

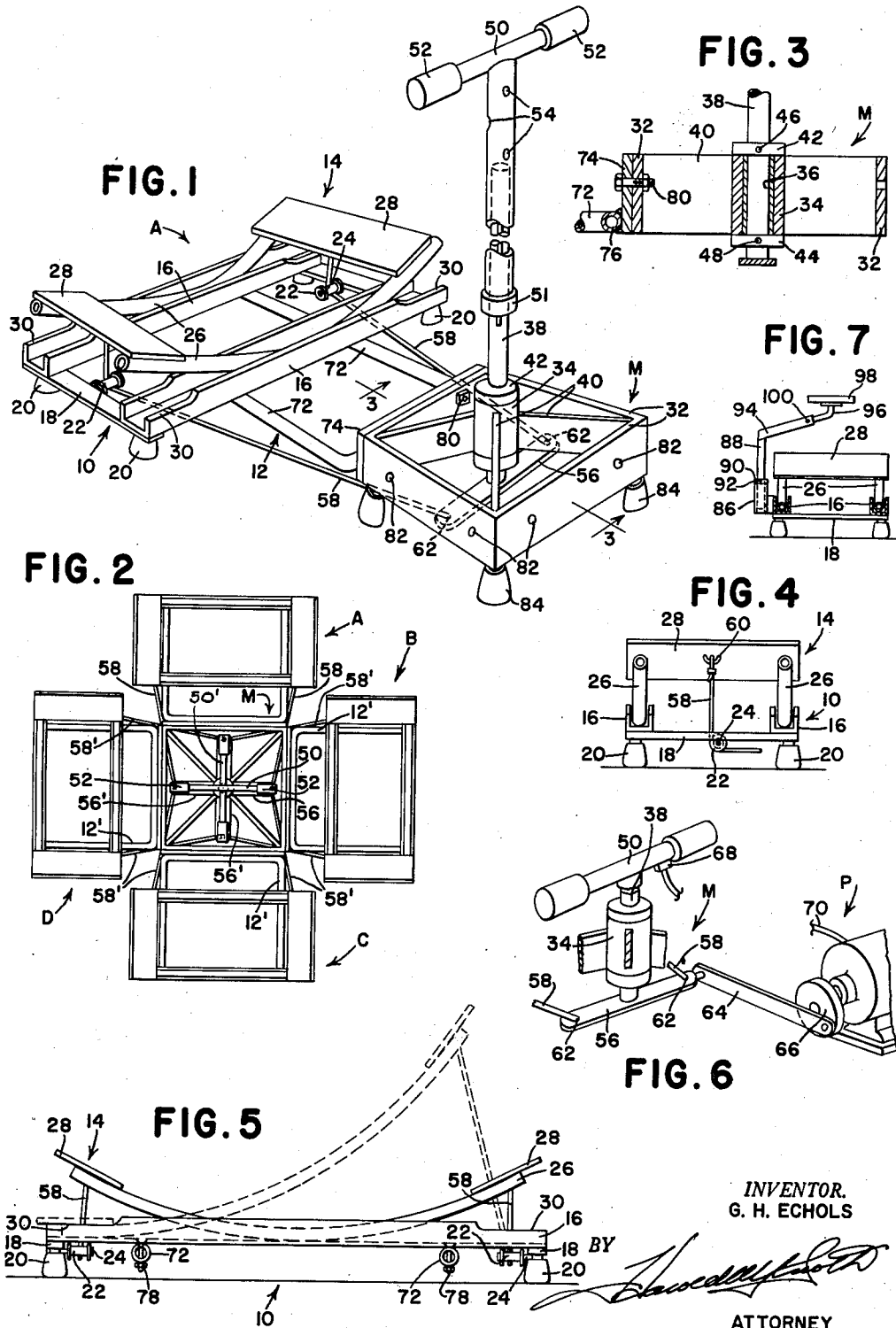
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EXERCISER

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## EXERCISER

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This invention relates to an exercising and/or amusement device or apparatus and more particularly to a device that employs a novel rocker means, especially in combination with other movable means, the whole being designed and intended for healthful and beneficial exercise as well as for pleasure and competitive sport.

It is a principal object to afford a novel exerciser or amusement device that may be manufactured, sold and used as individual components and also in combination and multiple-units, whereby it may be used by an individual or by two or more individuals, the latter aspect affording a competitive contest or game if desired. It is a further feature, in a modified extension of the general principles of the invention, to provide power input means for motivating the device. Of further importance are those features residing in simple, low-cost construction, economical and sturdy design that requires only a minimum of maintenance and those advantages of construction that enable the device to be used indoors as well as outdoors.

