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COMBINATION EXERCISING APPARATUS

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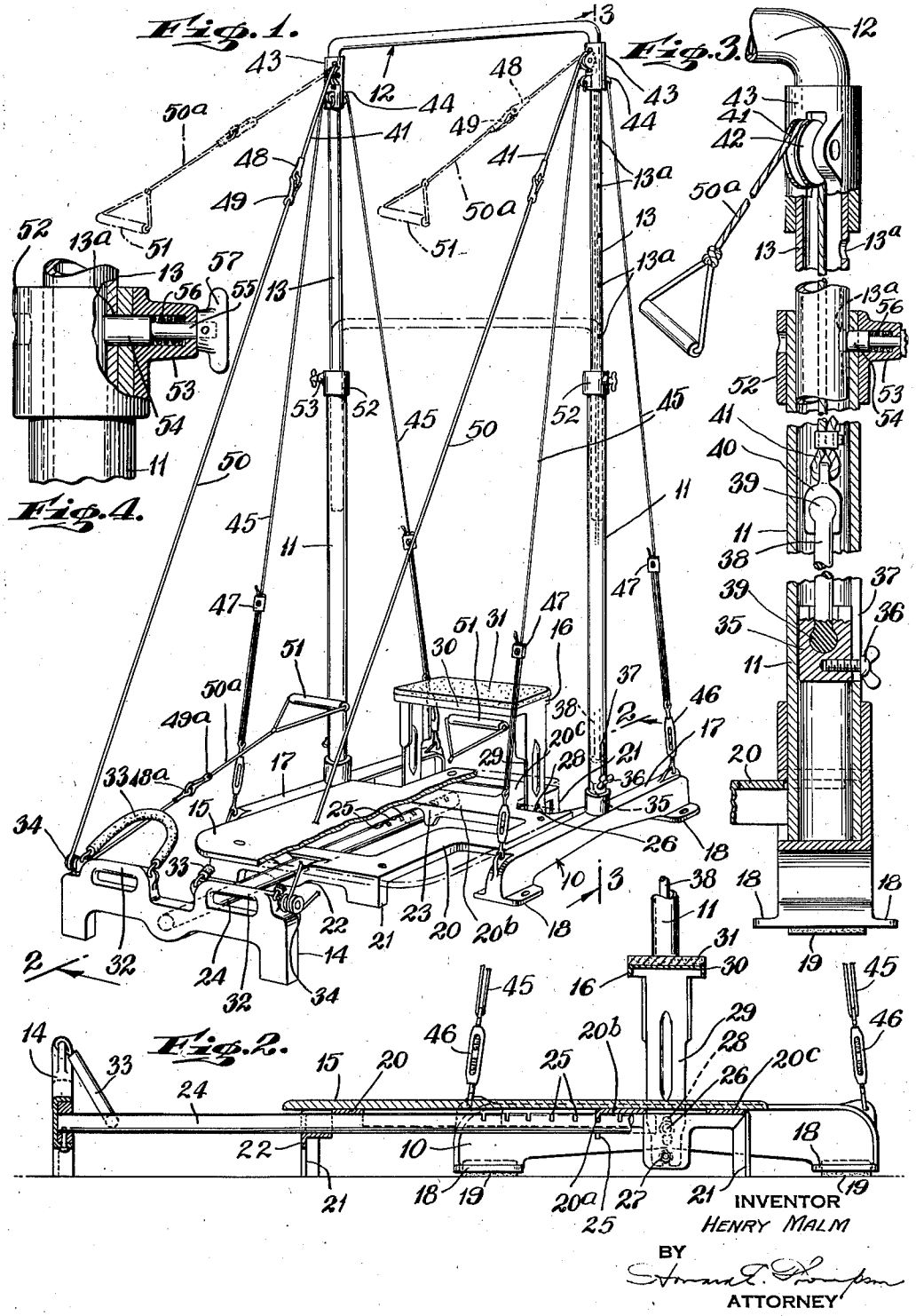

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COMBINATION EXERCISING APPARATUS

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This invention relates to a unitary apparatus employing adjustably related parts by means of which various types and kinds of exercises may be performed; and the object of the invention is to provide a unitary apparatus of the kind under consideration employing means for forming a horizontal bar at different heights to adapt it for several uses with means for quickly coupling the bar in its different positions of adjustment; a further object being to provide in combination with the adjustable bar, means extending through the tubular sides thereof and in the tubular supports for the bar for supporting resistance elements having means at the outer extremities thereof for coupling hand grips therewith in performing various types and kinds of exercises with the apparatus; a further object being to provide the base portion of the apparatus with a collapsible seat structure and with an extensible foot and arm bar; and with these and other objects in view, the invention consists in a unitary apparatus of the class and for the purpose specified, which is simple in construction, efficient in use and which is constructed as hereinafter described and claimed.

