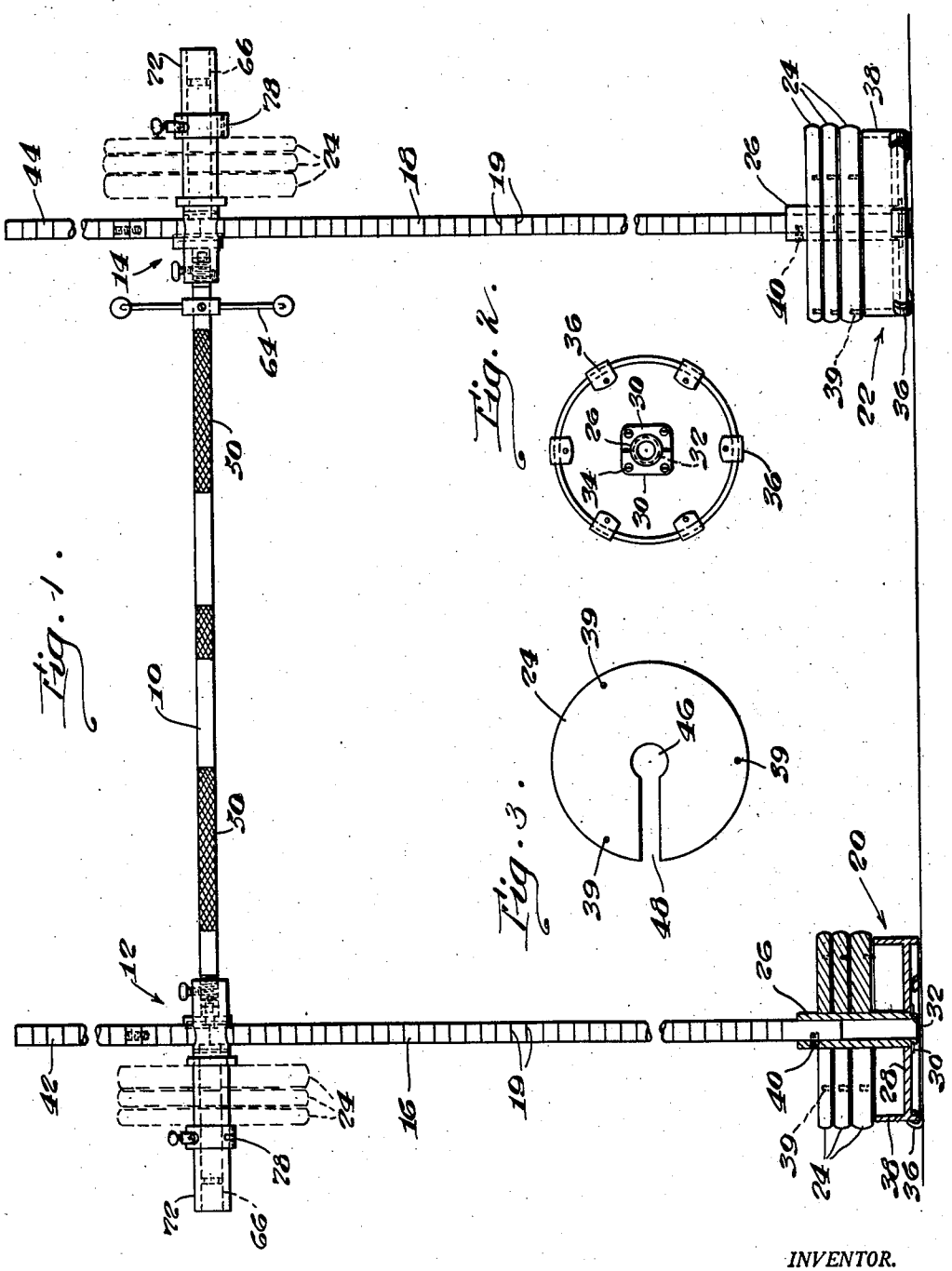
May 24, 1949. R. W. W. HARVEY 2,470,815

ATHLETIC APPARATUS

Filed March 10, 1948 2 Sheets-Sheet 1



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ATHLETIC APPARATUS

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Fig. 4.

