A horizontally twisting exercising device includes a base for the user to stand or sit on, a first rotating extension portion and a second rotating extension part. The second rotating extension portion has a pivoting portion and a pair of handles. Because the pivoting portion is pivoted on the second end of the first rotating extension portion, the handles can smoothly rotate. So, by the automatic rotating of handles, it is more comfortable and not easy to occur the exercising injures. The upper body of the user can keep straight during exercising. It is suitable for different kinds of user. It can apply on many leg-related exercising devices. And, the range of its swinging angle is wider.
HORizontally Twisting EXERCISING Device

background of INVENTION

[0001] 1. Field of the Invention

[0002] The present invention relates to a horizontally twisting exercising device. It is more comfortable and not easy to occur the exercising injuries. The upper body of the user can keep straight during exercising. It is suitable for different kinds of user. It can apply on many leg-related exercising devices. And, the range of its swinging angle is wider.

[0003] 2. Description of the Prior Art

[0004] FIGS. 1 to 3 show a traditional horizontal twisting exercising device. It comprises a base 80 for a user to stand on, a fixing rod 82 extended from the base 81 (having a axis defined as the first axis Y1), and a pair of rotatable handle portion 90 pivoted on the fixing rod 82. The rotatable handle portion 90 is disposed with two handles 91 for the user’s hands to grasp on.

[0005] As shown in FIG. 2, the height of the handles 91 usually is set approximately within a proper range so that the user can easily grasp on. The handles 91 can be rotated within a range. When the rotatable handle portion 90 moves, it has three different positions namely the left, the middle, and the right positions labeled P1, P2, and P3 respectively.

[0006] However, when the upper body of the user keeps straight and the user starts the horizontal twisting exercising, two ends 92 of the handles 91 will move along a range of a circular path (as shown in the phantom lines in FIG. 2). Referring to FIG. 3, when the handles 91 moves to the left position P1, the distance S1 between the end 92 of the left handle 91 and the user’s left shoulder X1 is short (it means the available space is small). Therefore, the user left arm (the inner arm) is hard to bend. But, the distance S2 between the end 92 of the right handle 91 and the user’s right shoulder X2 becomes quite long, so that the user’s right arm (the outer arm) will be compulsively pulled out. Even it might happen that the user’s right arm is not long enough to reach it (or called over-pulled). For the same reason, when the user twists his or her waist to the right, the handles 91 move to the position P3, the corresponding distance S2 becomes too short and the distance S1 becomes too long. If the user repeats this twisting exercise, the whole exercising is very uncomfortable and is very possible to cause exercising injuries. Even it is possible to hurt the user. Of course, when the outer arm is pulled out too far, the user must tilt the upper body to solve the over-pulling problem that the arm cannot reach the handle. However, such tilting condition will cause the user’s weight center moves forward. So, the user is easy to fall down. Especially, when this traditional twisting exercising device is combined with another leg exercising device, the whole exercise becomes not smooth. The repeated tilting forward and returning straight movements might cause the female user’s breasts to hit the handle. Therefore, many negative effects occur.

[0007] In addition, because the length of the user’s arms is limited, the range of rotatable angle of such twisting exercise is smaller.

SUMMARY OF THE INVENTION

[0008] The primary object of the present invention is to provide a horizontally twisting exercising device. It is more comfortable and not easy to occur the exercising injuries

[0009] The next object of the present invention is to provide a horizontally twisting exercising device. The upper body of the user can keep straight during exercising.

[0010] The other object of the present invention is to provide a horizontally twisting exercising device. It is suitable for different kinds of user.

[0011] Another object of the present invention is to provide a horizontally twisting exercising device. It can apply on many leg-related exercising devices.

[0012] Still another object of the present invention is to provide a horizontally twisting exercising device. The range of its swinging angle is wider.

[0013] The present invention is to provide a horizontally twisting exercising device. It comprises:

[0014] a base for supporting a user, said base having a first axis substantially vertical to a ground;

[0015] a first rotating extension portion having a first end and a second end, said first end being pivoted on said base so as to allow said first rotating extension portion to rotate along said first axis; and

[0016] a second rotating extension portion having a pivoting portion and a pair of handles, said pivoting portion being pivoted on said second end of said first rotating extension portion and forming a second axis so that said handles can rotate about said second axis.

