July 21, 1959 C. G. ADLER ET AL 2,895,736

EXERCISE APPARATUS

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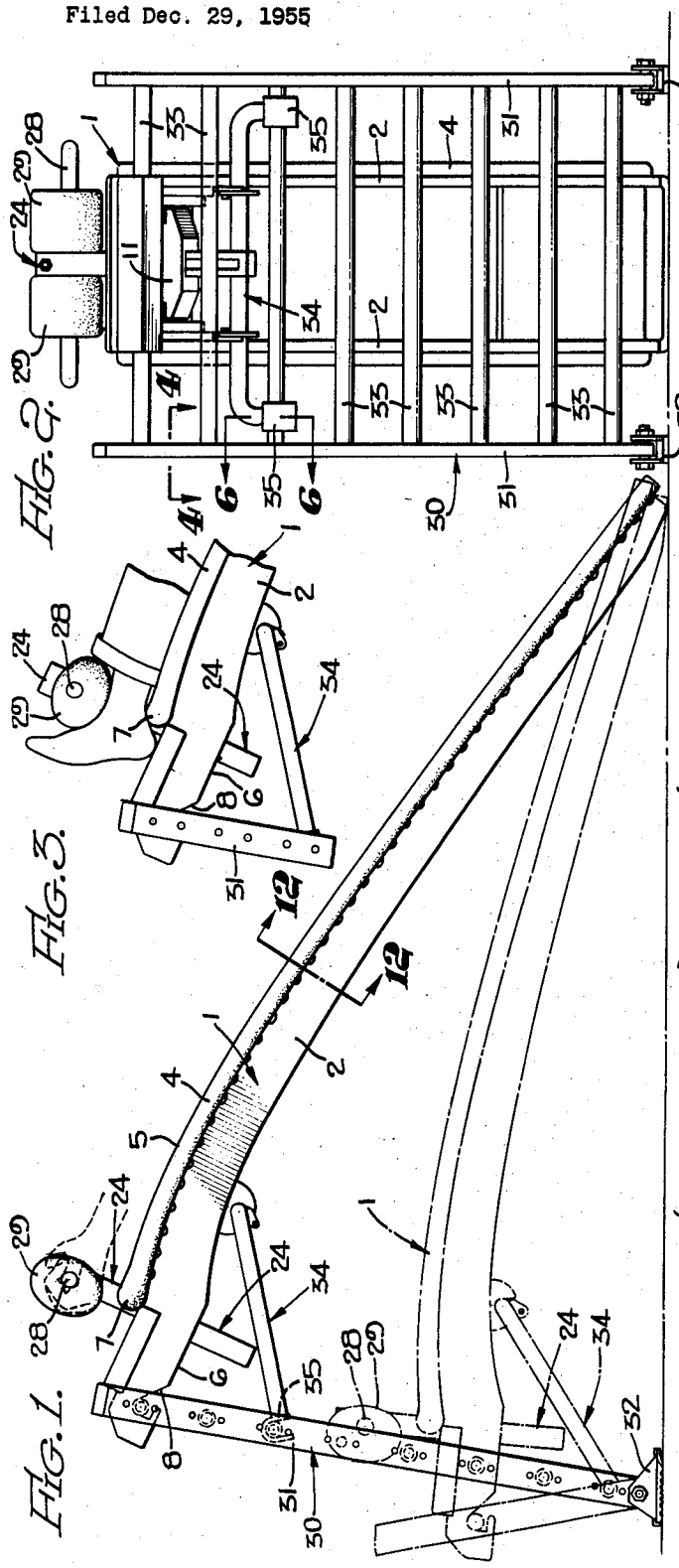


FIG. 1.

FIG. 3.

FIG. 2.

