

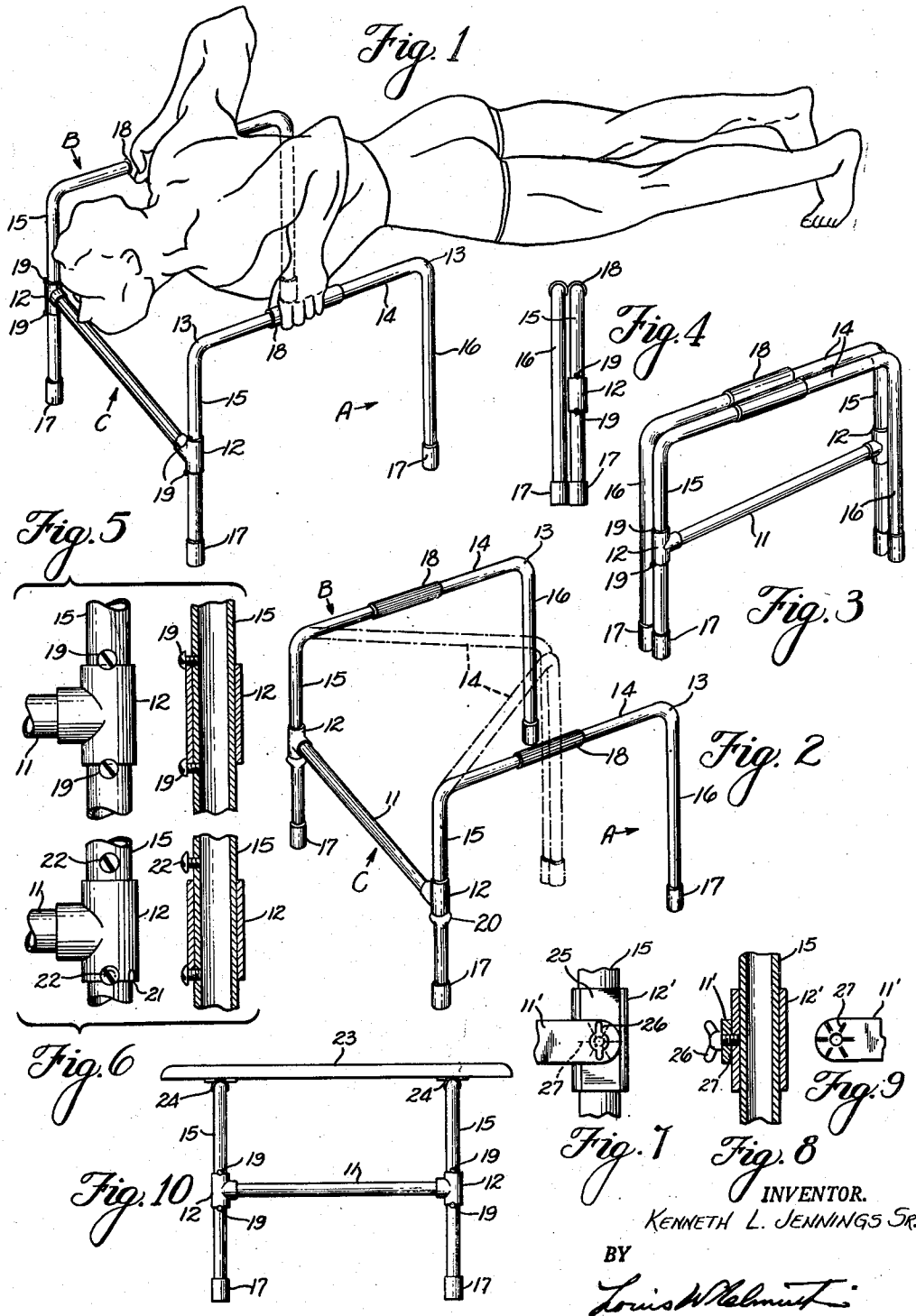
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EXERCISING STAND

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EXERCISING STAND

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1 Claim. (Cl. 272-63)

1

This invention relates to new and useful improvements in a combination portable exercising stand, table and foot or leg rest.

