A turn and burn exercise device comprising a frame assembly (including a periphery ring; and a plurality of frame rails); a rotation assembly (including at least one bushing and at least one bearing); a sphere having an inner volume; an inner surface; and an outer surface; and at least one ball. The turn and burn exercise device when operated during an exercise routine may or may not contact a ground surface. The turn and Burn exercise device allows users to burn calories and fat at relatively consistent rates throughout workout sessions. The longer the ball is in motion, the more calories and fat users may burn. The ball may also be used on the floor for push-ups and extensive core workouts. Different amounts of weight can be applied to the turn and burn exercise device as necessary to achieve desired results.
TURN AND BURN EXERCISE SYSTEMS
CROSS-REFERENCE TO RELATED APPLICATION

[0001] The present application is related to and claims priority from prior provisional application Ser. No. 61/410,996, filed Nov. 8, 2010 which application is incorporated herein by reference.

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BACKGROUND OF THE INVENTION

[0003] The following includes information that may be useful in understanding the present invention(s). It is not an admission that any of the information provided herein is prior art, or material, to the presently described or claimed inventions, or that any publication or document that is specifically or implicitly referenced is prior art.

[0004] 1. Field of the Invention
[0005] The present invention relates generally to the field of exercise and more specifically relates to exercise devices.

[0006] 2. Description of the Related Art
[0007] Many individuals in modern society exercise to enhance or maintain physical fitness and overall health and wellness. Exercise may be performed for strengthening muscles and the cardiovascular system, honing athletic skills, weight loss or maintenance, as well as for the purpose of enjoyment. Frequent physical exercise boosts the immune system, and helps prevent various diseases, obesity, and depression. Fitness centers and public gyms may be available for individuals to exercise in and may offer a host of equipment; however these facilities may be expensive to gain membership in and are not typically located near the individual’s residence, making them potentially difficult to work into the exerciser’s schedule/routine.

[0008] As a result many consumers enjoy exercising in the privacy and comfort of their own homes. However, achieving a full-body workout at home may be difficult, and may require the use of several different types of equipment for targeting different areas of the body. Purchasing pieces of equipment for every area of the body can also be expensive, and may not be practical for many consumers due to space limitations. Finding places to store multiple pieces of equipment can also be a hassle. A readily storable multi-purpose exercising device is needed.

[0009] Various attempts have been made to solve the above-mentioned problems such as those found in U.S. Pat. Nos. 6,514,179; 6,500,102; 6,053,846; 4,150,580; 2006/0073952; and 6,527,675. This art is representative of exercise devices. None of the above inventions and patents, taken either singly or in combination, is seen to describe the invention as claimed.

[0010] Ideally, an exercise device should be safe to use, user-friendly, multi-purpose to allow a host of exercises to be performed with it and, yet would operate reliably and be manufactured at a modest expense. Thus, a need exists for a reliable exercise system to be readily usable, easily storable and to avoid the above-mentioned problems.

BRIEF SUMMARY OF THE INVENTION

[0011] In view of the foregoing disadvantages inherent in the known exercise device art, the present invention provides a novel turn and burn exercise system. The general purpose of the present invention, which will be described subsequently in greater detail is to provide a readily storable, yet effective and efficient multi-purpose exercising device. The turn and burn exercise system allows users to burn calories and fat at consistent rates throughout their workout sessions.

[0012] The turn and burn exercise system as disclosed herein comprises: a turn and burn exercise device comprising a frame assembly (including a periphery ring; and a plurality of frame rails); a rotation assembly (including at least one bushing and at least one bearing); a sphere (having an inner volume; an inner surface; and an outer surface); and at least one ball. The exercise device when operated during an exercise routine may or may not contact a ground surface, depending on the exercise and particular fitness application.

[0013] The frame assembly is supported about the sphere via the rotation assembly. The periphery ring provides a handle that is hand engageable, with the periphery ring located an offset-distance from the outer surface of the sphere (such that there is room for the hand to engage the device.) The peripheral ring comprises about 1½ inch tubing in preferred embodiments. The peripheral ring may further comprise a grippable surface finish and is a (substantially) oval-shaped handle in most embodiments.

