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(54) **MULTIFACETED EXERCISE SYSTEM**

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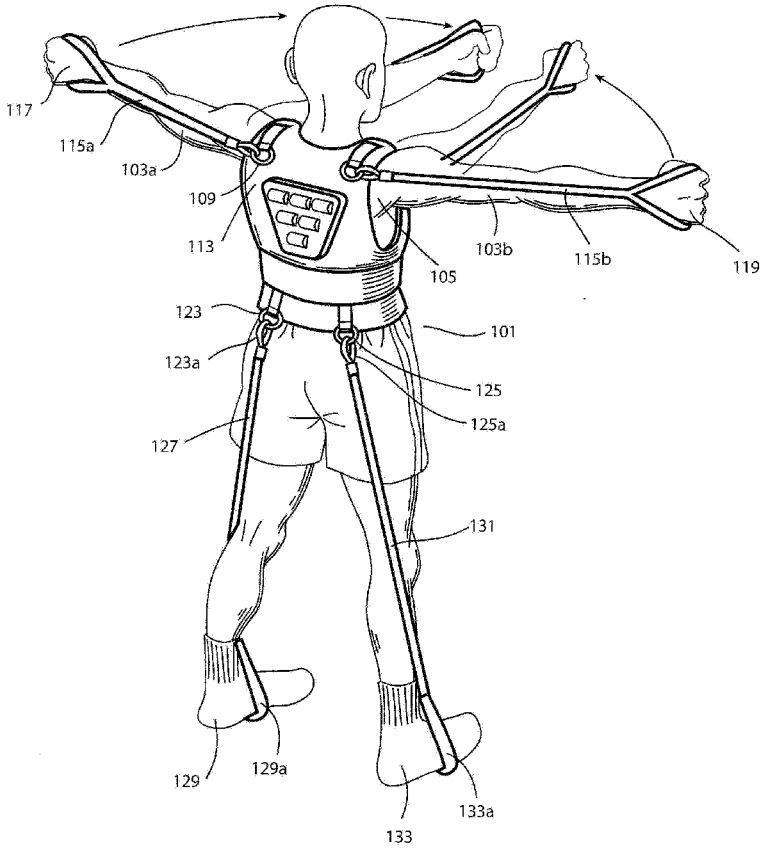
(57) **ABSTRACT**

A multifaceted exercise system is provided having several components, each capable of performing a different exercise. A vest worn by the exerciser has front segment and back segment, each segment having spaced apart O-rings and resistance bands secured by each O-ring adapted to be forced forward and laterally in order to exercise the chest. The back segment of the vest is provided with a panel member having roller receiving cavities each having fitted with a roller for performing a squatting exercise by moving the back panel member up and down a flat surface such as a wall. The back segment of the exercise device is also provided with a left O-ring and a right O-ring, a left resistance band having its upper end secured to the left O-ring and its lower end secured to the left foot, and a right resistance band having its upper end secured to the right O-ring and its lower end secured to the right foot. The exerciser can conduct abdominal exercises by removing the panel member from the back of the vest, placing it on a flat surface, and pushing and pulling the panel member using the hands of the exerciser.