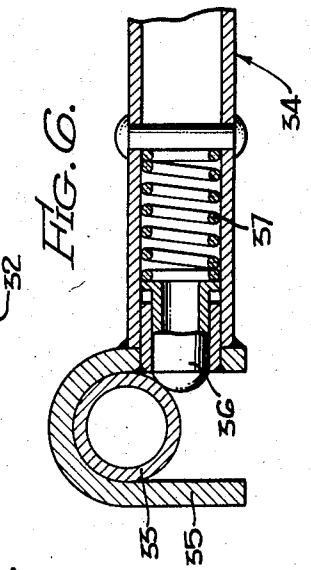


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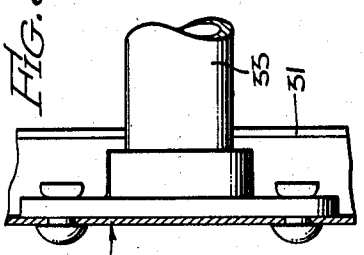


FIG. 5.

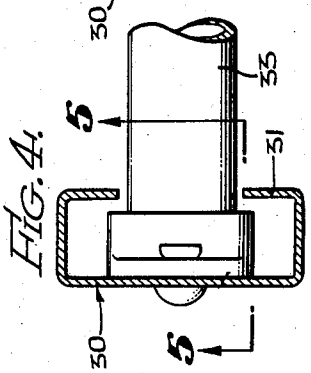


FIG. 4.

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EXERCISE APPARATUS

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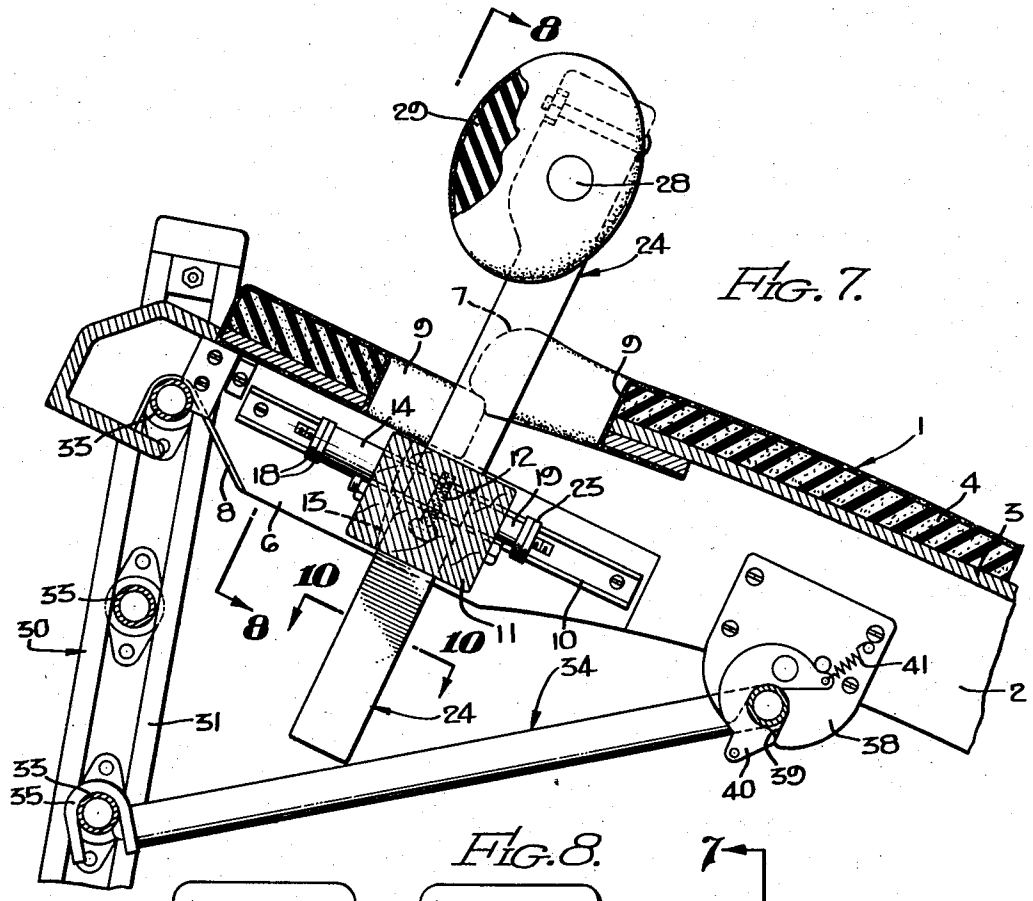


FIG. 7.