[0014] The frame rails mounting-ly-receive the rotational assembly; the bushing(s) and the bearing(s) in combination allowing the sphere to rotate in relation to the frame assembly. Further, the bearing of the rotation assembly preferably comprises ball bearings to minimize friction. The frame rails comprise a flared portion wherein the flared portion allows the frame rails to circumvent the sphere, the flared portion with a means for receiving a fastener therethrough to connect the frame assembly to the sphere. The sphere may have receiving means for mounting the bushings therein or thereon, or studs may be welded to the sphere (sphere comprises ferrous material in this particular embodiment) and washers/nuts or the like be used to rotatably secure it to the frame assembly. In certain embodiments the sphere may be sealable to contain a fluid other than air (water or other liquid or solids.)

[0015] The ball in preferred embodiments comprises an external rubber coating to minimize sound propagation and may be weighted in or out of balance. The ball may preferably comprise a ferrous material with a density of between about 7,750 and 8,050 kg/m³. The ball is located within the inner volume of the sphere such that the ball can be rotated on the inner surface in relation to the sphere. An action of rotating the ball about the inner surface in relation to the sphere provides an exercise whereby at least one user is able to burn calories. In this way the present invention may be used to exercise. The device may also be used to exercise in contact with the ground as explained subsequently.

[0016] A kit is embodied herein for the turn and burn exercise systems comprising a plurality of balls with each ball comprising a different weight; the exercise device (which the balls may be inserted within as per user-preference); and a set of exercise instructions.
A method of using an exercise device preferably comprising the steps of: gripping the exercise device via a periphery ring serving as a handle; and rolling a ball about an interior of a sphere to burn calories. In this method the device doesn’t touch the ground surface such as a floor. In another method of use the exercise device is in contact with a ground surface such that a user is able to put weight of the user on the exercise device to perform at least one exercise. The balls may be interchanged in certain embodiments for progressive difficulty (increased resistance) as the user manipulates the exercise device.

The present invention holds significant improvements and serves as a turn and burn exercise system. For purposes of summarizing the invention, certain aspects, advantages, and novel features of the invention have been described herein. It is to be understood that not necessarily all such advantages may be achieved in accordance with any one particular embodiment of the invention. Thus, the invention may be embodied or carried out in a manner that achieves or optimizes one advantage or group of advantages as taught herein without necessarily achieving other advantages as may be taught or suggested herein. The features of the invention which are believed to be novel are particularly pointed out and distinctly claimed in the concluding portion of the specification. These and other features, aspects, and advantages of the present invention will become better understood with reference to the following drawings and detailed description.

**BRIEF DESCRIPTION OF THE DRAWINGS**

The figures which accompany the written portion of this specification illustrate embodiments and method(s) of use for the present invention, turn and burn exercise systems, constructed and operative according to the teachings of the present invention.

**FIG. 1** shows a top perspective view illustrating a turn and burn exercise device and the turn and burn exercise device in an in-use condition (contacting the floor) according to an embodiment of the present invention.

**FIG. 2** is a top perspective view illustrating the turn and burn exercise device having a weighted ball contained within an outer ball (that is hollow) and the turn and burn exercise device in another in-use condition (user-upright) according to an embodiment of the present invention of FIG. 1.

**FIG. 3** is a top perspective view illustrating the turn and burn exercise device with a gripped circumferential ring according to an embodiment of the present invention of FIGS. 1 & 2.

**FIG. 4** is a top perspective view illustrating a rotation assembly (bearings/bushings) of the turn and burn exercise device according to an embodiment of the present invention of FIGS. 1 & 3.

**FIG. 5** is a side perspective view illustrating the turn and burn exercise device and a top view of a frame rail according to an embodiment of the present invention of FIGS. 1-4.

The various embodiments of the present invention will hereinafter be described in conjunction with the appended drawings, wherein like designations denote like elements.

**DETAILED DESCRIPTION**

As discussed above, embodiments of the present invention relate to an exercise device and more particularly to turn and burn exercise device and system 100 as used to improve the fitness of users 190. Turn and burn exercise device and system 100 provides user 190 with an efficient and convenient method for consistently burning calories and fat while exercising.

Referring to the drawings by numerals of reference there is shown in FIG. 1, a top perspective view illustrating turn and burn exercise device 110 and turn burn exercise device 110 in an in-use condition (contacting the floor) according to an embodiment of the present invention.