An important object of the invention is to provide an exercising device, which when used regularly, will strengthen and build body organs, muscles, arteries, tendons, blood circulation, respiration, bone structure and generally improve body functions. More particularly, it is an object to provide an inexpensive strong device by which "push-up" and other exercises can be more effectively performed and greater body benefits derived from such exercises.

Another important object is to provide an exercising device consisting broadly of a pair of inverted U-shaped frames, each having a front leg and a rear leg; the two front legs being rotatably received in elongated bearing and thrust resisting sleeves carried by the ends of a horizontal thrust resisting bar arranged a distance above the lower ends of said front legs, thereby positioning said bearing and thrust sleeves near the medial portions of the two front legs to prevent outward bending, tilting and spreading of the end frames caused by outward thrusts exerted upon these frames from a point therebetween.

Another object of the invention is to provide a utility device of the above character which is sturdily and cheaply constructed from three sections or frames, preferably of metal tubing, hinged together for relative adjustments.

A further object of the invention is to provide a device of the above character which is primarily made up of two identical substantially inverted U-shaped sections, each of which has a horizontal "push-up" bar with a pair of parallel legs arranged at right angles thereto terminating in anti-skid feet whereby all four of such feet are arranged in the same plane when the device is set up for use.

A still further object of the invention is to provide the device with a third section which is so arranged and connected with the two U-shaped sections, as to prevent accidental spreading, skidding, or tilting of the two sections under stress of use, to insure the above relationships.

Other objects and advantages of the invention will become apparent during the course of the following description:

In the accompanying drawing forming a part of the description and wherein like numerals are employed to designate like parts throughout the several views,

2

Fig. 1 is a perspective view of the invention showing its arrangement or position when used as an exercising device for push-up exercises,

Fig. 2 is a similar view showing its position or adjustment when used as an exerciser or table stand; the dotted lines showing the adjustment of the end frames or sections to form a foot and leg rest or a table stand,

Fig. 3 is a perspective view of the device folded or collapsed for storage,

Fig. 4 is an end elevation of the device folded or collapsed for storage,

Fig. 5 is an elevation and also a vertical section of the preferred hinge connections between the three sections of the device,

Fig. 6 is an elevation and also a vertical section of a modified hinge connection with means for latching the sections in various angular relations;

Fig. 7 is an elevation of another modified slidable hinge connection between the three sections which permits various angular adjustments of the end sections with respect to the intermediate section,

Fig. 8 is a vertical section of the same,

Fig. 9 is an elevation of an end of the modified intermediate section or horizontal bar employed in Figs. 7 and 8, and

Fig. 10 is an end elevation of the stand showing it converted into an occasional table.

Referring now to the drawing, wherein for the purpose of illustration and not limitation, the preferred embodiments of the invention are illustrated; the letters A and B designate generally the two end frames or sections of the device, and the letter C designates generally the intermediate frame or section which is composed of a single horizontal tubular bar 11 about 21 inches long arranged at approximately 9 inches from the floor. Each of the three sections A, B and C is preferably made of metallic tubing for strength, durability and appearance. Each end of this thrust resisting bar 11 has rigidly connected thereto, a vertical sleeve 12 elongated to form a substantial bearing to prevent any tilting of the end sections with respect to this bar 11. These sleeves may be like T pipe fittings with the ends of the bar 11 threaded therein, or they may be separate sleeves brazed or welded at right angles to the ends of the bar.

The two identical end frames or sections A and B are each preferably composed of a single length of metal tubing bent at two spaced points preferably at right angles as at 13 to provide a horizontal push-up bar 14, about 21 inches long and of the same length as the bar 11, terminating in a