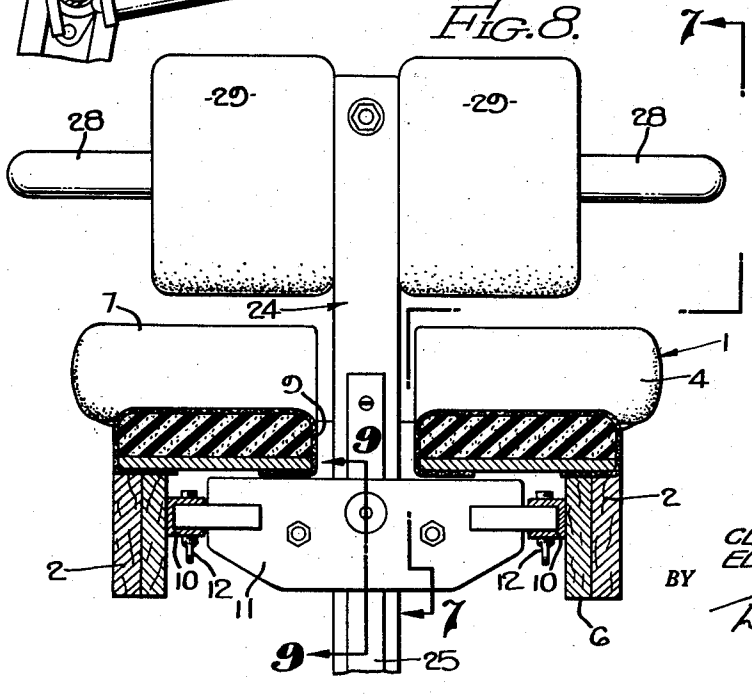


FIG. 8.

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EXERCISE APPARATUS

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FIG. 9.

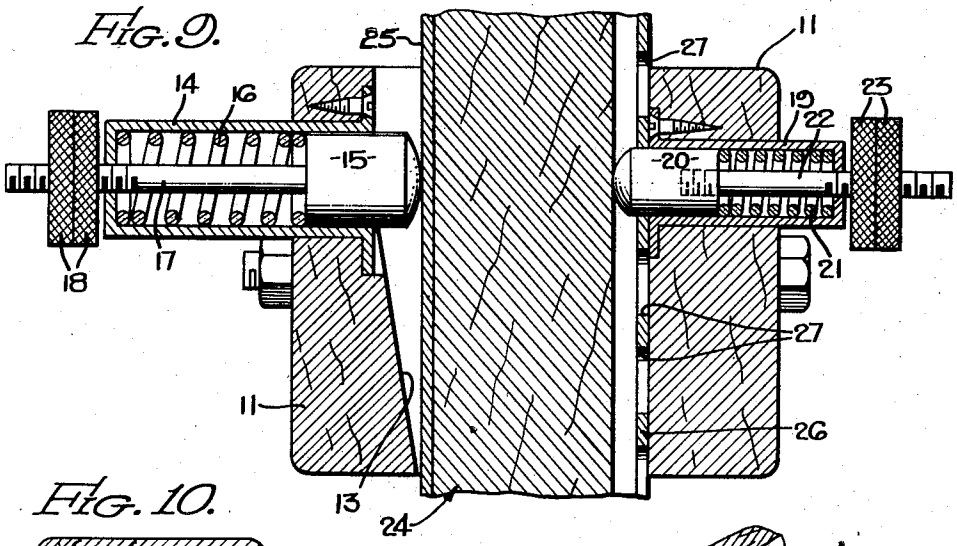


FIG. 10.