Turn and burn exercise system 100 preferably comprises: turn and burn exercise device 110 comprising frame assembly 120: rotation assembly 140; sphere 160 (having inner volume 164, inner surface 168, and outer surface 172); and at least one ball 180. Frame assembly 120 preferably includes periphery ring 124 and plurality of frame rails 128. Rotation assembly 140 preferably includes at least one bushing 144 and at least one bearing 148 (two of each located on opposing sides as shown in preferred embodiments.) Frame assembly 120 may be supported about sphere 160 via rotation assembly 140.

Periphery ring 124 on frame assembly 120 provides handle 126 that is hand engageable and may be grooved for improved gripping. Handle 126 may be (substantially) oval-shaped such that it doesn’t comprise sharp edges. Periphery ring 124 is preferably located an offset-distance from outer surface 172 of sphere 160. Frame rails 128 mounting-receive rotational assembly 140, with bushing 144 and bearing 148 in combination which allow sphere 160 to rotate in relation to frame assembly 120. Other equivalent rotating means may also be used and still be considered within the scope of the present invention.

Ball 180 is preferably located within inner volume 164 of sphere 160 such that ball 180 can be rotated on inner surface 168 (rolled) in relation to sphere 160. An action of rotating (rolling) ball 180 about inner surface 168 in relation to sphere 160 provides an exercise whereby at least one user 190 is able to burn calories. The longer that user 190 is able to keep ball 180 in motion, the more calories and fat user 190 may burn.

Sphere 160, on turn and burn exercise device 110, when operated during an exercise routine may contact a ground surface such as a floor (as shown.) Exercise device 110 is able to support a weight of user 190 (relative hand positioning shown for in-use condition 106.) Other hand positioning are available (due to oval-shape) depending on user-preference for other exercises such as alluded to in FIG. 2. Sphere 160 may comprise a rubberized coating on outer surface 172 of sphere 160 such that the ground surface and sphere 160 are protected from contact-wear, other embodiments may not comprise any finish or different finishes. Exercises that may be performed using turn and burn exercise device 110 may include pushups and the like. Upon reading this specification, it should be appreciated that, under appropriate circumstances, considering such issues as user preferences, design preference, structural requirements, marketing preferences, cost, available materials, technological advances, etc., other exercises performed using turn and burn exercise device such as, for example, pikes; ab curls; dolphin poses; crunches, etc., may be sufficient. In this way the present invention is multi-functional.

Referring now to FIG. 2 and FIG. 5, FIG. 2 showing a top perspective view illustrating turn and burn exercise device 110 having ball 180 that is weighted contained within
an outer ball (sphere 160 that is hollow) and turn and burn exercise device 110 in another in-use condition (user-upright) and FIG. 5, a side view of turn and burn exercise device 110 and a top view of one of frame rail 128 to indicate a relative profile both according to an embodiment of the present invention.

[0033] Turn and burn exercise device 110 when operated during an exercise routine may not contact a ground surface in all exercises and/or embodiments (unlike in FIG. 1.) Upon reading this specification, it should be appreciated that, under appropriate circumstances, considering such issues as user preferences, design preference, structural requirements, marketing preferences, cost, available materials, technological advances, etc., other non-floor contact exercises such as, for example, curls, presses, clockwise-rotation/counter-clockwise rotation exercises, etc., may be sufficient.

[0034] Sphere 160 may comprise a fluid (air, liquid or solid) substantially contained within inner volume 164. The fluid therein provides a resistance to movement of ball 180. Overcoming the resistance to the air, to gravity, to maintaining momentum of ball 180 all provide exercising means whereby calories may be expended. Outer surface 172 of sphere 160 may comprise an access opening (not shown, but may be slidably incorporated into contour of outer surface 172) such that ball 180 can be removed and another ball of a different weight may be inserted for use. In this way different amounts of weight can be applied to turn and burn exercise device 110 as necessary to achieve desired results such as ball 180 that is heavier provides more resistance to user 190 when performing an exercise as compared to ball 180 that is lighter.

[0035] Ball 180 comprises an external rubber coating in preferred embodiments to minimize sound propagation. Upon reading this specification, it should be appreciated that, under appropriate circumstances, considering such issues as user preferences, design preference, structural requirements, marketing preferences, cost, available materials, technological advances, etc., other coating arrangements such as, for example, plastic, foam, different types of rubber, etc., may be sufficient.

[0036] Ball 180 preferably comprises a ferrous material with a density of between about 7.750 and 8.050 kg/m³. Upon reading this specification, it should be appreciated that, under appropriate circumstances, considering such issues as user preferences, design preference, structural requirements, marketing preferences, cost, available materials, technological advances, etc., other materials such as, for example, steel, stainless steel, alloyed materials, non-ferrous materials, composites, plastics, etc., may also be sufficient for us in ball 180.