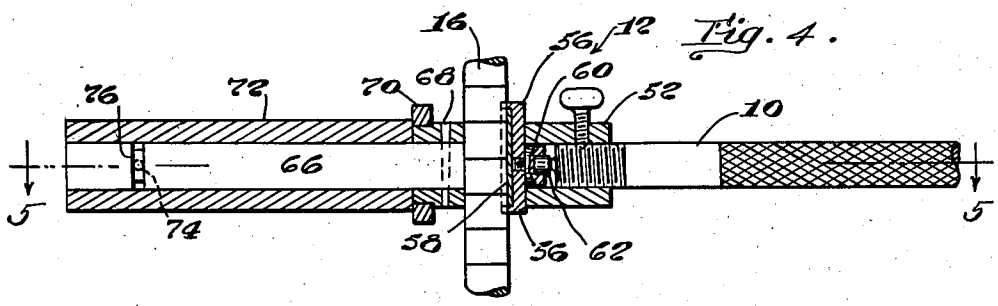


Fig. 5.

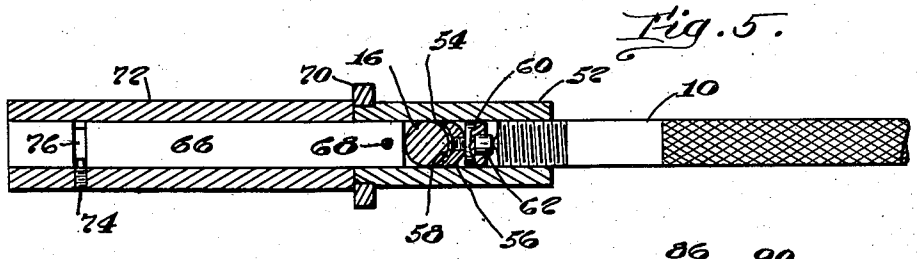


Fig. 6.

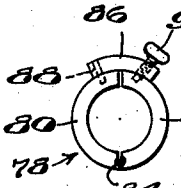


Fig. 7.

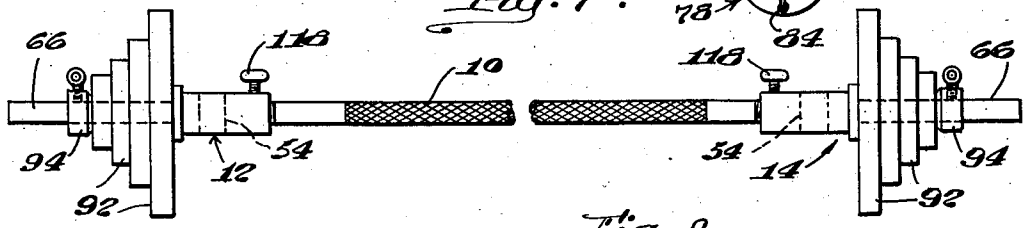


Fig. 8.

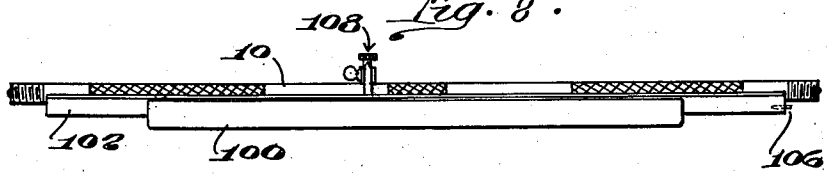


Fig. 9.

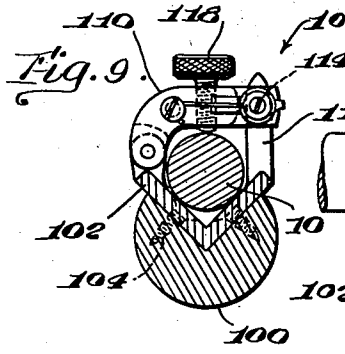
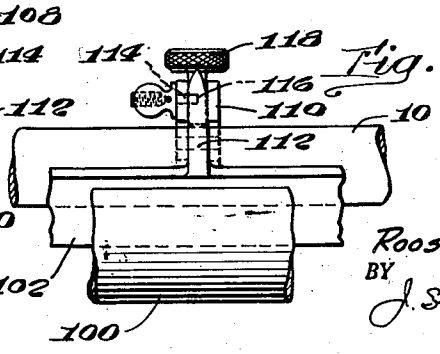


Fig. 10.



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ATHLETIC APPARATUS

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Application March 10, 1948, Serial No. 14,102

6 Claims. (Cl. 272—84)

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This invention relates to athletic apparatus.