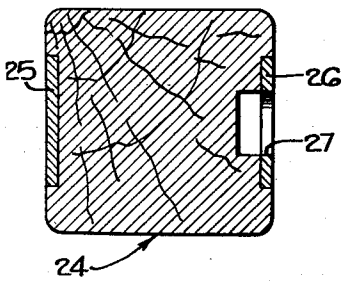
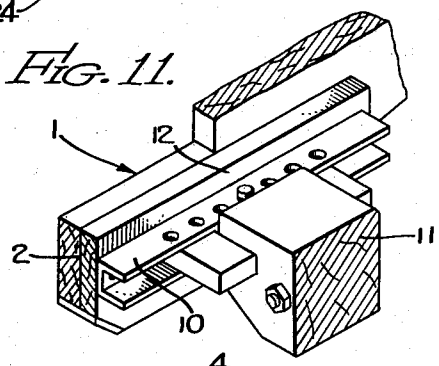


FIG. 11.



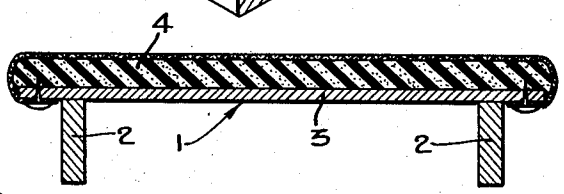
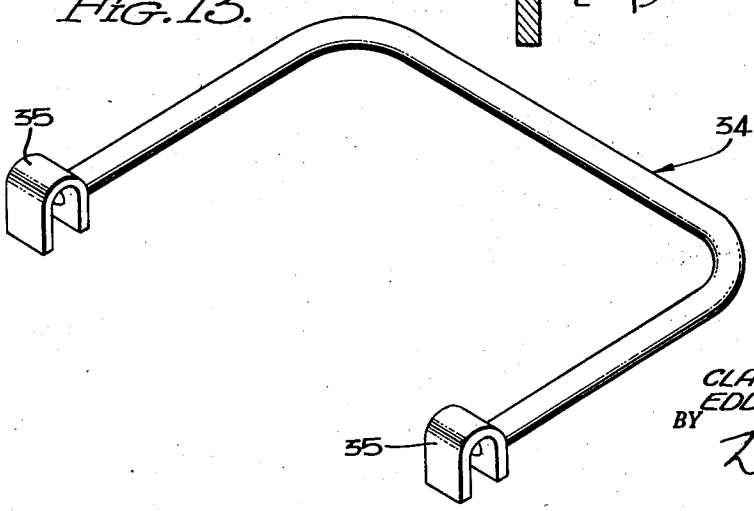


FIG. 12.

FIG. 13.



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EXERCISE APPARATUS

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Application December 29, 1955, Serial No. 556,234

4 Claims. (Cl. 272—58)

This invention relates to exercise apparatus, and included in the objects of this invention are:

First, to provide an exercise apparatus which includes an exercise platform which may be disposed at various angular positions, and which includes means disposed at its upper end which may be firmly held by one's hands or dependably engaged by one's ankles and feet, so that a series of exercises may be taken.

Second, to provide an exercise apparatus having a means which, although capable of holding the ankles and feet firmly against accidental dislodgment during the course of exercise, holds the feet comfortably and without discomfort on the muscles, tendons, and bones of the feet, even though the angle of the exercise apparatus is substantial or even vertical and the entire weight of the body is suspended by the feet.

Third, to provide an exercise apparatus which may be readily and quickly adjusted for use by different persons, or for maximum comfort, as well as to different positions for different degrees of exercise.

Fourth, to provide an exercise apparatus which incorporates an exercise board or platform, ladder arrangement, and brace, whereby the angular position of the exercise board may be readily and quickly adjusted.

With the above and other objects in view, as may appear hereinafter, reference is directed to the accompanying drawings in which:

Figure 1 is a side view of the exercise apparatus, indicating one position thereof in solid lines and another position thereof in broken lines;

Fig. 2 is an end view thereof, taken from the elevated end of the exercise apparatus;

Fig. 3 is a fragmentary view of the upper end of the apparatus, showing the manner in which the foot suspension means is employed;

Fig. 4 is an enlarged fragmentary sectional view of the ladder structure, forming a part of the apparatus, taken through 4—4 of Fig. 2;

Fig. 5 is a fragmentary sectional view thereof through 5—5 of Fig. 4;

Fig. 6 is a fragmentary sectional view through 6—6 of Fig. 2, showing the manner of connection between the brace member and the ladder structure;