The invention is fully disclosed in the following specification, of which the accompanying drawing forms a part, in which the separate parts of my improvement are designated by suitable reference characters in each of the views, and in which:

Fig. 1 is a perspective view of the apparatus with parts of the construction broken away and indicating parts in different positions.

Fig. 2 is a sectional view substantially on the line 2—2 of Fig. 1.

Fig. 3 is an enlarged and broken sectional view on the line 3—3 of Fig. 1; and

Fig. 4 is a sectional detail view of a part of the structure shown in Fig. 1.

It is the purpose of my invention to provide a unitary apparatus which may be permanently set up in the home for convenient daily use, or use in clubs, gymnasiums, and many other places of this type and kind, and by means of which numerous body-building exercises may be performed. For example, the apparatus may form a tall horizontal bar which may be used for chinning exercises. This bar may also be adapted for easy grasping by individuals of different heights, while at the same time using the bar for the performance of calisthenic feats, as is common with other bars of this type and kind. Still further, my invention provides a unitary apparatus having resistance elements in the form of heavy extensible rubber rods terminating at their ends in hand or foot engagement means whereby various exercises in the development of the arms and legs as well as in the development of the back and stomach muscles may be performed in conjunction with other adjustable parts of the apparatus. One part of the apparatus includes a foot and hand engaging part, and the other part a raised seat member or support.

To illustrate one adaptation of the invention, I have shown a unitary apparatus comprising a base 10 having upwardly extending tubular side members 11, in conjunction with which is adjustably coupled a horizontal bar 12 having integral side members 13 telescoping with the tubes 11. The bar 12 and sides 13 thereof may be of tubular construction to reduce the weight of the entire unit. The members 13 and bar 12 collectively form a U-shaped frame adjustable with respect to the supports 11. At 14 is shown a combination foot and hand cross-bar adjustable longitudinally of the base 10. At 15 is shown a platform arranged upon the base; at 16 a seat member normally collapsible in the base and adapted to be raised in upright position as seen in Fig. 1.

The foregoing forms what might be termed the main frame parts of the apparatus. Considering the base 10, it will appear that this base comprises elongated side members 17 terminating at their ends in supporting feet 18 which may be bolted or screwed to a supporting surface, or as seen in Fig. 2, provided with rubber or other cushioned feet 19 imbedded in the lower surfaces thereof. The side members 17 are integrally joined by a transverse supporting frame 20 which is of openwork construction as indicated in Fig. 1, and terminates at its ends in supporting feet 21.

The supporting frame 20 has bearings 22 and 23 centrally and longitudinally thereof for receiving and supporting a rod 24 attached centrally to the member 14. The upper surface of the rod 24 has spaced notches 25, one of which is adapted to engage a flange portion 20a formed on the cross-member 20b of the frame 20, so that by raising the member 14 slightly, this member may be moved back and forth in the frame 20 to adjust the spacing of the member 14. If desired, the entire member 14 including the rod 24 may be removed from the base which would be desirable in performing some exercising operation.

The rear portion 20c of the frame 20 is in the form of a reduced extension upon the sides of

which are arranged pins or studs 26 and 27. The upper studs 26 engage elongated slots 28 in the sides 29 of the seat member 16, whereas the studs 27 engage recesses opening through the lower ends of the sides 29, so that by raising the seat, the sides 29 may be disengaged from the studs 27 and the seat dropped into position rearwardly of and in alinement with the extension 20c of the base. The upper cross-plate 30 of the member 16 is also provided with a cushioned or upholstered surface 31, so as to protect the body of the person seated upon or otherwise engaging the member 16.