front leg 15 and a rear leg 16 arranged at right angles to the bar 14 to dispose this bar about 18 inches from the floor. Anti-skid devices in the form of crutch rubber cups 17 are secured on the foot or lower ends of all four legs, and are arranged in the same plane in all positions or adjustments of the three sections to prevent slipping or skidding of the device. Elongated rubber or plastic hand grips 18 are slit longitudinally to snap on and off of the middle of the horizontal bars 14. The corresponding front legs 15 of the two end frames or sections are freely rotatably mounted in the sleeves 12 of bar 11 to swing through approximately 360 degrees, and these sleeves 12 are maintained about half way or upon the middle of their respective legs 15 at approximately 9 inches from the floor by a pair of set screws 19 threaded into each leg 15 and engaging the upper and lower parallel edges of the sleeve 12 as shown in Fig. 5 to maintain the bar 11 at a constant elevation and to assure that the feet or cups 17 of all four legs are arranged in the same horizontal plane in all positions of these legs for stability of the device and for the prevention of accidental skidding or tipping of the device in use. The bar 11 may also be maintained at this elevation on the legs 15 by providing the latter with bulged or expanded integral rings 20 as shown in Fig. 2 and formed in the legs after the sleeves 12 have been slipped thereon.

If it be desired to provide means for releasably retaining the legs or end frames A and B in various adjusted angular positions with respect to the sleeves 12 and intermediate frame or section C, as for example in the positions shown in full and dotted lines in Figs. 2 and 3, the lower edges of these sleeves 12 may be provided with spaced radial vertical notches 21 as shown in Fig. 6 and the pair of set screws 22 in each leg 15 may be spaced apart vertically a greater distance than the vertical dimension of its respective sleeve 12. In this way the weight of the bar 11 and sleeves 12 will cause the sleeves to rest by gravity with their lower edges supported upon the lower screws 22 so that when the end frames A and B are turned on the vertical axes of their legs 15, the sleeves 12 will slide down the legs 15 as the first notch 21 comes into alignment with the lower screw 22, thereby latching the end sections in a predetermined angular position with respect to the intermediate frame or section C. Should a different angular position be desired, the bar 11 with the sleeves 12 are lifted to disengage their notches 21 from the lower screws 22, whereby the legs 15 can be turned on their axes to the desired position, after which the bar 11 is released to permit its sleeves 12 to slide down the legs 15 and engage the proper notch with the lower set screw 22. If desired, the upper screws 22 may be dispensed with, as their primary purpose is to prevent excessive sliding of the sleeves 12 along the legs 15 when the bar 11 is raised to make a new angular adjustment of the legs or end sections.

The primary purpose of this invention is to provide an exercising stand upon which push-ups, callisthenics and acrobatics can be performed for health or amusement, or when not so used, can be used as a foot or leg rest or as the stand or legs of a card or occasional table, and when such uses are not desired, can be folded or collapsed to occupy the minimum storage space. When used for callisthenics, the two end sections A and B are swung on their hinge sleeves 12 to be arranged to extend at any angles desired but preferably in parallel relation at right angles to

the bar 11 with the four anti-skid devices 17 supported on the floor as shown in Fig. 1. The user places his right and left hands on the grips 18 with his arms extended and his body disposed between the horizontal bars 14 with his feet comfortably placed at a distance rearwardly of the legs 16 so as to permit his body to be lowered between the frames A and B. His body is then extended at an angle of approximately 30 degrees with relation to the floor and raised and lowered by the arms, exhaling while lowering the body and inhaling while raising the body. The horizontal bar 11 of section C may be touched with the user's nose as he lowers his body as a gauge for the maximum body lowering movements. This is an exercise known as "push-ups," the health benefits from which are widely known and recognized. Due to the two end frames A and B being each formed with two straight right angled parallel legs 15 and 16 with anti-skid cups 17 all disposed in the same plane in all angular positions of the end frames, and the hinge sleeves 12 forming elongated bearings for the legs 15, the end frames A and B cannot skid, be separated or be tilted by the tremendous outward thrusts exerted by the weight of the user when performing the above exercises or acrobatics upon the bars 14. The acrobatic user may swing the sections A and B to the dotted line position shown in Fig. 2 and grasp the grips 18 and stand on his hands on the converged bars 14, lowering and raising his body by his arms to raise and lower his head between these bars. Many other acrobatics or exercises may be performed upon this stand in many different positions of the end frames A and B, in all of which the anti-skid devices 17 are all arranged in the same plane for absolute stability. When the device is not to be used further, it may be quickly folded without any unlatching operations by freely swinging both end frames in the same direction on the axes of their legs 15 in the sleeves 12 to the folded position shown in Figs. 3 and 4 for compact storage under the bed or otherwise out of sight.