Fig. 7 is an enlarged fragmentary sectional view through 7—7 of Fig. 8, showing the upper portion of the exercise apparatus;

Fig. 8 is a fragmentary transverse sectional view, taken through 8—8 of Fig. 7;

Fig. 9 is an enlarged fragmentary sectional view through 9—9 of Fig. 8;

Fig. 10 is a transverse sectional view through 10—10 of Fig. 7;

Fig. 11 is a fragmentary perspective view, showing particularly the carriage member, its track, and adjacent portion of the side rail of the exercise platform;

Fig. 12 is a transverse sectional view through 12—12 of Fig. 1, showing the exercise platform; and

Fig. 13 is a perspective view of the brace member.

The exercise apparatus includes an exercise board or platform 1 having side rails 2 joined by a cross member 3 and covered with padding 4.

One end portion of the platform 1 is preferably arched, as indicated by 5, and is provided with an offset extremity 6, forming a padded shoulder 7. The side rails 2 at this extremity are provided with notches 8 for supporting this end of the exercise platform on a ladder structure, as will be presently described. The offset extremity 6 is provided with a slot 9 which extends into the shoulder 7, as shown best in Fig. 7.

Substantially centered with respect to the slot 9 and fastened to the inner or confronting sides of the side rails 2 is a pair of guide tracks 10 in the form of channel members. A carriage frame 11 extends between the guide tracks 10 and rides therein. The guide tracks 10 are provided with a series of screw-threaded holes which receive locking screws 12, to secure the carriage frame 11 in any one of several adjusted positions longitudinally of the exercised board or platform 1.

The central portion of the carriage frame 11 is provided with a cross bore 13, as shown best in Fig. 9. Disposed at right angles to the cross bore 13 is a sleeve 14 in which is mounted a bearing pin 15 backed by a spring 16. The bearing pin 15 is adapted to project into the bore 13, and its movement is limited by a stem 17 and adjustment nuts 18.

The carriage frame 11 also supports a second sleeve 19, preferably in alignment with the sleeve 14, in which is slidable a latch pin 20 backed by a spring 21 and provided with a protruding stem 22 having adjustment nuts 23.

Slidably mounted and loosely fitting within the cross bore 13 is a post 24 which is yieldably held against the side of the cross bore 13 by the bearing pin 15. The side of the post engaged by the bearing pin is provided with a wear plate 25. The opposite side is engaged by the latch pin 20 and is provided with a plate 26 having perforations 27 adapted to receive the latch pin 20.

The post 24 extends upwardly through the slot 9 and is provided at its upper end with a cross bar 28. The extremities of the cross bar form hand grips.

Between the extremities of the cross bar 28 and the post 24 there is provided padded rolls 29 which are oval in cross-section and eccentrically disposed on the cross bar 28, as shown best in Fig. 7. The padded rolls are adapted to occupy a position above and slightly offset from the padded shoulder 7, and cooperate therewith to support the feet of the user, as will be described hereinafter.

The exercise platform 1 is supported in various angular positions by means of a ladder 30 having side rails 31 which rest on feet 32. The ladder 30 is provided with a series of rungs 33, any one of which may receive the hook notches 8 of the exercise platform 1.

A U-shaped brace bar 34 secures the exercise platform 1 and ladder 30 in various angular positions. The legs of the U-shaped bar 34 terminate in hooks 35 which fit over the rungs 33 of the ladder. Each end hook 35 is provided with a latch pin 36 backed by a spring 37, so that the end hooks may be snapped into place.

Secured to the side rails 2, near the normally upper end of the exercise platform 1, is a pair of bearing plates 38 having notches 39 in their under sides which receive the cross portion of the brace bar 34. The cross portion of the brace bar is held in position in each bearing plate by means of a latch lever 40 pivotally mounted on the bearing plate and urged by a spring 41 in a direction to close the corresponding notch 39.

The exercise apparatus is used as follows:

The exercise board or platform 1 is placed with the hook notches 8 engaging a desired rung 33 of the ladder 30.

