WAIST EXERCISE DEVICE

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ABSTRACT

A waist exercise device has an annular rail, a slide base slidably mounted on the annular rail, and a balance weight connected to the slide base via a rope. A user wears the waist exercise device on his waist and twists his waist and moves his hips to fling the balance weight to revolve around the annular rail and to drive the slide base to slide along the annular rail. Thus, muscles in the waist, the abdomen, and the hips of the user are trained and strengthened. Since the annular rail does not repeatedly press against the waist and the abdomen, exercising with the waist exercise device does not cause damage to the muscles in the waist, the abdomen, and the hip, does not injure the spine, and is safe.
WAIST EXERCISE DEVICE

BACKGROUND OF THE INVENTION

[0001] 1. Field of the Invention
[0002] The present invention relates to an exercise device, especially to a waist exercise device.
[0003] 2. Description of the Prior Art(s)
[0004] Nowadays, people are usually busy with work and hardly have enough time to exercise outdoors. Therefore, various conventional exercise devices have been developed to allow people to exercise indoors for maintenance of their health. One of the exercise devices that allow a user to train his waist, abdomen and hips is a non-powered hoop, called “Hula hoop”. A circumference of the hoop is far longer than a girth of a human body. The hoop circles around the waist of the user. When the user twists the waist and moves the hips, the hoop twirls around the waist, muscles in the waist, the abdomen and the hips are exercised and strengthened.

[0005] However, when the hoop twirls around the waist, the hoop repeatedly presses against the waist and the abdomen of the user. Therefore, improper use of the hoop can sprain the muscles in the waist and the abdomen, or cause injuries to the spine. Moreover, as weight of the hoop increases, risk of damaging the user also increases.

[0006] To overcome the shortcomings, the present invention provides a waist exercise device to mitigate or obviate the aforementioned problems.

SUMMARY OF THE INVENTION

[0007] The main objective of the present invention is to provide a waist exercise device. The waist exercise device has an annular rail, a slide base slidably mounted on the annular rail, and a balance weight connected to the slide base via a rope.

[0008] A user wears the waist exercise device on his waist and twists his waist and moves his hips to fling the balance weight to revolve around the annular rail and to drive the slide base to slide along the annular rail. Thus, muscles in the waist, the abdomen, and the hips of the user are trained and strengthened. Since the annular rail does not repeatedly press against the waist and the abdomen, exercising with the waist exercise device does not cause damage to the muscles in the waist, the abdomen, and the hips, does not injure the spine, and is safe.

[0009] Other objectives, advantages and novel features of the invention will become more apparent from the following detailed description when taken in conjunction with the accompanying drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

[0010] FIG. 1 is a perspective view of a waist exercise device in accordance with the present invention;
[0011] FIG. 2 is a partially exploded perspective view of the waist exercise device in FIG. 1;
[0012] FIG. 3 is a cross-sectional side view of the waist exercise device in FIG. 1;
[0013] FIG. 4 is an enlarged front view of the waist exercise device in FIG. 1; and
[0014] FIG. 5 is an operational perspective view of the waist exercise device in FIG. 1.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

[0015] With reference to FIG. 1, a waist exercise device in accordance with the present invention comprises an annular rail 10, a slide base 20, a balance weight 31 and a cushion belt 40.

[0016] With further reference to FIG. 3 and 5, the annular rail 10 is circular and has a circumference, an inner annular surface, a main panel 11, two extending panels 12, two retaining panels 13, an annular recess 14, and a gap. The circumference of the annular rail 10 is adjustable to fit a girth of a user 50, such that the annular rail 10 can be stably worn on the waist of the user 50. The main panel 11 is annular and has an upper peripheral edge, a lower peripheral edge, an outer surface, and an inner surface. The extending panels 12 are respectively formed around and protrude from the upper peripheral edge and the lower peripheral edge of the main panel 11, and radially extend outwardly. Each extending panel 12 has an outer peripheral edge. The retaining panels 13 are respectively formed around and protrude from the outer peripheral edges of the extending panels 12. Each one of the retaining panels 13 extends toward the other retaining panel 13. The annular recess 14 is defined between the extending panels 12. The gap of the annular rail 10 is defined between the retaining panels 13 of the annular rail 10.

