March 7, 1967 T. T. GIBBS 3,307,534

EXERCISING MACHINE

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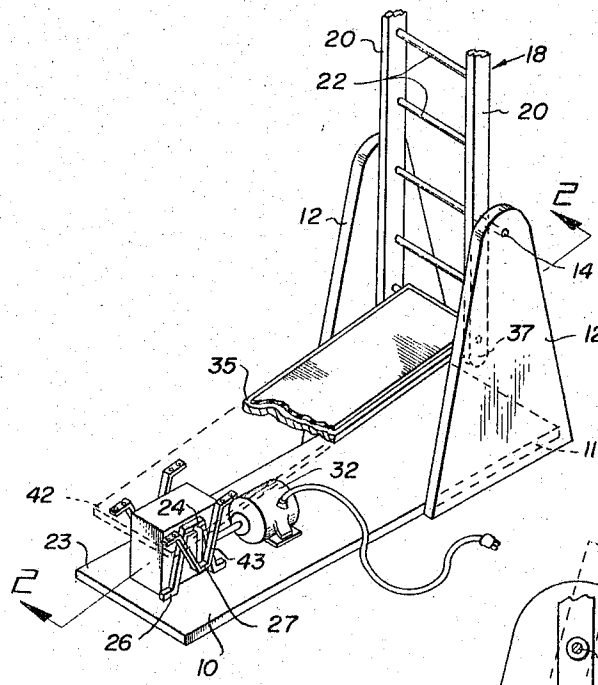


Fig. 1.

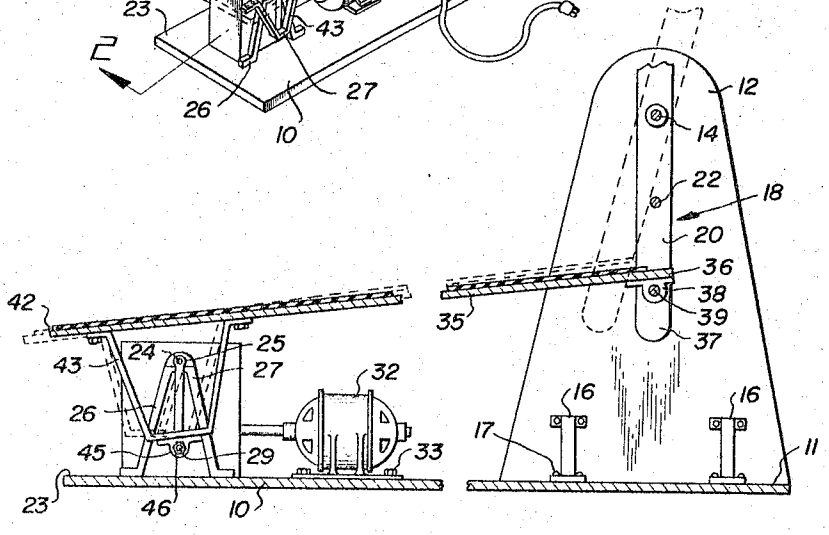


Fig. 2.

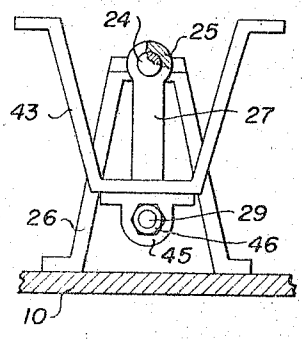


Fig. 3.

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EXERCISING MACHINE

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This invention relates to an exercising machine which is specifically arranged to stretch various members of the human body and at the same time impart motion thereto. Exercising machines heretofore designed have in the main been constructed so that only an adult of certain proportions is able to use them, and such machines have not taken into account the susceptibility of aged persons to injury by reason of a violent motion or motion of extraordinary latitude. It is appreciated that heretofore exercising machines have been devised whereby a gentle motion may be imparted to aged people. However, such machines are not especially suitable for persons who require exercise of more violent nature.

The present invention is not limited in use to human beings who may be aged or infirm as by virtue of the arrangement of its component parts, an individual may, by changing his position upon it, obtain either a gentle or more vigorous movement to his body parts. Furthermore, it is so constructed that it may be quite easily used by human beings of any height or weight.

The present invention consists of an exercising apparatus which, when arranged in assembled form, comprises an elongated substantially vertical hand supporting member pivotally supported intermediate its ends for oscillation on a horizontal axis, a substantially horizontally disposed movable platform member coupled to one of its ends to the lower end of the hand supporting member, and means to impart simultaneous vertical and horizontal oscillation to the other end of the platform member.

In the drawings, which illustrate embodiments of the invention,

FIGURE 1 is an isometric view of the invention partially cut away,

FIGURE 2 is a section taken along line 2—2 of FIGURE 1, and

FIGURE 3 is an enlarged fragmentary view of an embodiment of the invention taken in the same direction as FIGURE 2.