[0037] Ball 180 preferably comprises a smaller volume than sphere 160 such that ball 180 is able to rotate in an orbit about an artificial node located at a center of sphere 160, with ball 180 being able to travel on inner surface 168 within inner volume 164 of sphere 160. Ball 180 may or may not comprise a heavier weight than sphere 160. Ball 180 is weighted, and may or may not be balanced.

[0038] Referring now to frame rails 128; frame rails 128 preferably comprise flared portion 130 wherein flared portion 130 allows frame rails 128 to circumvent sphere 160 with flared portion 130 preferably providing a means for receiving fasteners 132 therethrough to connect frame assembly 120 to sphere 160 as shown in FIGS. 2 and 5.

[0039] Referring now to FIG. 3, a top perspective view illustrating turn and burn exercise device 110 with gripped circumferential ring 114 according to an embodiment of the present invention of FIGS. 1 & 2.

[0040] Peripheral ring 124 preferably comprises grippable surface finish 134 (also shown in FIG. 4). Grippable surface finish 134 may be included to prevent hands of user from slipping off this turn and burn exercise device 110 when in in-use condition 106, especially when slippery from sweat.) Grippable surface finish 134 may also comprise a rubberized material.

[0041] Peripheral ring 124 also comprises about 1¼ inch (steel) tubing in preferred embodiments (more or less in other embodiments.) Rotation assembly 140 comprises bearing(s) 148 with bearing(s) 148 preferably comprising ball bearings. Upon reading this specification, it should be appreciated that, under appropriate circumstances, considering such issues as user preferences, design preference, structural requirements, marketing preferences, cost, available materials, technological advances, etc., other rotating (bearing) means such as, for example, roller bearings, fluid bearings, magnetic bearings, plain bearings or other non-bearing means for rotating, etc., may be sufficient.

[0042] Referring now to FIG. 4, a top perspective view illustrating rotation assembly 140 (bearings 148/bushings 144) of turn and burn exercise device 110 according to an embodiment of the present invention of FIGS. 1 & 3.

[0043] A kit may comprise a plurality of balls 180 with each ball 180 comprising a different weight; turn and burn exercise device 110; and a set of exercise instructions. The kit may be manufactured and provided for sale in a wide variety of sizes and shapes for a wide assortment of applications. Upon reading this specification, it should be appreciated that, under appropriate circumstances, considering such issues as design preference, user preferences, marketing preferences, cost, structural requirements, available materials, technological advances, etc., other kit contents or arrangements such as, for example, including more or less components, customized parts, different weight/exercise combinations, parts may be sold separately, etc., may be sufficient.

[0044] A method of using turn and burn exercise device 110 (method not shown) preferably comprises the steps of: step one gripping turn and burn exercise device 110 via a peripheral ring 124 serving as handle 126; and rolling ball 180 about an inner surface 168 of sphere 160 to burn calories. In this method the device doesn’t touch the ground surface such as a floor. In another method of use turn and burn exercise device 110 is in contact with a ground surface such that user 190 is able to put weight of user 190 on turn and burn exercise device 110 to perform at least one exercise. Other weighted balls 180 may be used progressively if more or less resistance is desired.

[0045] It should be noted that the steps described in the method of use can be carried out in many different orders according to user preference. The use of “step of should not be interpreted as “step for”, in the claims herein and is not intended to invoke the provisions of 35 U.S.C. §112, ¶6. Upon reading this specification, it should be appreciated that, under appropriate circumstances, considering such issues as design preference, user preferences, marketing preferences, cost, structural requirements, available materials, technological advances, etc., other methods of use arrangements such as, for example, different orders within above-mentioned list, elimination or addition of certain steps, etc., may be sufficient.

[0046] The embodiments of the invention described herein are exemplary and numerous modifications, variations and
rearrangements can be readily envisioned to achieve substantially equivalent results, all of which are intended to be embraced within the spirit and scope of the invention. Further, the purpose of the foregoing abstract is to enable the U.S. Patent and Trademark Office and the public generally, and especially the scientist, engineers and practitioners in the art who are not familiar with patent or legal terms or phraseology, to determine quickly from a cursory inspection the nature and essence of the technical disclosure of the application.