[0017] With further reference to FIG. 2, the slide base 20 is slidably mounted on and selectively orbits around the annular rail 10. Specifically, the slide base 20 is slidably mounted in the annular recess 14 of the annular rail 10 and has two lateral surfaces, a longitudinal surface, multiple inner rollers 21, and multiple outer rollers 22. The lateral surfaces of the slide base 20 respectively correspond to the extending panels 12 of the annular rail 10. The longitudinal surface of the slide base 20 corresponds to the gap of the annular rail 10. The inner rollers 21 are rotatably mounted on the lateral surfaces of the slide base 20. Each inner roller 21 is disposed between the main panel 11 and a corresponding one of the extending panels 12. The outer rollers 22 are rotatably mounted on the longitudinal surface of the slide base 20 and are disposed between the retaining panels 13 of the annular rail 10.

[0018] When the slide base 20 slides along the annular recess 14 of the annular rail 10 to orbit around the annular rail 10, with the inner rollers 21 abutting and rolling along the main panel 11 or the retaining panels 13 of the annular rail 10, the slide base 20 does not vibrate laterally. Moreover, with the outer rollers 22 abutting and rolling along the retaining panels 13 of the annular rail 10, the slide base 20 does not vibrate longitudinally. Accordingly, the slide base 20 can smoothly and stably slide along the annular recess 14 of the annular rail 10.

[0019] The balance weight 31 is connected to the slide base 20 via a rope 32. The cushion belt 40 is mounted on and around the inner annular surface of the annular rail 10. Specifically, the cushion belt 40 is mounted on and around the inner surface of the main panel 11 of the annular rail 10. With further reference to FIG. 4, specifically, each extending panel 12 of the annular rail 10 further has an outer surface. The annular rail 10 further has a first mounting end 10A, a second mounting end 10B, multiple protruding stops 15, two locking hooks 16, and two resilient elements 17. The second mounting end 10B of the annular rail 10 is selectively mounted around the first mounting end 10A of the annular rail 10. The protruding stops 15 are separately formed on the outer surfaces of the extending panels 12, are arranged in rows, and are
disposed adjacent to the first mounting end 10A of the annular rail 10. The locking hooks 16 are respectively mounted pivotally on the outer surfaces of the extending panels 12 and are disposed adjacent to the second mounting end 10B of the annular rail 10. Each locking hook 16 selectively hooks one of the protruding stops 15. The resilient elements 17 are respectively mounted between the locking hooks 16 and the extending panels 12 of the annular rail 10. Each resilient element 17 has two ends respectively abutting a corresponding locking hook 16 and a corresponding extending panel 12. When the second mounting end 10B of the annular rail 10 is mounted around the first mounting end 10A of the annular rail 10 and the locking hooks 16 hook the protruding stops 15, the annular rail 10 is circular.

[0020] More specifically, the annular rail 10 is formed by connecting multiple connecting rail sections 103, a first mounting rail section 101, and a second mounting rail section 102. The connecting rail sections 103 are pivotally connected to each other in series to form an arced rail having two ends. Each connecting rail section 103 is an arc. The first mounting rail section 101 is pivotally connected to one of the ends of the arced rail. The second mounting rail section 102 is pivotally connected to the other end of the arced rail and is selectively mounted around the first mounting rail section 101. The protruding stops 15 of the annular rail 10 are formed on the first mounting rail section 101. The locking hooks 16 and the resilient elements 17 are mounted on the second mounting rail section 102.

[0021] When the waist exercise device is in use, the annular rail 10 is worn on the waist of the user 50. As the user 50 twists his waist and moves his hips, the balance weight 31 is flung to revolve around the annular rail 10. Accordingly, the slide base 20 is driven by the balance weight 31 via the rope 32 and slides along the annular recess 14 of the annular rail 10. The user 50 exercises to keep the slide base 20 and the balance weight 31 revolving around the annular rail 10 such that muscles in the waist, the abdomen, and the hips are trained and strengthened.

[0022] The waist exercise device as described has the following advantages. Since the annular rail 10 is worn and fastened to the waist of the user 50, the annular rail 10 does not repeatedly press against the waist and the abdomen of the user 50 when in use. Consequently, exercising with the waist exercise device of the present invention does not cause damage to muscles in the waist, the abdomen, and the hip, does not injure the spine, and is safe. Moreover, with the cushion belt 40 abutting the waist of the user 50, the annular rail 10 does not press hard upon the user 50. The user 50 can wear the waist exercise device in a comfortable manner.

[0023] Even though numerous characteristics and advantages of the present invention have been set forth in the foregoing description, together with details of the structure and features of the invention, the disclosure is illustrative only. Changes may be made in the details, especially in matters of shape, size, and arrangement of parts within the principles of the invention to the full extent indicated by the broad general meaning of the terms in which the appended claims are expressed.