Other objects and significant attributes of the invention will appear from the disclosure of a preferred embodiment of the invention, by way of example, in the ensuing specification and accompanying sheet of drawings, the several figures of which are described below.

Figure 1 is a perspective of the device or apparatus as a single unit.

Figure 2 is a reduced plan view of a multiple-unit apparatus.

Figure 3 is a section on the line 3—3 of Figure 1.

Figure 4 is an end view of the rocker unit.

Figure 5 is an elevation, partly in section of the rocker unit.

Figure 6 is a fragmentary perspective of a power input means for the apparatus.

Figure 7 is a reduced section showing a modified form of the apparatus equipped with a seat.

In the following description, such expressions as "front," "rear," "right," "left," etc. are employed with reference to an occupant using the apparatus. In other aspects however the invention permits of wide variation from the preferred structure illustrated and described and may be readily designed or adapted for adults and/or children. These and other variations will fall within the spirit and scope of the invention without sacrificing any of the benefits thereof or even while securing other advantages.

Figure 2 will be referred to first as illustrative of a multiple unit apparatus in which a plurality of rocker units A, B, C and D are grouped about a central mount M. Although four units are shown fewer or more could be used. The four units are in horizontally radiating relation to the central mount and these units are detachably secured to the mount so as to be capable of being supplied as individual units to which later-acquired units may be added if desired.

Figures 1, 3, 4 and 5 show the detail of the unit A and its relation to the mount M, it being understood that

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the details of the other units are the same and need not be separately described. Such differences as appear in connection with the use of more than the unit A will be pointed out in detail later.

The unit A (as well as the other units) is made up of base or support means 10, extension or connecting means 12, and rocker means 14. The base preferably includes a pair of elongated parallel channels 16, opening upwardly and rigidly cross-connected at their opposite ends by cross members 18. The interconnecting method is preferably welding; although, that detail as such does not limit the invention. Suitable legs 20, preferably rubber covered or otherwise, provide for the support of the base or support means on the floor or ground. Each cross member 18 carries generally centrally and inwardly thereof a spool sheave 22, suitably carried on its cross member 18 as by a shaft 24 welded to that cross member.

The rocker means comprises a pair of parallel arcuate members 26, preferably tubular, coextensive in length and rigidly cross-connected at their opposite ends by treads 28, or equivalent portions, spaced apart and adapted to receive the spread apart feet of a standing occupant facing the mount M. The rockers 26 are respectively received in and guided by the base channels 16 for rocking motion between a normal level position and either of two extreme rocked positions, one of which appears in dotted lines in Figure 5. The ends of the channels 16 may be cut away at 30 to receive the projecting edges of the treads 28. As will be apparent thus far, the rocker unit may be used by itself for exercise or for simple amusement. All that is required is that a person place his feet on the treads and rock. If desired, the rocker means per se may be removed from the base means and used directly on the ground, floor or other suitable surface or support.

The mount M is here shown as a box-like structure of suitable material and strength, here having four sides 32 arranged in the pattern of a square and sustaining a central sleeve 34 which affords bearing means on an upright axis, having a central bushing 36 (Figure 3), for supporting an upright means or post 38. Suitable braces 40, welded between the sleeve 34 and the corners of the mount, afford adequate strength; although, additional support may be provided as desired. The post 38 is preferably tubular and is retained against vertical displacement via upper and lower collars 42 and 44 affixed thereto as by set screws 46 and 48. The post is thus turnable back and forth for oscillation about a vertical axis and rises from the mount M to an upper end portion equipped with handle means, here a diametrical bar 50 provided at its opposite ends with hand grips 52 adapted to be grasped by the hands of an occupant on the rocker unit A. This handle bar is preferably horizontal and parallel to the rocker means 14 so as to conveniently accommodate the user in his starting position. Apertures 54 (Figure 1), spaced angularly as well as vertically in the post are provided for receiving additional handle means, as at 50', in the multiple-unit use of the apparatus (Figure 2). As illustrated, the post is preferably made of two vertically telescopic sections selectively extendible and contractible to afford adjustment for the height of the user. The two sections are long enough to enable the handle means to assume a relatively substantial height, requiring the user to extend his arms upwardly. Any suitable keyed locking means, preferably of the collet type at 51, may be used to secure selected positions of adjustment.