BRIEF DESCRIPTION OF THE DRAWINGS

[0017] FIG. 1 is a perspective view of the traditional horizontally twisting exercising device.

[0018] FIG. 2 shows the movement of the traditional horizontally twisting exercising device.

[0019] FIG. 3 illustrates the actual operation of the traditional horizontally twisting exercising device.

[0020] FIG. 4 is a perspective view of the present invention.

[0021] FIG. 5 shows a rotating condition of the present invention.

[0022] FIG. 6 shows another rotating condition of the present invention.

[0023] FIG. 7 illustrates the actual operation of the present invention at a position.

[0024] FIG. 8 illustrates the actual operation of the present invention at another position.

[0025] FIG. 9 is a perspective view of the second preferred embodiment of the present invention.

[0026] FIG. 10 is a perspective view of the third preferred embodiment of the present invention.

[0027] FIG. 11 is a perspective view in which this invention is applied on a stepping exercising device.
DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

[0028] Referring to FIGS. 4 to 8, they show the first preferred embodiment of the invention that is a horizontally twisting exercising device. It mainly comprises a base 10, a first rotating extension portion 20, and a second rotating extension portion 30.

[0029] With regard to the base 10, the base 10 is used for supporting a user to stand on or sit on. This base 10 has a first axis Y1 that is substantially vertical to a ground.

[0030] The first rotating extension portion 20 has a first end 21 and a second end 22. The first end 21 is pivoted on the base 10 so that it allows the first rotating extension portion 20 to rotate along this first axis Y1.

[0031] About the second rotating extension portion 30, it has a pivoting portion 31 and a pair of handles 32. The pivoting portion 31 is pivoted on the second end 22 of the first rotating extension portion 20 and forming a second axis Y2, so that these handles 32 can rotate about the second axis Y2, as shown in FIGS. 5 and 6.

[0032] In this first preferred embodiment, the base 10 is a plate-like structure for supporting a user on the base 10.

[0033] Concerning its operation, the user stand on the base 10. Then, the user’s hands hold on the handles 32 of the second rotating extension portion 30 to do the repeated horizontal rotation within a range. Furthermore, when the user’s hands and arms move to the left hand side (but the upper body still keeps straight) as shown in FIG. 7, the first rotating extension portion 20 rotates to the left. As this moment, the second rotating extension portion 30 will automatically rotate to a suitable angle and position for this user. The distances from the left and right ends 33 of the handles 32 to the user’s left and right shoulders X1, X2 are defined distances S3 and S4 respectively.

[0034] When the user continues to twist his or her waist toward the leftmost position, as shown in FIG. 8, the first rotating extension portion 20 continues to move to the left. However, the second rotating extension portion 30 still can automatically rotate to the most comfortable angle and position for the user.

[0035] During the left-direction rotation period, the distance S3 of the left arm is much longer than the distance S1 by using the traditional exercising device. That means there is a larger available space for the left arm to bend or move. For the user’s right arm, the distance S4 of the right arm is shorter than the distance S2 by using the traditional one. That means the right arm will not be compulsively pulled to an uncomfortable position (even over-pulled) to a position that the right arm cannot reach). Moreover, the distances S3 and S4 are always kept to have the approximately equal length. That means the left and right arms are extended to the roughly equal length, so that it is the most comfortable and natural condition for both arms. It avoids the problem that one of the user’s arms will be over-squeezed or over-pulled. Also, the upper body of the user always keeps straight. For the detailed movement of the right arm, it is just opposite to the left arm as described above, so it is omitted here.

[0036] Therefore, when the user twist his or her waist, the inner arm or the user has a larger space to bend. Thus, it is more comfortable and it can significantly reduce the possibility of exercising injury. Also, the outer arm of the user will not be compulsively pulled to an uncomfortable position or to a position that the arm cannot reach. Therefore, both arms are kept to have the approximately equal length. Besides, the range of the rotating angle of the first rotating extension portion 20 becomes larger so that the exercising effect is better.

[0037] Next, as shown in FIG. 9, it is the second preferred embodiment of the present invention. In which, the base 10 and the first rotating extension portion 20 are modified, but this second preferred embodiment could achieve the same function.