What is claimed is new and desired to be protected by Letters Patent is set forth in the appended claims:

1. An exercise device comprising:
   a frame assembly including;
   a periphery ring; and
   a plurality of frame rails;
   a rotation assembly including;
   at least one bushing; and
   at least one bearing;
   a sphere having;
   an inner volume;
   an inner surface; and
   an outer surface; and
   at least one ball; and
   wherein said frame assembly is supported about said sphere via said rotation assembly;
   wherein said periphery ring provides a handle that is hand engageable, said periphery ring located an offset-distance from said outer surface of said sphere;
   wherein said frame rails mountingly-receive said rotational assembly, said bushing and said bearing in combination allowing said sphere to rotate in relation to said frame assembly;
   wherein said ball is located within said inner volume of said sphere such that said ball can be rotated on said inner surface in relation to said sphere; and
   wherein an action of rotating said ball about said inner surface in relation to said sphere provides an exercise whereby at least one user is able to burn calories.

2. The exercise device of claim 1 wherein said exercise device when operated during an exercise routine does not contact a ground surface.

3. The exercise device of claim 1 wherein said exercise device, when operated during another exercise routine said sphere of said exercise device contacts a ground surface.

4. The exercise device of claim 3 wherein said exercise device is able to support a weight of said user.

5. The exercise device of claim 4 wherein said sphere comprises a rubberized coating on said outer surface of said sphere such that said ground surface and said sphere are protected from contact-wear.

6. The exercise device of claim 2 wherein said sphere comprises a fluid contained within said inner volume, said fluid providing a resistance to movement of said ball.

7. The exercise device of claim 1 wherein said periphery ring comprises a grippable surface finish.

8. The exercise device of claim 1 wherein said outer surface of said sphere comprises an access opening such that said ball can be removed and another ball of a different weight inserted for use.

9. The exercise device of claim 2 wherein said ball comprises an external rubber coating to minimize sound propagation.

10. The exercise device of claim 9 wherein said ball comprises a ferrous material with a density of between about 7,750 and 8,050 kg/m³.

11. The exercise device of claim 7 wherein said peripheral ring comprises about 1 ½ inch tubing.

12. The exercise device of claim 1 wherein said bearing of said rotation assembly comprises ball bearings.

13. The exercise device of claim 1 wherein said frame rails comprise a flared portion wherein said flared portion allows said frame rails to circumvent said sphere.

14. The exercise device of claim 11 wherein said peripheral ring comprises an oval-shaped said handle.

15. The exercise device of claim 1 wherein said ball is weighted.

16. The exercise device of claim 2 wherein said ball comprises a smaller volume than said sphere such that said ball is able to rotate in an orbit about an artificial node located at a center of said sphere, said ball able to travel on said inside surface within said inner volume of said sphere.

17. An exercise system comprising:
   an exercise device comprising;
   a frame assembly including;
   a periphery ring; and
   a plurality of frame rails;
   a rotation assembly including;
   at least one bushing; and
   at least one bearing;
   a sphere having;
   an inner volume;
   an inner surface; and
   an outer surface; and
   at least one ball; and
   wherein said frame assembly is supported about said sphere via said rotation assembly;
   wherein said exercise device when operated during an exercise routine does not contact a ground surface;
   wherein said periphery ring provides a handle that is hand engageable, said periphery ring located an offset-distance from said outer surface of said sphere;
   wherein said frame rails mountingly-receive said rotational assembly, said bushing and said bearing in combination allowing said sphere to rotate in relation to said frame assembly;
   wherein said ball is located within said inner volume of said sphere such that said ball can be rotated on said inner surface in relation to said sphere; and
   wherein an action of rotating said ball about said inner surface in relation to said sphere provides an exercise whereby at least one user is able to burn calories.
wherein an action of rotating said ball about said inner surface in relation to said sphere provides an exercise whereby at least one user is able to burn calories.

18. The exercise system of claim 17 further comprising a kit wherein said kit comprises a plurality of said balls each of said balls comprising a different weight; said exercise device; and a set of exercise instructions.

19. A method of using an exercise device comprising the steps of:

   - gripping said exercise device via an oval-shaped periphery ring serving as a handle; and
   - rolling a ball about an interior of a sphere using resistance to burn calories.

20. The method of using an exercise device of claim 19 wherein said exercise device is in contact with a ground surface such that a user is able to put weight of said user on said exercise device to perform at least one exercise.

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