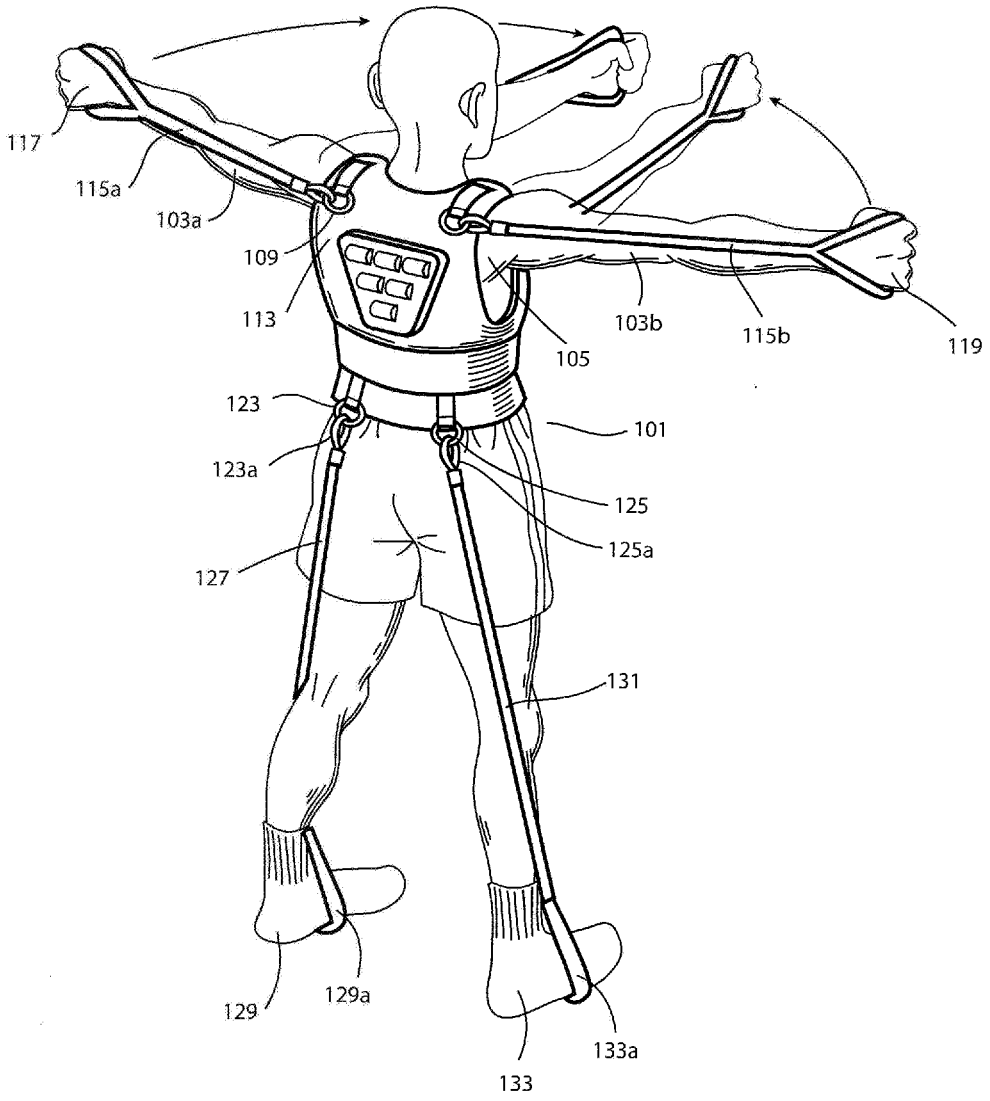

117
115a
103a
109
113
105
103b
115b
119
123
101
123a
125
125a
127
131
129
129a
133a
133