The invention has for an object to provide novel and improved athletic apparatus for use with maximum safety in training for lifting a weight such as a bar bell.

With this object in view, and such others as may hereinafter appear, the invention consists in the athletic apparatus hereinafter described and particularly defined in the claims at the end of this specification.

In the drawings illustrating the preferred embodiment of the invention, Fig. 1 is a front elevation of athletic apparatus embodying the present invention; Fig. 2 is an inverted plan view detail of one of the base members embodied in the apparatus shown in Fig. 1; Fig. 3 is a plan view detail of a detachable weight employed in the present apparatus; Figs. 4 and 5 are cross sectional views in side and plan elevations respectively of locking mechanism for adjustably securing a bar bell at different levels on its supporting structure; Fig. 6 is a detail view of a clamping collar; Fig. 7 is a side elevation of the bar bell removed from the apparatus permitting its use in the conventional manner; Fig. 8 is a side elevation of a pad arranged to be detachably secured to the bar bell rod; Fig. 9 is a detail view of a locking member forming a part of the detachable pad; and Fig. 10 is a side elevation of the locking member shown in Fig. 9.

In general, the present invention contemplates an exercising device particularly adapted for use in training in lifting a bar bell. In lifting the ordinary or regulation bar bell comprising a bar having detachable and interchangeable discs or weights supported at the ends thereof there is an element of danger, particularly for a novice, in that the bar bell may get out of control of the athlete, and be dropped from an elevated position, and in many instances serious injuries have resulted.

In accordance with one feature of the present invention, in the present apparatus the bar bell may be adjustably supported at different levels upon spaced vertical rods having base members normally resting on the floor and which are arranged to support the detachable weights. In the use of the training apparatus, the bar may be initially adjusted at a desired level and the entire unit including the supporting rods and the weights may be lifted bodily from the floor. Thus, in the event the user should accidentally slip and fall when the apparatus is lifted, the weighted ends of the falling unit will come to rest on the floor and the bar will be maintained

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in its initially elevated position thus avoiding any danger of the weighted bar pinning the user to the floor.

The present apparatus enables the athlete to practice a particular portion or an intermediate stage of a weight lift without having to initially raise the bar bell from the floor to such an intermediate position. For example one of the basic lifts performed with a bar bell comprises a two hand press which is accomplished in three stages; first lifting the bar from the floor to a standing position ending up with the arms extended downwardly at the sides. From this position the bar is lifted to chest level, this movement being accomplished by raising the bar as high as possible while in a standing position and then quickly crouching under the bar with the legs and arms in a bent position. The bar in this position is then raised or "pressed" by gradually stretching out the arms and legs until the bar is held above the head with legs and arms outstretched. It will be observed that with the present apparatus any stage of such lift may be repeatedly practiced by initially adjusting the bar at the desired position.

Another important advantage of the present apparatus is that the athlete is permitted to start his training at the easiest part of the lift by adjusting the bar correspondingly and then by progressively adjusting the bar he may gradually work into the most difficult part of the lift. For example, in lifting the bar from the floor to a standing position, the most difficult part of the lift is the initial lifting movement when the back is arched and the legs bent, and, the easiest part of such lift is when standing upright with the arms at the sides. In order to practice this lift the user may initially adjust the bar a few inches below the hands when he is in a standing position. As training is advanced the bar may be progressively lowered a few inches each practice period, gradually approaching the most difficult portion of the lift.

Referring now to the drawings, in general, the present exercising apparatus comprises a horizontal bar 10 connected at each end to clamping units 12, 14 having provision for clamping engagement with spaced vertical rods 16, 18. The rods are supported at their lower ends in base members 20, 22 respectively, the base members having provision for detachably receiving one or more disc weights 24.

As herein shown, each base member 20, 22 may comprise a tubular standard 26 secured at its

lower end to a wall 28 of the base member, the lower end of the standard extending through an opening in the wall and being attached thereto by opposed retaining plates 30 arranged to be received in a grooved portion 32 of the standard, the retaining members being secured to the underside of the wall 28 by screws 34, as clearly shown in Fig. 2. Rubber pads 36 may be secured to the underside of the annular rim portion 38 of the base member, as illustrated, in order to protect the floor and to cushion the blow when the unit is dropped. The lower ends of the vertical supporting rods 16, 18 are received in the upper ends of the tubular standards 26 and are secured thereto by set screws 40. The upper ends of the vertical rods may be extended in length by extension rods 42, 44 threadedly attached to the upper ends of the rods 16, 18 respectively, as shown. The vertical supporting rods 16, 18 may and preferably will be provided with graduation marks 19 for use as a guide in adjusting the horizontal bar 10 thereon.