The lower end of the post depends below the bearing 34—36 and has rigidly affixed thereto a cross bar 56 which preferably extends diametrically or in alignment with the handle bar 50. This bar comprises part of force-transmitting means for incurring rocking of the

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rocker means 14 and oscillation of the post 38 in unison, other parts of this means including flexible elements or cables 58 and the previously described sheaves 22. Each cable is anchored at one end to a tread 28, as by an eye 60, passes around the proximate sheave 22 and is anchored at its other end at 62 to one end of the cross bar 56. A person standing on the rocker means and facing the post or mount will have his feet on the treads 28 and will grasp the handle grips 52 with his hands. As he shifts his weight to the left, the left tread (user's) goes down and the right tread comes up. This tightens the right cable and relaxes the left cable, causing the post to turn clockwise to the user. As he shifts his weight to the right, the foregoing is reversed. Hence, as he rocks back and forth, or from side to side, his legs and lower body are exercised by the rocking action and his arms and upper body are exercised by the turning or oscillating action of the post. If desired, various actions could be given to the post by a modification of the force-transmitting means, or the post could be selectively rigidified to serve as a simple support. The width of the sheaves 22 accommodates variations in the line of pull of the cables.

As suggested in Figure 6, a power input means P, here an electric motor suitably geared down, is connectible to the unit, preferably by means of a pitman 64 between a driven eccentric 66 and one end of the cross bar 56. The connections and means shown are but representative. If the rocker alone is used, the means P could be connected directly to it. A suitable switch 68, here carried by the handle bar 50, is connected at 70 to the means P for starting and stopping the motor.

The extension or connection means 12 connects the unit A to one side 32 of the mount and additional extension means 12' are provided for attaching the units B, C and D to the other sides of the mounts. Since the additional units are like the unit A, they need not be described, except to note that when additional units are used as in Figure 2, an additional cross bar 56' is fixed to the lower end of the post 38 for receiving the cables 58' of the units B and D. The cables 58' of the unit C are attached to the bar 56 in common with the cables 58 of the unit A.

The extension 12 is preferably of tubular U-shaped construction, having horizontal legs 72 and a transverse cross plate 74 welded to its bight 76 (Figure 3). The legs are detachably secured to the base channels 16 by appropriate fastening means such as countersunk bolts 78 (Figure 5) and the plate 74 is detachably connected to one side 32 of the mount M by securing means or bolts 80. Extra holes 82 are provided in the other sides 32 of the mount for receiving similar bolts or fasteners for mounting the other units B, C and D or any of them. The detachability of the base means 10 from the extension means 12 at 78 enables use of the base and rocker means alone. The cables 58 are of course readily detachable from the eyes 60 on the treads 28 of the rocker means. Suitable legs 84, preferably rubber tipped, are provided on the mount M to support it on the floor or ground.

In the modification shown in Figure 7, the base and rocker means are identical to that previously described and only so much thereof has been shown to orient the modification with the basic structure. The fundamental difference is that the base means in Figure 7 has an upright socket member 86 secured, as by welding, to the rear base channel 16. This socket receives a seat support 88 which is adjustable as to height by means of a collar 90 having a set screw 92. The post 88 is preferably circular in section to enable turning thereof in the socket 86, and the post has a rigid cantilever portion 94 preferably of square section and carries a seat mount 96 for a seat 98. The mount 96 is fore-and-aft adjustable in the portion 94 and selected positions of adjustment are secured as by a set screw 100. The seat

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accommodates sitting occupants, as in the cases of affording therapeutic treatment of non-ambulatory patients whose legs require muscle toning and the like; and the seat adjunct is especially useful when combined with the power drive of Figure 6.

It will thus be seen that the apparatus is capable of use as a single unit or as multiples of that unit, in addition to which the rocker means of any unit is useful alone or on its base means. The whole is designed for exercise and/or amusement as already stated and it will be evident that the motions and combined actions impart a type of exercise not available in known apparatus.

What is claimed is:

1. A device of the class described, comprising: base means including a pair of horizontal elongated parallel upwardly opening channels rigidly cross-connected in spaced apart relation; rocker means including a pair of arcuate rockers, one received in each channel, having opposite ends rigidly cross-connected by means affording a pair of tread members adapted to receive the spread-apart feet of a standing occupant, said rocker means being thereby rockable in the channels; a forward extension rigidly secured to the base means independent of the rocker means and including a pedestal support spaced forwardly from said rocker means; a bearing means on an upright axis carried by the pedestal means; a post having its lower end journaled in the bearing means and rising to an upper end including hand grips projecting diametrically oppositely therefrom on a line generally parallel to the channels and adapted to be grasped in the two hands of a rocker-means-supported occupant; a diametrical cross bar rigidly secured to the post below the bearing means and extending generally parallel to the channels; a pair of sheaves carried by the base means, one at each end thereof and below the proximate normally positioned tread of the rocker means; and a pair of flexible force-transmitting elements respectively connecting the rocker means treads to opposite ends of the cross bar and trained respectively about said sheaves.