Fig. 1

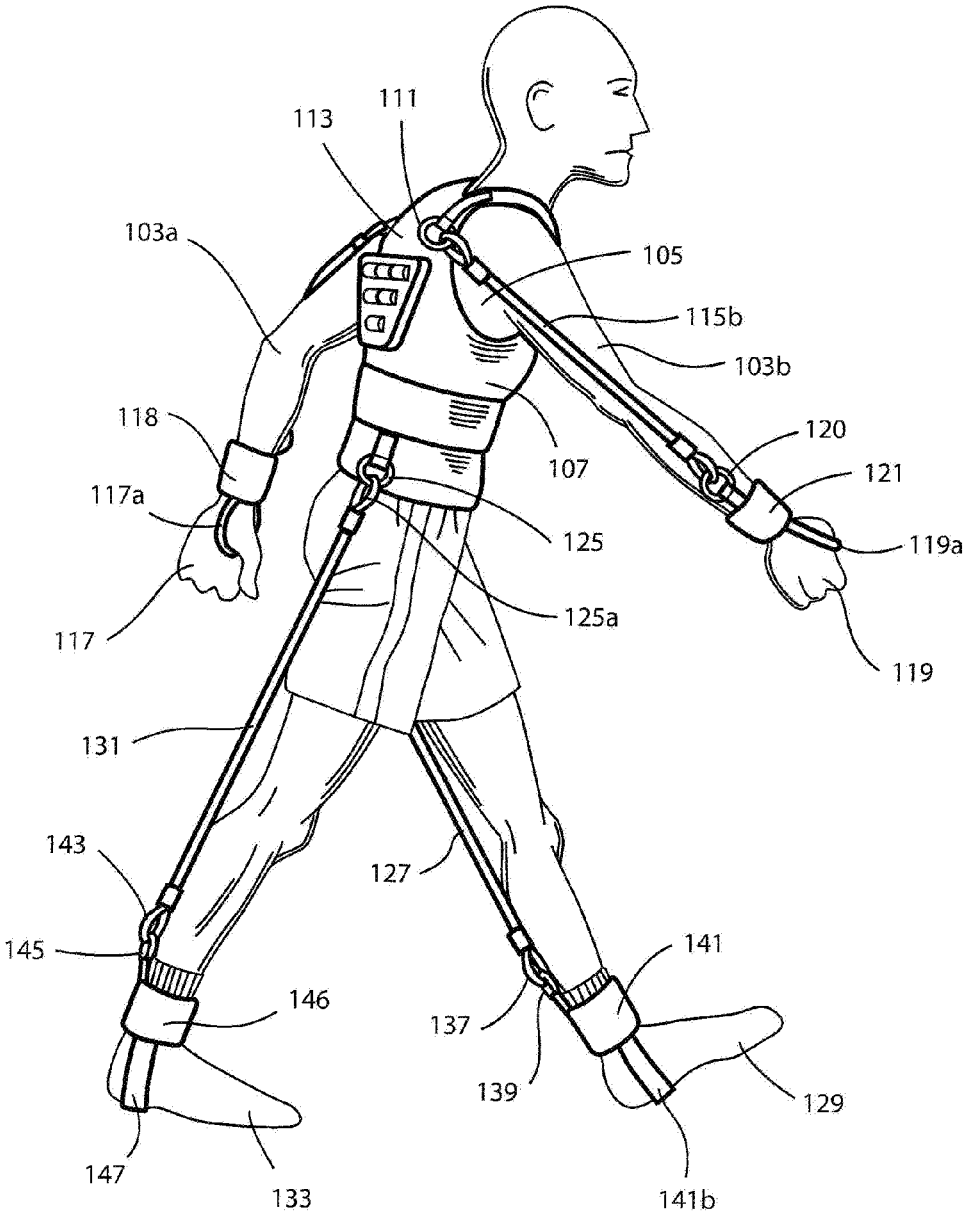

113
111
103a
105
115b
103b
118
120
107
121
117a
125
119a
125a
117
119
131
143
127
145
141
146
137
139
129
147
133
141b