The disc weights 24, as herein shown, are provided with a central opening 46 arranged to fit over the tubular standard 26 and are further provided with a radial slot 48 of a width to permit straddling of the vertical rods 16, 18 so that in operation the weight may be first slipped over a rod 16, 18 and then dropped down over the standard 26 to rest on the upper edge of the annular rim portion 38. In order to provide a space for a finger hold between successive disc weights for convenience in removing the weights, each weight as herein shown may be provided with circumferentially spaced pins 39 depending from the underside thereof.

Referring now to Figs. 1, 4 and 5, the horizontal bar 10 may be provided with knurled portions 50 intermediate its ends and with left and right hand threaded portions at opposite ends for threaded engagement with the clamping units 12, 14. Each clamping member may comprise a tubular member 52 internally threaded at one end to receive the end of the horizontal bar 10 and is provided with an elongated slotted portion 54 formed at right angles to and through the tubular member 52 and which is arranged to receive the vertical rods 16, 18. A curved clamping member 56 faced with brake lining 58 is also fitted into the slotted portion 54, the clamping member being threadedly secured to one end of a plug member 60 slidingly fitted in the bore of the tubular member 52. The other end of the plug member 60 is provided with a metal insert 62, preferably of brass, for cooperation with a knob formed on the end of the horizontal bar 10. With this construction it will be seen that by rotation of the horizontal bar 10 in one direction, the clamping members 56 of each unit will be urged against one side of the vertical supporting rods 16, 18 to clamp them against the outer ends of the slotted portions 54 of each clamping unit 12, 14 thus simultaneously clamping the horizontal bar in the desired position of adjustment on the vertical supporting rods 16, 18 by virtue of the left and right hand threaded portions at opposed ends of the horizontal bar 10, and, conversely rotation of the bar 10 in the opposite direction will simultaneously unclamp the bar from the vertical rods. The bar may be maintained in its clamped position by thumb screws carried by the tubular members 52 and engageable with the ends of the bar 10, as illustrated. The bar 10 may be rotated into and out of clamping position by hand, or, in order to obtain more leverage, the bar 10 may be provided with a handwheel 64.

Provision may also be made for extending the horizontal bar 10 laterally beyond the vertical rods 16, 18 at each end for supporting additional weights if desired, or for use as a bar bell in the usual manner when detached from the supporting rods 16, 18. As herein shown, the outer end of each clamping unit 12, 14 may be provided with a shaft 66 extended and tightly fitted into the outer end of the bore of the tubular member 52 and may be secured thereto by a taper pin 68. A collar 70 may be tightly fitted over a turned down portion of the outer end of the tubular member 52 and a sleeve 72 may be rotatably mounted on the shaft 66, the sleeve being retained on the shaft by a set screw 74 arranged to cooperate with a grooved portion 76 of the shaft. In use, the disc weights 24 may be slipped over the ends of the sleeves 72 up against the collars 70 and clamped thereto by a clamping collar 78. As herein shown, the clamping collar 78 may be of a quick clamping type split at 83 and having a slotted portion 84 to permit opposed half sections to yield and arranged to be clamped together at the split end by an arcuate member 86 having a radially extended pin 88 fitted into a radial opening in one half section 80 of the collar, and having a thumb screw 90 arranged to cooperate with an opening in the other half section 82 of the collar, as clearly shown in Fig. 6. When it is desired to use a standard disc weight 92 of the type having a smaller central opening, the sleeves 72 may be removed and the standard disc weights may be placed directly on the shafts 66 and clamped thereon by the usual clamping collars 94, as shown in Fig. 7. It will be understood that when used as an ordinary bar bell without the illustrated supporting structure the unit may be used either with or without the sleeves 72 using the appropriate disc weights 24, 92 respectively. It will be observed that when the rotatable sleeve 72 is used, the discs 24 mounted thereon may rotate with the sleeve relative to the bar so that in use the bar may be rotated during the lifting movements without rotating the disc weights.