The member 14 is provided with two hand-grip portions 32 to opposite ends of which are pivotally coupled feet engaging straps or loops 33. On outer ends of the members 32 are arranged small pulleys or guide rollers 34. In certain uses of the apparatus the feet may be placed in the loops 33 with a person seated upon the member 16 in going through rowing and back-bending exercises where the legs of the individual are more or less firmly supported in position. In other instances a person may rest the shoulders or back upon the member 16 with the feet engaging the loops 33 in performing other exercises. Still further the individual may lie face downwardly with the legs resting upon the seat 16 and with the hands engaging the grips 32 in carrying out other types of exercises. In all of the above instances the relative positions of adjustment of the member 14 with respect to the member 16 may be regulated to suit the individual and the different types and kinds of exercises being performed. These exercises may be performed independent of or in conjunction with tension elements employed as now more specifically described.

Adjustably supported in the lower end portions of the tubular supports 11 are blocks 35 having wing screws 36 operating in elongated slots 37 in the tubes 11, to adjust and fix the position of the blocks 35 in the tubes. In each tube 11 is arranged a tensioning element 38 in the form of a heavy rubber rod constructed of extensible rubber such as commonly employed in rubber exercising devices well known in the trade. These rods are provided with enlarged heads 39 at each end, one seating in the block 35 passing through an enlarged opening at one side of the block, and the other seating in a coupling ring 40 to which is secured a rod or cable 41. The cable 41 extends upwardly through the tube 11 and the tubular sides 13 and passes outwardly through apertures adjacent the upper horizontal bar 12 and around pulleys 42 supported on brackets 43 secured to the tubes 13 adjacent the bar 12 by welding or in any other desired manner.

On the brackets 43 are a pair of oppositely directed eyes 44 to which are coupled stay-wires or cables 45 which are also connected with turnbuckles 46 secured to the ends of the side members 17 of the frame. The cables 45 have line clamps 47 therein to compensate for the vertical adjustments of the horizontal bar 12.

The cord or cable 41 has at its end a ring or eye 48 with which may be coupled a snap hook 49 at the end of a long extension 50 or a short extension 50a, the latter being indicated in dot and dash lines in Fig. 1 of the drawing. The short extension 50a is shown in full lines at the left of the apparatus in Fig. 1 having a snap hook 49a for attachment with an eye 48a at the other end of the extension 50. In other words, the short extension 50a may be used with the extension 50 when the latter is passed around the pulleys or guide rollers 34 in the various sitting or rowing exercises performed on the apparatus. By detaching the extensions 50, the short extensions 50a may be coupled with the rings 48 for use when the individual stands upon the platform 15 in performing various arm exercises and bending exercises, as will be readly apparent to those accustomed to using exercising apparatus of the general type and kind under consideration. The short extensions 50a terminate in hand grip portions 51 of any type and kind.

In connection with the use of the apparatus in extending the elastic tension elements 38, it will be understood that these elements will be stretched longitudinally of the tube 11—13. By adjusting the blocks 35 vertically, the degree of resistance may be increased or decreased to suit individuals of different heights so as to be equivalent to and in fact superior to the customary use of weights in exercising devices of the general type and kind under consideration.

Several advantages of the present construction are for example the concealment of the tension elements within the tubular structure of the frame, and further in the adjustable means for increasing and decreasing the tension of these elements. It will be understood, however, that by stepping forwardly on the platform 15, greater resistance will be provided in using the devices as indicated in dot and dash lines in Fig. 1, whereas in the full line position shown in the drawing, the adjustment of the member 14 forwardly and backwardly in the frame will further increase and decrease the resistance of the elements 38.

With the construction of the type and kind under consideration, it is desirable to provide means for supporting the horizontal bar 12 at different heights with respect to the platform 15 to adapt the apparatus for use by small children as well as with adults and relatively tall individuals; and further in performing various types and kinds of exercises on the bar. In the accompanying drawing I have shown one method of providing for this adjustment in a quick and simple manner, while at the same time forming a strong and durable coupling between the parts. The tubular side members 13 will be provided with longitudinally spaced apertures 13a to provide for adjustable mounting of the bar 12. At the upper end of each standard 11 is secured a collar 52 having outwardly projecting bearings 53 in which are supported key pins 54 on the reduced shanks 55 of which are arranged springs 56 which normally support the pins 54 in operative position. Knobs 57 are secured to the shanks 55 outwardly of the bearings 53 to facilitate movement of the pins 54 into inoperative position or to withdraw the same from the apertures 13a in the members 13. In other words, the pins 54 provide means for retaining the bar 12 in the different vertical positions of adjustment. The construction of one of the couplings is shown in detail in Fig. 4 of the drawing. It will be understood that the bearings 53 project outwardly of the sides of the supports 11 as will clearly appear in Fig. 1 of the drawing.