If it be desired to use the device as a foot and leg rest, it may be placed in front of a chair in either position shown in Fig. 2 with the bar 11 arranged nearest the chair, in order that a user sitting in the chair may rest the arches of his feet on the bar 11, or may rest his legs horizontally upon the cushioned hand grips 18 of the bars 14. When the three frames are arranged in the dotted line position shown in Fig. 2 to form an equilateral triangle (in plan) the horizontal bars 14 will angle diagonally across the legs of the user so as not to "cut" or render them tiresome when using the device in front of a chair as a leg rest. And when so used the anti-skid devices 17 being arranged in the same plane on a level floor, will not skid away from the user, and may even be used as a triangular standing pen for a baby by locking or tying the legs 15 and 16 in the position shown.

Should it be desired to convert the exerciser stand into an occasional table or bench, the sections A, B and C may be arranged in either position shown in Fig. 2 and a platform 23 in the form of a table top or bench plank shown in Fig. 10 having a pair of wide spring metal clips 24 secured to its underside, may be clipped over the grips 18 or bars 14 as shown and will hold the sections or frames A and B in the same angular fixed positions as the clips 24 are secured to the platform 23. Thus, when it is desired to provide a small triangular occasional table, a triangular table top may be used with clips 24 secured there-

5

to at the same angles as the dotted line position of the bars 14 in Fig. 2 to be clipped thereon to hold the sections A and B in converging relationship.

In a modification of the invention, the sleeves 12' in Figs. 7 to 9, correspond to the sleeves 12, and instead of being rigidly connected to the ends of a cross bar 11 of frame C are pivotally connected on horizontal pivots or axes by thumb screws 26 extending through the ends of a flat cross bar 11' and through threaded apertures in the flattened surfaces 25 of the sleeves 12'. The flattened engaging faces of the bar 11' and the sleeves 12' are provided with radially disposed ratchet teeth 27 which are adapted to inter-engage in any angular position of the sleeves 12' with respect to the bar 11' on the pivots of screws 26 to hold the adjustment by tightening the thumb screws 26. The thumb screws 26 are long enough to thread entirely through the flattened wall of the sleeve 12' so that they can be made to engage the leg 15 to hold the sleeve in the desired adjusted position lengthwise of the leg when these screws are tightened or driven home.

From the foregoing it will be seen that the device has many versatile uses and that various changes in the size, shape and relation of parts may be made without departing from the spirit of the invention and the scope of the appended claim.

I claim:

In a collapsible and portable device of the character described, the combination of a pair of inverted U-shaped end frames each having a vertical front leg and a rear leg joined by a push-up bar arranged above the floor at approximately the height of the average person's knee joint when standing upon the floor whereby a person

6

may grip said push-up bars to support his weight to perform calisthenics, said legs having anti-skid foot portions engageable with the floor, and a horizontal thrust resisting bar carrying elongated vertical bearing and thrust sleeves at its ends, the medial portions of the lengths of corresponding front legs of said two end frames being rotatably mounted in said bearing and thrust sleeves whereby said end frames can swing individually as units in said sleeves on vertical axes, said thrust resisting bar being arranged above the floor in a substantially horizontal plane midway the height of said front legs and with said bearing and thrust sleeves rotatably mounted upon said medial portions of said vertical front legs to prevent outward bending, tilting and spreading apart of said front legs and end frames caused by outward thrusts exerted thereon by the weight of a person imposed upon said push-up bars by his arms pushing outwardly thereon from between the same, said elongated bearing sleeves distributing said outward thrusts of said end frames over extended lengths of said front legs, and said horizontal thrust resisting bar serving as a gage means which may be touched by the person's nose to inform him how far to lower his body during push-up exercises.

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References Cited in the file of this patent

UNITED STATES PATENTS

| Number | Name | Date |
|-----------|-------|---------------|
| 1,570,307 | Kirby | Jan. 19, 1926 |

FOREIGN PATENTS

| Number | Country | Date |
|---------|---------|---------------|
| 771,089 | France | July 16, 1934 |