The user then lies on the platform in various positions. He may, when the platform is placed lower than the top rung, remove the post **24** and lie with his feet downward and hold onto a ladder rung with his hands. It will be observed that the ladder is wider than the exercise platform, not only for lateral stability, but also to permit use of the extremities of the ladder rungs as hand grips. Once reclined on the platform and holding a ladder rung, the user may proceed with the performance of various exercises starting with this position.

As indicated in Fig. 1, the extremities of the cross bar **28** may also be grasped by the hands; however, for most purposes the ladder rungs are preferred.

The exercise apparatus is particularly suited for those exercises in which the user places his foot between the padded shoulder **7** and padded rolls **29**, as shown in Fig. 3, so that the foot is yieldably held by the heel and instep or top of the foot. It will be noted that the padded rolls are rotatable on the cross bar **28** so that they may be readily turned to the angular position affording the most comfort. By commencing a series of exercises with the exercise platform **1** supported from one of the lower rungs **33** of the ladder **30**, the user may gradually develop his muscles so that he can exercise with the board at increasing angles until the top rung of the ladder is reached.

For the purposes of illustration, a relatively short ladder is shown. However, in the use of this invention the exercise pltaform may be raised until it occupies almost a vertical position for maximum exercise. Even in this position the feet are completely supported so that no injury can occur, even when performing the most strenuous exercises.

It will be observed that the post **24** fits loosely in the opening **12** and that the bearing pin **15** holds the post against the latch pin **20** so that the latch pin may enter any of the perforations **27** and secure the post against accidental displacement. By tilting the post **24**, so as to fulcrum about an end of the opening **12**, the post may be moved free of the pin **20** and adjusted longitudinally to the desired height.

While a particular embodiment of this invention has been shown and described, it is not intended to limit the same to the exact details of the construction set forth, and it embraces such changes, modifications, and equivalents of the parts and their formation and arrangement as come within the purview of the appended claims.

We claim:

1. An exercise apparatus, comprising: an exercise platform having a padded surface and arched principally at one end portion, said end portion having an offset extension whereby said padded surface forms a padded shoulder for engagement with the heels of the user; said offset portion having a slot therein; a post extending through said slot; means under said platform for adjustably supporting said post; a cross bar carried by said post above said padded surface, said cross bar having hand grips at its extremities; and pads mounted on said cross bar adjacent said post and arranged to cooperate with said padded shoulder, to engage the upper portions of the feet when the heels thereof overlie said padded shoulder for yieldably restraining the feet of the user.

2. An exercise apparatus, comprising: an exercise platform having a padded surface and arched principally at one end portion, said end portion having an offset extension whereby said padded surface forms a padded shoulder for engagement with the heels of the user; said offset portion having a slot therein; a post extending through said slot; means under said platform for adjustably supporting said post; a cross bar carried by said post above said padded surface; pads mounted on said cross bar adjacent said post and arranged to cooperate with said padded shoulder, to engage the upper portions of the feet when the heels thereof overlie said padded shoulder for yieldably restraining the feet of the user; hook means at the extremity of said offset portion; a ladder having rungs engageable by said hook means to secure said exercise platform at various angular positions; and brace means extending between said ladder and said platform.

3. An exercise apparatus as set forth in claim 2, wherein: the extremities of said rungs extend laterally beyond the sides of said platform for engagement by the hands of one reclining on said platform.

4. An exercise apparatus, comprising: an exercise platform having a padded surface and arched principally at one end portion, said end portion having an offset extension whereby said padded surface forms a padded shoulder for engagement with the heels of the user; said offset portion having a slot therein; a post extending through said slot; means under said platform for adjustably supporting said post; a cross bar carried by said post above said padded surface; and pads mounted on said cross bar adjacent said post and arranged to cooperate with said padded shoulder, to engage the upper portions of the feet when the heels thereof overlie said padded shoulder for yieldably restraining the feet of the user.

References Cited in the file of this patent

UNITED STATES PATENTS

1,351,053	Macklem	Aug. 31, 1920
2,240,228	Schall	Apr. 29, 1941
2,446,275	Glasin	Aug. 3, 1948
2,673,736	Fiumedoro	Mar. 30, 1954
2,738,975	Zaboy	Mar. 20, 1956