What is claimed is:

1. A waist exercise device comprising an annular rail being circular; a slide base slidably mounted on and selectively orbiting around the annular rail; and a balance weight connected to the slide base via a rope.

2. The waist exercise device as claimed in claim 1, wherein the annular rail has a main panel being annular and having an upper peripheral edge, a lower peripheral edge, and an outer surface; two extending panels respectively formed around and protruding from the upper peripheral edge and the lower peripheral edge of the main panel and radially extending outwardly, and each extending panel having an outer peripheral edge; two retaining panels respectively formed around and protruding from the outer peripheral edges of the extending panels, and each one of the retaining panels extending toward the other retaining panel; and an annular recess defined between the extending panels; and the slide base is slidably mounted in the annular recess of the annular rail and has two lateral surfaces respectively corresponding to the extending panels of the annular rail; and multiple inner rollers rotatably mounted on the lateral surfaces of the slide base, and each inner roller disposed between the main panel and a corresponding one of the extending panels.

3. The waist exercise device as claimed in claim 2, wherein the annular rail further has a gap defined between the retaining panels of the annular rail; the slide base further has a longitudinal surface corresponding to the gap of the annular rail; and multiple outer rollers rotatably mounted on the longitudinal surface of the slide base and disposed between the retaining panels of the annular rail.

4. The waist exercise device as claimed in claim 2, wherein each extending panel of the annular rail further has an outer surface; the annular rail further has a first mounting end; a second mounting end selectively mounted around the first mounting end of the annular rail; multiple protruding stops separately formed on the outer surfaces of the extending panels, arranged in rows, and disposed adjacent to the first mounting end of the annular rail; two locking hooks respectively mounted pivotally on the outer surfaces of the extending panels and disposed adjacent to the second mounting end of the annular rail, and each locking hook selectively hooking one of the protruding stops; and two resilient elements respectively mounted between the locking hooks and the extending panels of the annular rail, and each resilient element having two ends respectively abutting a corresponding locking hook and a corresponding extending panel.

5. The waist exercise device as claimed in claim 3, wherein each extending panel of the annular rail further has an outer surface; the annular rail further has a first mounting end; a second mounting end selectively mounted around the first mounting end of the annular rail;
multiple protruding stops separately formed on the outer surfaces of the extending panels, arranged in rows, and disposed adjacent to the first mounting end of the annular rail;
two locking hooks respectively mounted pivotally on the outer surfaces of the extending panels and disposed adjacent to the second mounting end of the annular rail, and each locking hook selectively hooking one of the protruding stops; and
two resilient elements respectively mounted between the locking hooks and the extending panels of the annular rail, and each resilient element having two ends respectively abutting a corresponding locking hook and a corresponding extending panel.

6. The waist exercise device as claimed in claim 4, wherein the annular rail is formed by connecting multiple connecting rail sections, a first mounting rail section, and a second mounting rail section, wherein the connecting rail sections are pivotally connected to each other in series to form an arced rail having two ends, and each connecting rail section is an arc; the first mounting rail section is pivotally connected to one of the ends of the arced rail; and the second mounting rail section is pivotally connected to the other end of the arced rail and is selectively mounted around the first mounting rail section;
the protruding stops of the annular rail are formed on the first mounting rail section; and the locking hooks and the resilient elements are mounted on the second mounting rail section.

7. The waist exercise device as claimed in claim 5, wherein the annular rail is formed by connecting multiple connecting rail sections, a first mounting rail section, and a second mounting rail section, wherein the connecting rail sections are pivotally connected to each other in series to form an arced rail having two ends, and each connecting rail section is an arc; the first mounting rail section is pivotally connected to one of the ends of the arced rail; and the second mounting rail section is pivotally connected to the other end of the arced rail and is selectively mounted around the first mounting rail section;
the protruding stops of the annular rail are formed on the first mounting rail section; and the locking hooks and the resilient elements are mounted on the second mounting rail section.

8. The waist exercise device as claimed in claim 1, wherein the annular rail further has an inner annular surface; and the waist exercise device further comprises a cushion belt mounted on and around the inner annular surface of the annular rail.

9. The waist exercise device as claimed in claim 2, wherein the annular rail further has an inner annular surface; and the waist exercise device further comprises a cushion belt mounted on and around the inner annular surface of the annular rail.

10. The waist exercise device as claimed in claim 3, wherein the annular rail further has an inner annular surface; and the waist exercise device further comprises a cushion belt mounted on and around the inner annular surface of the annular rail.