[0038] Besides, referring to FIGS. 10, it is the third preferred embodiment. In which, the first rotating extension portion 20 has a first sub-section 20A and a second sub-section 20B. The first sub-section 20A and the second sub-section 20B are connected and approximately parallel, so as to allow the first sub-section 20A and the second sub-section 20B rotate about a third axis Y3. That is, the rotatable portions mentioned earlier can be modified from a two-section rotatable portions (Y1, Y2) into a three-section rotatable portions (Y1, Y2, & Y3).

[0039] Of course, this invention can combine with other leg-related exercising devices to achieve a better integrated exercising effect. For example, as shown in FIG. 11, the base 10 is defined as a stepping exercising device that at least includes a frame 11 and a pair of vertically movable pedals 12 (vertically up and down). Therefore, the user’s feet can stand on the pedals 12 to do the stepping exercising. Meanwhile, the upper arms, forearms, and waist can achieve the horizontal twisting exercising. Under such circumstance, the arms and legs of the user can fully exercise.

[0040] Similarly, the base 10 can be modified as a sliding exercising device (not shown). This sliding exercising device at least includes a frame (not shown) and a pair of horizontally movable pedals (not shown) that can horizontally move back and forth (horizontally back and forth). Also, it can achieve the similar function as the one of the stepping exercising device. In addition, this invention can apply to other types of similar leg-related exercising devices. That is just an equivalent modification.

[0041] The advantages and disadvantages of this invention can be summarized as follows:

[0042] (1) It is more comfortable and not easy to occur the exercising injuries. Because the handles are rotatable, while using this invention, the inner arm of the user can move within a larger space. Also, the outer arm of the user will no be compulsively pulled out too far (uncomfortable or injured) nor over-pulled to a position that the arm cannot reach. Thus, it is more comfortable and not easy to occur the exercising injuries.

[0043] (2) The upper body of the user can keep straight during exercising. Because the distances S3 and S4 are approximately equal, the left and right arms are always kept to have the approximately same length. Thus, the weight center of the user is more stable so that the upper body of the user can keep straight.

[0044] (3) It is suitable for different kinds of user. No matter the user is tall or short, this invention can automatically adjust to fit the user’s arms.
[0045] (4) It can apply on many leg-related exercising devices. This invention is designed for the horizontally rotating exercising of the upper body. However, it can further combine with a leg-related exercising device such as a stepping exercising device, a sliding exercising device, or the like. Thus, both the upper and lower body can fully exercise.

[0046] (5) The range of its swinging angle is wider. Because the handles are rotatable, the total rotatable angle of this invention is larger than the one of the traditional exercising device.

[0047] The above embodiments are only used to illustrate the present invention, not intended to limit the scope thereof. Many modifications of the above embodiments can be made without departing from the spirit of the present invention.

What is claimed is:

1. A horizontally twisting exercising device comprises:
   a base for supporting a user, said base having a first axis substantially vertical;
   a first rotating extension portion having a first end and a second end, said first end being pivoted on said base so as to allow said first rotating extension portion to rotate along said first axis; and
   a second rotating extension portion having a pivoting portion and a pair of handles, said pivoting portion being pivoted on said second end of said first rotating extension portion and forming a second axis so that said handles can rotate about said second axis.

2. The horizontally twisting exercising device as claimed in claim 1, wherein said base is a plate-like structure for supporting a user standing on.

3. The horizontally twisting exercising device as claimed in claim 1, wherein said base is a stepping exercising device, and said stepping exercising device at least includes a frame and a pair of vertically movable pedals.

4. The horizontally twisting exercising device as claimed in claim 1, wherein said base is a sliding exercising device and said sliding exercising device at least includes a frame and a pair of horizontally movable pedals.

5. The horizontally twisting exercising device as claimed in claim 1, wherein said first rotating extension portion having a first sub-section and a second sub-section, said first sub-section and said second sub-section are connected and approximately parallel, so as to allow said first sub-section and said second sub-section rotate about a third axis.

6. The horizontally twisting exercising device as claimed in claim 1, wherein said base is a plate-like structure for supporting a user standing on.

7. The horizontally twisting exercising device as claimed in claim 5, wherein said base is a stepping exercising device, and said stepping exercising device at least includes a frame and a pair of vertically movable pedals.

8. The horizontally twisting exercising device as claimed in claim 5, wherein said base is a sliding exercising device and said sliding exercising device at least includes a frame and a pair of horizontally movable pedals.

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