It will be understood that the member 14 may be termed a foot rail for purposes of description, particularly in the use of this device in the manner illustrated in full lines in Fig. 1 of the drawing; that is to say where the flexible strands 41

or the extension 50 thereof are passed around the pulleys 34.

It will also be apparent that when the horizontal bar is not used, the stay cables or wires 45 may be disengaged from the turn-buckles or through the line clamps. However, it is preferred that the apparatus may be maintained in a fully set-up position so as to adapt the complete unit for the performance of many types and kinds of exercises and to have the unit available at all times for the performance of these exercises without the waste of any time in setting up or adjusting the parts, outside of the quick adjustments that are afforded to the members 14 and 16.

It will also be understood that other lengths of extensions such as the extensions 50 may be used in other types of leg exercises, while the operator is hanging from the horizontal bar 12. While the arrangement as shown in full lines in Fig. 1 of the drawing may be used in lifting exercises, it will also be apparent that other pulleys may be arranged on the base of the apparatus for this purpose.

Having fully described my invention, what I claim as new and desire to secure by Letters Patent, is:

1. An apparatus of the class described comprising a base, a platform on said base, a horizontal bar member, means at the sides of the base supporting said bar member over said platform, said last named means including adjustable stay strands between the base and end portions of said bar member, resiliently extensible tension elements mounted within the first named means, said elements having secured thereto flexible strands extending longitudinally of said first named means, pulleys at the end portions of said horizontal bar around which said flexible strands pass, and hand grips detachably coupled with said flexible strands by means of which said elements may be actuated.

2. An apparatus of the class described comprising a base, a platform on said base, a horizontal bar member, means at the sides of the base supporting said bar member over said platform, said last named means including adjustable stay strands between the base and end portions of said bar member, tension elements mounted within the first named means, said elements having flexible strands extending longitudinally of said first named means, pulleys at the end portions of said horizontal bar around which said flexible strands pass, hand grips detachably coupled with said flexible strands by means of which said elements may be actuated, said base including a longitudinally adjustable foot supporting bar, and means on said bar for supporting and guiding said flexible strands.

3. An apparatus of the class described comprising a base, a platform on said base, a horizontal bar member, means at the sides of the base supporting said bar member over said platform, said last named means including adjustable stay strands between the base and end portions of said bar member, tension elements mounted within the first named means, said elements having flexible strands extending longitudinally of said first named means, pulleys at the end portions of said horizontal bar around which said flexible strands pass, hand grips detachably coupled with said flexible strands by means of which said elements may be actuated, said base including a longitudinally adjustable foot supporting bar, means on said bar for supporting and guiding said flexible strands, a seat member normally collapsed in the base, and means for supporting the seat member in upright position over part of said platform.

4. An apparatus of the character described comprising a base having upwardly extending tubular side supports and a U-shaped member comprising tubular sides joined by a cross-bar, said tubular sides having a telescopic engagement with the vertical supports of said base, means adjustably supporting the cross-bar at different heights with respect to said tubular supports, elongated elastic elements having one end adjustably mounted in said tubular supports, means coupling a flexible strand with the other end of said elements and extending longitudinally through the supports and the tubular sides of said U-shaped member and extending outwardly through the latter adjacent the ends of said cross-bar, and means detachably coupling hand grip portions with the free ends of said flexible strands.

5. An apparatus of the character described comprising a base having upwardly extending tubular side supports and a U-shaped member comprising tubular sides joined by a cross-bar, said tubular sides having a telescopic engagement with the vertical supports of said base, means adjustably supporting the cross-bar at different heights with respect to said tubular supports, elongated elastic elements having one end adjustably mounted in said tubular supports, means coupling a flexible strand with the other end of said elements and extending longitudinally through the supports and the tubular sides of said U-shaped member and extending outwardly through the latter adjacent the ends of said cross-bar, means detachably coupling hand grip portions with the free ends of said flexible strands, a foot rail adjustable longitudinally of the base, means retaining the rail in different positions of adjustment, and means supporting and guiding said flexible strands at the end portions of said rail.

