair of bars at one end thereof; a foot support pivotally connected to the other end of the bars and depending therefrom; a crank shaft journaled on the base parallel to the pivotal axis of the bars, said crank shaft having a double throw at each end thereof; a pair of vertically disposed links, each having one end thereof pivotally connected to one of the bars at the seat end thereof and the other end of each of said links swivelly connected to corresponding throws on opposite ends of the crank shaft; and a pair of horizontally disposed links each having one end thereof pivotally connected to the foot support on opposite ends thereof and the other end of each of said links swivelly connected to corresponding throws on opposite ends of the crank shaft.

end of said frame adjacent the hand support; a support for the buttocks at the other end of said frame; an extension member secured to the hand support and having its other end in a position to be engaged by the head of a person seated on the frame, whereby the head exerts a pulling pressure rearwardly against the extension member as the feet exert a pressure forwardly against the foot supports.

In testimony whereof, I have hereunto set my hand at San Francisco, California, this 8th day of September, 1930.

JOSEPH D. BELL.

4. An exercising machine including a base; a pair of bars arranged in spaced parallel relation on said base; means pivotally connecting the base to the bars at a point midway between the ends thereof; a seat connecting the pair of bars at one end thereof; a foot support pivotally connected to the other end of the bars and depending therefrom; a crank shaft journaled on the base parallel to the pivotal axis of the bars, said crank shaft having a double throw at each end thereof; a pair of vertically disposed links, each having one end thereof pivotally connected to one of the bars at the seat end thereof and the other end of each of said links swivelly connected to corresponding throws on opposite ends of the crank shaft; a pair of horizontally disposed links each having one end thereof pivotally connected to the foot support on opposite ends thereof and the other end of each of said links swivelly connected to corresponding throws on opposite ends of the crank shaft; a shaft having a fly wheel thereon, journaled on the base parallel with the crank shaft; and meshing driving means on the fly wheel shaft and crank shaft to transmit rotary movement of the crank shaft to the fly wheel shaft.

5. An exercising machine including an elongated frame having a fixed support for the hands and a movable support for the feet at one end thereof, and a support for the buttocks at the other end thereof, an extension member connected to the frame adjacent the hand support and having the other end thereof positionable around the back part of the head of a person seated on the frame, whereby the head may be held stationary to permit the legs of a person to exert a pushing pressure forwardly against the foot supports to cause movement of the foot supports.

6. An exercising machine including a base; a support for the hands at one end of the base; an elongated frame mounted to rock intermediate its ends on said frame; a support for the feet swingingly mounted on one

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