Referring to the drawings, **10** designates a rectangular base, which for purposes of strength may be composed of a material, such as hardwood or preferably steel. Secured to one end **11** of the base upon each side thereof, is a pair of spaced vertical supports **12** connected near their upper ends by a horizontal shaft **14**. Gussets **16** secured by bolts **17** between said vertical supports and the base serve as lateral stiffeners to prevent lateral sway of the supports **12**.

A ladder-like hand support **18** having side members **20** and rungs **22** is pivotally journalled in a substantially vertical position on the shaft **14** for pivotal movement around an axis somewhat intermediate its ends so that some of the rungs **22** lie both above and below the shaft **14**.

Secured on the other end **23** of the base **10** and perpendicularly to the longitudinal axis thereof, is a horizontal crank shaft **24**. Journalled at each end is a pair of bearing blocks **25** secured to the upper ends of a pair of spaced angle supports **26**, said angle supports being secured to the upper surface of the base **10**. The crank shaft **24** is provided at each end thereof with a crank arm **27** which, in its lower vertical position, will clear the base **10**. A pair of horizontal stub shafts **29** are secured to the free end of each of the crank arms to protrude outwardly therefrom.

In the preferred form of the invention as shown in FIGURES 1 and 2, the crank shaft is driven through a suitable reduction gear, not shown, by an electric motor **32** which is firmly secured to the base **10** by bolts and nuts **33**.

An elongated rectangular platform **35** which, as it is intended to carry persons of various weights, should be composed of a strong material, such as hardwood or steel or the like, is coupled at one end **36** to the lower end **37** of the side members **20** of the hand member **18**. Any suitable coupling arrangement may be used, however, in the present example, it will be seen that the connection has been affixed by a pair of bearing blocks **38** which are secured to said one end **36** of the platform and which are journalled in a horizontal supporting shaft **39** secured between the side members of the hand member **18** near their lower ends.

The other end **42** of the platform **35** is provided with a pair of spaced U-shaped brackets **43** depending downwardly from the underside of the platform and carrying at their lower ends a pair of bearing blocks **45**, in which stub shafts **29** are journalled, and secured thereon by lock nuts **46** threaded over the outer ends of said stub shafts.

Referring now to FIGURES 1 and 2 of the drawings, it will be seen that with the exerciser in a state of repose, as indicated by solid lines in FIGURE 2, the platform **35** is substantially horizontal and the hand member **18** is substantially vertical. If the crank shaft **24** is rotated to a position as shown by dotted lines in FIGURE 2, the platform and hand member will assume positions also as shown by dotted lines in FIGURE 2, in which position the end **42** of the platform is moved backwardly and upwardly and the lower end of the hand member is swung backwardly. It will be seen that upon continued rotation of the crank shaft, although end **42** of the platform follows a rotational part, end **36** thereof will reciprocate in an arcuate path as the hand member reciprocately pivots on the horizontal shaft **14**.

In using the apparatus, the feet are placed firmly upon the platform **35** and the hands placed on any one of the rungs **22** of the hand member. Upon the operation of electric motor **32**, the simultaneous moving of both the hand member and platform, will tend to throw the person taking exercise backwardly and forwardly and at the same time impart a vertical motion to his body dependent, of course, upon what portion of the platform he is standing. It will be seen that if the feet are placed near the end **42** of the platform, the vertical motion will be greatly exaggerated and the closer his feet are placed to the end **36** thereof, the less will be the vertical motion imparted to his body. It should also be appreciated that the individual taking exercise might grasp the rungs **22** of the hand member either below or above the horizontal shaft **14** to impart different motions to various parts of his body.

As pointed out previously, it is preferred that the crank shaft be motor driven. However, for those individuals who require a more strenuous form of exercise, the electric motor **32** and reduction gear may be omitted and the crank shaft rotated by the exercising individual rowing the exerciser by means of the hand member **18**.

What I claim as my invention is:

1. An exercising apparatus comprising an elongated hand supporting member, supporting base means, means on the base for pivotally supporting the hand supporting member in a substantially vertical position for oscillatory movement about a horizontal axis substantially intermediately of the ends of said supporting member, a crank member rotatably mounted on the supporting base means in horizontally spaced relationship to the hand supporting member for rotation about a horizontal axis parallel to said axis of said hand supporting member, and a sub-

stantially horizontally disposed elongated platform member coupled at one of its ends to the lower end of the hand supporting member for oscillation therewith and at its other end to the crank member, whereby oscillatory movement of said hand supporting member and the said one end of the platform member connected thereto will result in rotational movement of the crank member and the other end of the platform member connected thereto.

2. An exercising apparatus as claimed in claim 1 in which the hand supporting member comprises a ladder-like frame having horizontal rungs above and below its oscillatory axis.

3. An exercising apparatus as claimed in claim 1 including drive means connected to the crank member for rotating the latter.

4. An exercising apparatus as claimed in claim 3 in which said drive means comprises an electric motor.

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