6. An apparatus of the character described comprising a base having upwardly extending tubular side supports and a U-shaped member comprising tubular sides joined by a cross-bar, said tubular sides having a telescopic engagement with the vertical supports of said base, means adjustably supporting the cross-bar at different heights with respect to said tubular supports, elongated elastic elements having one end adjustably mounted in said tubular supports, means coupling a flexible strand with the other end of said elements and extending longitudinally through the supports and the tubular sides of said U-shaped member and extending outwardly through the latter adjacent the ends of said cross-bar, means detachably coupling hand grip portions with the free ends of said flexible strands, a foot rail adjustable longitudinally of the base, means retaining the rail in different positions of adjustment, means supporting and guiding said flexible strands at the end portions of said rail, a seat member normally collapsed within side members of the base, and means for supporting the seat member in upright position.

7. An exercising unit of the class described comprising a base consisting of elongated side members joined by a cross-frame of openwork structure, a platform supported on said frame, said side members having centrally thereof upwardly extending elongated tubular supports, a U-shaped frame member comprising a horizontal

bar and depending tubular sides having a telescoping engagement with said tubular supports, means adjustably coupling the U-shaped frame with the tubular supports in fixing the position of the horizontal bar with respect to said platform, an adjustable staying means coupled with the end portions of the sides of said base and with said U-shaped frame adjacent the ends of said horizontal bar for bracing the bar in said unit.

8. An exercising unit of the class described comprising a base consisting of elongated side members joined by a cross-frame of openwork structure, a platform supported on said frame, said side members having centrally thereof upwardly extending elongated tubular supports, a U-shaped frame member comprising a horizontal bar and depending tubular sides having a telescoping engagement with said tubular supports, means adjustably coupling the U-shaped frame with the tubular supports in fixing the position of the horizontal bar with respect to said platform, an adjustable staying means coupled with the end portions of the sides of said base and with said U-shaped frame adjacent the ends of said horizontal bar for bracing the bar in said unit, a transverse member protruding from one end portion of the base, and means adjustably supporting said member longitudinally of the base.

9. An exercising unit of the class described comprising a base consisting of elongated side members joined by a cross-frame of openwork structure, a platform supported on said frame, said side members having centrally thereof upwardly extending elongated tubular supports, a U-shaped frame member comprising a horizontal bar and depending tubular sides having a telescoping engagement with said tubular supports, means adjustably coupling the U-shaped frame with the tubular supports in fixing the position of the horizontal bar with respect to said platform, an adjustable staying means coupled with the end portions of the sides of said base and with said U-shaped frame adjacent the ends of said horizontal bar for bracing the bar in said unit, a transverse member protruding from one end portion of the base, means adjustably supporting said member longitudinally of the base, and a seat member collapsibly supported in connection with the other end portion of said base.

10. An apparatus of the class described comprising a base, a platform on said base, a horizontal bar, means extending vertically at the sides of the base supporting said bar over said platform, said first named means including means for adjusting said bar to different vertical positions, resiliently extensible tension elements mounted within the first named means, said elements having secured thereto flexible strands extending longitudinally of the first named means and outwardly at end portions of said horizontal bar, guide means adjacent the end portions of said horizontal bar through which said flexible strands pass, said guide means including pulleys extending from the axes of said first named means outwardly through inner opposed sides thereof below said bar, and hand grips detachably coupled with the ends of said flexible strand by means of which said elements may be actuated.

11. An apparatus of the class described comprising a base, a platform on said base, a horizontal bar, means extending vertically at the sides of the base supporting said bar over said platform, said first named means including means for adjusting said bar to different vertical positions, resiliently extensible tension elements mounted within the first named means, said elements having secured thereto flexible strands extending longitudinally of the first named means and outwardly at end portions of said horizontal bar, guide means adjacent the end portions of said horizontal bar through which said flexible strands pass, said guide means including pulleys extending from the axes of said first named means outwardly through inner opposed sides thereof below said bar, hand grips detachably coupled with the ends of said flexible strands by means of which said elements may be actuated, and adjustable means coupled with the base for bracing said first named means and horizontal bar.

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