2. The invention defined in claim 1, in which: the extension is detachably secured to the pedestal means; and said pedestal means has a portion at the side diametrically opposite said extension for the attachment of an additional extension, base means and rocker means.

3. A device of the class described, comprising: base means including a pair of horizontal elongated parallel upwardly opening channels rigidly cross-connected in spaced apart relation; rocker means including a pair of arcuate rockers, one received in each channel, having opposite ends rigidly cross-connected by means affording a pair of tread members adapted to receive the spread-apart feet of a standing occupant, said rocker means being thereby rockable in the channels; a forward extension rigidly secured to the base means independent of the rocker means and including a pedestal support spaced forwardly from said rocker means; a bearing means on an upright axis carried by the pedestal means; a post having its lower end journaled in the bearing means and rising to an upper end including handle means adapted to be grasped by a rocker-means-supported occupant; and force-transmitting means connected between the post and the rocker means and operative to cause back and forth turning of the post about the axis of the bearing means in unison with rocking of said rocker means by an occupant.

4. A device of the class described, comprising: support means adapted to rest on the floor or ground; rocker means sustained by the support means for rocking up and down and having spaced apart portions adapted to receive the laterally spread-apart feet of a standing occupant; extension means secured to and projecting forwardly from the support means and including a bearing on an upright axis; a post journaled at its lower end in the bearing and rising to an upper end having handle means adapted to be grasped by an occupant standing on the rocker means; and force-transmitting means con-

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ected between the post and the rocker means and operative to cause back and forth turning of the post about the axis of the bearing in unison with rocking of said rocker means by an occupant.

5. A device of the class described, comprising: support means adapted to rest on the floor or ground; rocker means sustained by the support means for rocking up and down and having spaced apart portions adapted to receive the laterally spread-apart feet of a standing occupant; extension means secured to and projecting forwardly from the support means; and generally upright means mounted at its lower end on the extension means for movement relative to said extension means and rising therefrom to a height enabling grasping thereof by an occupant standing on the rocker means; and force-transmitting means drivingly connected between the rocker means and the upright means for moving the latter upon rocking of the former.

6. A device of the class described, comprising: base means; rocker means including arcuate rockers having opposite ends rigidly cross-connected by means affording a pair of tread members adapted to receive the spread-apart feet of a standing occupant, said rocker means being rockably sustained by the base means; a forward extension rigidly secured to the base means independent of the rocker means and including a pedestal support spaced forwardly from said rocker means; a bearing means on an upright axis carried by the pedestal means; a post having its lower end journaled in the bearing means and rising to an upper end including hand grips projecting diametrically oppositely therefrom on a line generally parallel to the rocker means and adapted to be grasped in the two hands of a rocker-means-supported occupant; a diametrical cross bar rigidly secured to the post below the bearing means and extending generally parallel to the rocker means; a pair of sheaves carried by the base means, one at each end thereof and below the proximate normally positioned tread of the rocker means; and a pair of flexible force-transmitting elements respectively connecting the rocker means treads of opposite ends of the cross bar and trained respectively about said sheaves.

7. The invention defined in claim 6, in which: the extension is detachably secured to the pedestal means; and said pedestal means has provision at the side diametrically opposite said extension for the attachment of an additional extension, base means and rocker means.

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8. A device of the class described, comprising: a central mount and a plurality of occupant-supporting units grouped about said mount in horizontally radiating relation thereto; each unit having a rocker means provided with spaced apart treads adapted to receive the spread-apart feet of a standing occupant facing the mount; support means on each unit for supporting the respective rocker means from the ground or floor; means individually and removably connecting the rocker unit support means to the mount; upright means disposed generally centrally as respects said units; means carrying the upright means on the mount for movement relative to said mount; and a plurality of force-transmitting means respectively drivingly connecting the rocker means of the units to the upright means for causing rocking of the rocker means in unison with each other and in unison with movement of the upright means.

9. A device of the class described, comprising: a central mount and a plurality of occupant-supporting units grouped about said mount in horizontally radiating relation thereto; each unit having a rocker means provided with spaced apart treads adapted to receive the spread-apart feet of a standing occupant facing the mount; support means on each unit for supporting the respective rocker means from the ground or floor; means individually and removably connecting the rocker unit support means to the mount; upright means disposed generally centrally as respects said units; bearing means on an upright axis and mounting the upright means on the mount for back and forth turning; and a plurality of force-transmitting means respectively drivingly connecting the rocker means of the units to the upright means for causing rocking of the rocker means and turning of the upright means in unison.

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