Wearable exercise device for foot stretching

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ABSTRACT

A wearable exercise device for foot stretching is disclosed. The wearable exercise device serves to stretch and thereby train strength of muscles in legs and foot soles, and to improve users' balancing ability. The wearable exercise device has a stepping plane at top for a user foot to step thereon, a convex curved surface at bottom, and one or more binding bells attached to laterals of the wearable exercise device for fixing the user foot on the stepping plane so as to allow different areas of the foot sole to contact the stepping plane; thereby stretching and training legs and foot soles differently. When wearing the exercise device, a user may walk to improve the strength of the muscles in legs and foot soles, or he/she may just stand to stretch the muscle clusters of legs and foot soles.
WEARABLE EXERCISE DEVICE FOR FOOT STRETCHING

BACKGROUND OF THE INVENTION

[0001] 1. Technical Field

The present invention relates to exercise devices, and more particularly, to a wearable exercise device for foot stretching that exercises and trains muscle clusters of legs and foot soles.

[0002] 2. Description of Related Art

Various muscle clusters in human body can be enriched and strengthened to support improved movement speed and explosive force through continuous exercise that gives loads that stimulate muscle contraction.

[0003] While appropriate exercise is proven useful to stimulate muscle contraction and thereby improve explosive force, doing exercise excessively, or with overexertion and improper posture may lead to muscle hypertonicity and bring about clear soreness to the exerciser. In such a case, although rest and proper massage may mitigate the soreness, it is more important to stretch the tightness, so the soreness can be truly removed.

[0004] People having weak muscle clusters of legs and foot soles, when doing strenuous exercise intensively or exercising with overexertion for long, can feel tightness and soreness. At this time, massage may be applied to mitigate the soreness, and muscle stretching devices may be used to stretch the legs and foot soles and release the tightened muscles. After the legs and foot soles are stretched, relaxed and restored, appropriately weight training may be conducted to reach balanced muscle concentration.

[0005] However, the existing devices for stretching and training muscles of legs and foot soles are bulky and therefore limit the place where training and exercise can be performed. This is inconvenient to busy modern people. In addition, children today often lack exercise. Since some of their sole muscles are less used, acquiring flat foot deformity is likely to happen. Although such acquired deformity may be cured through proper training for sole muscles, there is currently not a proper and convenient device for this purpose.

SUMMARY OF THE INVENTION

[0006] In view of the inconveniences related to the existing bulky stretching devices and exercise devices, the inventor has developed a portable exercise device for allowing users to stretch and train muscles of legs and foot soles anytime and anywhere.

[0007] According to the present invention, a wearable exercise device for foot stretching serves to stretch and thereby train strength of muscles in legs and foot soles, and to improve users’ balancing ability. The wearable exercise device has a stepping plane at top for a user foot to step thereon, a convex curved surface at bottom, and one or more binding belts attached to laterals of the wearable exercise device for fixing the user foot on the stepping plane so as to allow different areas of the foot sole to contact the stepping plane, thereby stretching and training legs and foot soles differently. When wearing the exercise device, a user may walk to improve the strength of the muscles in legs and foot soles, or he/she may just stand to stretch the muscle clusters of legs and foot soles.

[0008] One objective of the present invention wearable exercise device is to make the wearable exercise device compact, light and portable, so as to allow users to use it anytime and anywhere. When wearing it and standing still, a user may bend his/her legs and foot soles in different angles so as to stretch the muscle clusters of legs and foot soles.

[0009] Another objective of the present invention is to allow users to walk on the wearable exercise device, so as to train the muscle clusters of legs and foot soles.

BRIEF DESCRIPTION OF THE DRAWINGS

[0010] The invention as well as a preferred mode of use, further objectives and advantages thereof will be best understood by reference to the following detailed description of illustrative embodiments when read in conjunction with the accompanying drawings, wherein:

[0011] FIG. 1 depicts a wearable exercise device for foot stretching according to the present invention;

[0012] FIG. 2 is a first applied view of the wearable exercise device for foot stretching;

[0013] FIG. 3 is a second applied view of the wearable exercise device for foot stretching;

[0014] FIG. 4 is a third applied view of the wearable exercise device for foot stretching;

[0015] FIG. 5 provides an alternative embodiment of the wearable exercise device for foot stretching according to the present invention.