When the illustrated exercising apparatus is used for lifting exercises which require the bar to be placed across the neck and shoulders or across the back, a detachable pad may be clamped to the horizontal bar 10 as illustrated in Figs. 8 and 9. As therein shown, the pad may comprise a generally cylindrical wooden bar 100 longitudinally grooved to receive an angle bar 102 secured to the wooden pad by screws 104. One end of the angle bar is provided with a pin 106 arranged to fit into an opening provided in the end of the adjacent clamping unit 14, and, a quickly detachable clamp 108 may be provided adjacent the other end of the pad for securing the pad to the bar 10. As best shown in Figs. 9 and 10, the detachable clamp unit 108 may comprise an arm 110 pivoted on one side of the angle bar 102 arranged to cooperate with a rectangular arm 112 upstanding from the other side of the angle bar. The pivoted arm 110 is slotted at its outer end to receive the upstanding arm 112, and the pivotal arm 110 is further provided with a spring pressed locking pin 114 arranged to cooperate with a grooved opening 116 in the stationary arm 112 when the pivoted arm 110 is rocked into locking position as shown in Fig. 10. A thumb screw 118 carried by the arm 110 may then be tightened against the horizontal bar 10,

as shown, to securely clamp the pad in place. The angle bar 102 in addition to serving as a support for the pad and as a means for securing the unit to the bar 10, also serves as a strengthening bar to prevent bending of the bar 10 when very heavy weights are used.

From the above description it will be seen that the present exercising apparatus may be used with advantage for training in the use of a bar bell wherein the bar bell may be adjustably supported at different levels for practice in a particular portion or stage of the lift as desired and wherein the apparatus may be used with maximum safety to the user in the event that the exercising unit should be dropped. It will also be observed that the present horizontal bar may be conveniently dismantled from the supporting structure for use as an ordinary bar bell if desired.

While the preferred embodiment of the invention has been herein illustrated and described, it will be understood that the invention may be embodied in other forms within the scope of the following claims.

Having thus described the invention, what is claimed is:

1. Athletic apparatus of the character described comprising a pair of spaced vertical rods having provision at their lower ends for removably supporting weight elements, and a horizontal bar extending between and adjustably secured to said vertical rods for vertical movement thereon, said horizontal bar extending laterally beyond said vertical rods and having means on said extending portion for supporting additional weight elements.

2. Athletic apparatus of the character described comprising a pair of spaced vertical rods having provision at their lower ends for removably supporting weight elements, a horizontal bar extending between said vertical rods, clamping means connected at each end of said bar for adjustably securing the bar to the rods, each of said clamping means comprising a connecting member arranged to slidably receive a vertical rod and having an internally threaded portion arranged to receive one end of the bar, and a clamping piece carried by said connecting member and movable into clamping engagement with the rod upon rotation of the bar.

3. Athletic apparatus of the character described comprising a pair of spaced vertical rods having provision at their lower ends for removably supporting weight elements, a horizontal bar extending between said vertical rods, clamping means connected at each end of said bar for adjustably securing the bar to the rods, each of said clamping means comprising a connecting member arranged to slidably receive a vertical rod therethrough and having an internally threaded portion arranged to receive one end of the bar, and a clamping piece carried by said connecting member and movable into clamping engagement with the rod upon rotation of the bar, said bar being oppositely threaded at each end whereby to effect simultaneous clamping of each end of the bar to its respective rod.

4. Athletic apparatus of the character described comprising a pair of spaced vertical rods having supporting base portions, means adjacent said base portions for removably supporting weight elements thereon, and a horizontal bar extending between and adjustably secured to said vertical rods, said horizontal bar extending laterally beyond said vertical rods, and sleeve members concentrically rotatably mounted on said extended ends for supporting additional weight elements.

5. A bar bell comprising a horizontal bar, sleeves concentrically rotatably mounted on each end of said bar, and a plurality of weight elements removably carried by and rotatable with said sleeves, whereby to permit rotation of said bar relative to said weights during the use of the bar bell.

6. Athletic apparatus for use in training in the art of weight lifting, comprising a pair of spaced vertical rods, and a horizontal bar extending between and adjustably secured to said vertical rods for vertical movement thereon, said vertical rods each being provided with a weight supporting member to which the lower end of the rod is secured in a position substantially centrally of the supporting member, said supporting members each being of a size and shape to provide a stable supporting means of substantial area for supporting the apparatus upon the floor and constituting means for removably supporting weight elements resting thereon and embracing the vertical rods, the space between said supports being unobstructed to enable the trainee to kneel upon the floor during use of the weight lifting apparatus.

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