DETAILED DESCRIPTION OF THE INVENTION

[0016] FIG. 1 depicts a wearable exercise device for foot stretching according to the present invention. As shown, the wearable exercise device 10 primarily has a stepping plane 101 at top for a user foot to step thereon, a convex curved surface 102 at bottom, and one or more binding belts 20 attached to laterals of the wearable exercise device 10 for fixing the user foot on the stepping plane 101.

[0017] FIG. 2 is a first applied view of the wearable exercise device for foot stretching. As shown, a user foot wearing the wearable exercise device 10 has its front part supported by the stepping plane 101 of the wearable exercise device 10 and tied in position by the two binding belts 20. The user at this time has his/her heel placed on the ground so the convex curved surface 102 of the wearable exercise device 10 swings to a position where the user can stand with balance. This makes the user’s tip toe tilted upward and in turn shifts the user’s gravity to the heel, thereby stretching and relaxing the muscle clusters of legs and foot soles. When the user walks on the wearable exercise device 10, he/she can train the muscle clusters of legs and foot soles.

[0018] FIG. 3 is a second applied view of the wearable exercise device for foot stretching. As shown, a user foot wearing the wearable exercise device 10 has its rear part, including the heel, supported by the stepping plane 101 of the wearable exercise device 10 and tied in position by the two binding belts 20. The user at this time has his/her tip toe placed on the ground so the convex curved surface 102 of the wearable exercise device 10 swings to a position where the user can stand with balance. This makes the user’s tip toe tilted downward and in turn shifts the user’s gravity to the tip toe, thereby stretching and relaxing the muscle clusters of legs and foot soles. When the user walks on the wearable exercise device 10, he/she can train the muscle clusters of legs and foot soles.

[0019] FIG. 4 is a third applied view of the wearable exercise device for foot stretching. As shown, a user foot wearing the wearable exercise device 10 has its middle part supported...
by the stepping plane 101 of the wearable exercise device 10 and tied in position by the two binding belts 20. The user at this time has his/her gravity focused on the center of the convex curved surface 102 of the wearable exercise device 10, and he/she can stand or walk around to train his/her balancing ability.

![FIG. 5](image.png) FIG. 5 provides an alternative embodiment of the wearable exercise device for foot stretching. As shown, one or more assistive pads 30 may be alternatively adhered to the stepping plane 101 of the wearable exercise device 10. For example, a thick pad can add the overall thickness of the wearable exercise device 10, so as to increase the intensity of food stretching and training. Alternatively, a lateral wedge is helpful to rectifying treatment for bowleg and provides the user wearing the wearable exercise device 10 with stableness and comfort.

![FIG. 6](image.png) The assistive pad 30 is adhered to the stepping plane 101 of the wearable exercise device 10 by combining matching reclosable fastener pieces provided on the stepping plane 101 of the wearable exercise device 10 and an attaching surface of the assistive pad 30, respectively. This allows easy replacement of the assistive pad 30.

![FIG. 7](image.png) Training with the disclosed wearable exercise device 10 in the ways described above can effectively improve the muscle strength of the legs and foot soles and enhance balancing ability. Thus, the disclosed wearable exercise device 10 is particularly useful to rectify acquired flat foot deformity.

![FIG. 8](image.png) The present invention has been described with reference to the preferred embodiments and it is understood that the embodiments are not intended to limit the scope of the present invention. Moreover, as the contents disclosed herein should be readily understood and can be implemented by a person skilled in the art, all equivalent changes or modifications which do not depart from the concept of the present invention should be encompassed by the appended claims.

What is claimed is:

1. A wearable exercise device for foot stretching, comprising a stepping plane at top for a user foot to step thereon, a convex curved surface at bottom, and one or more binding belts attached to laterals of the wearable exercise device for fixing the user foot on the stepping plane.

2. A wearable exercise device for foot stretching, comprising a stepping plane at top for a user foot to step thereon, a convex curved surface at bottom, and one or more binding belts attached to laterals of the wearable exercise device for fixing the user foot on the stepping plane, wherein one or more assistive pads are alternatively adhered to the stepping plane of the wearable exercise device.

3. The wearable exercise device for foot stretching of claim 2, wherein the assistive pad is adhered to the stepping plane of the wearable exercise device by combining matching reclosable fastener pieces provided on the stepping plane of the wearable exercise device and an attaching surface of the assistive pad, respectively.

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