Fig. 2

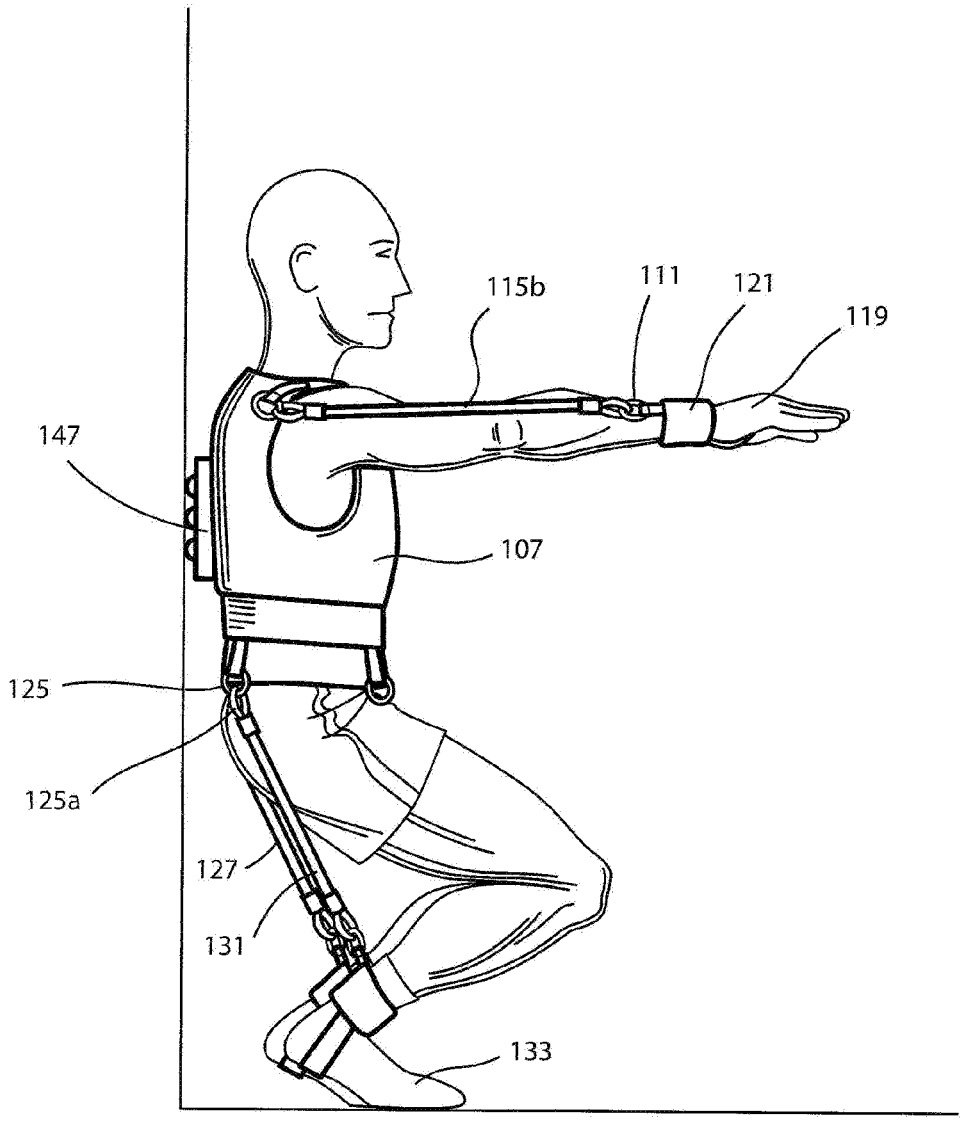


Fig. 3

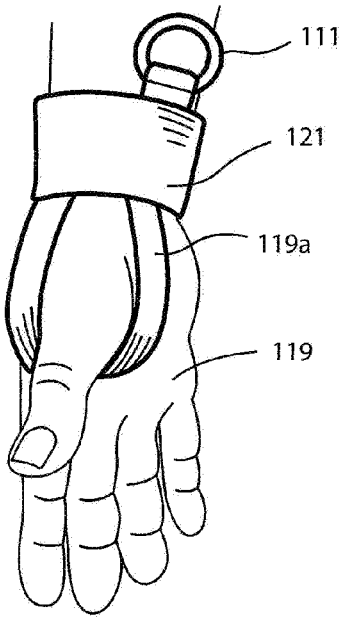


Fig. 4

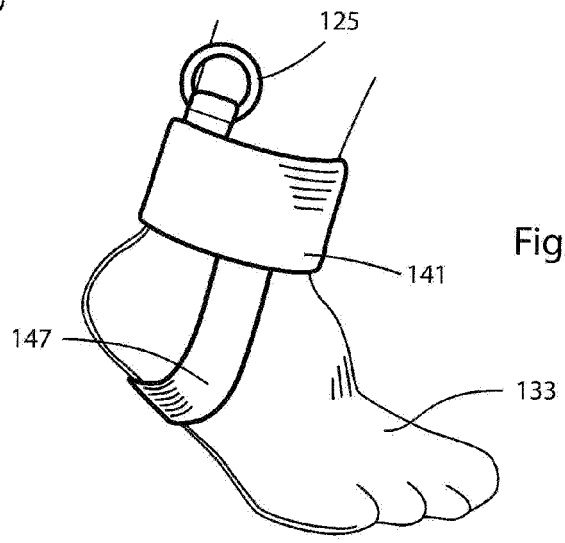


Fig. 5

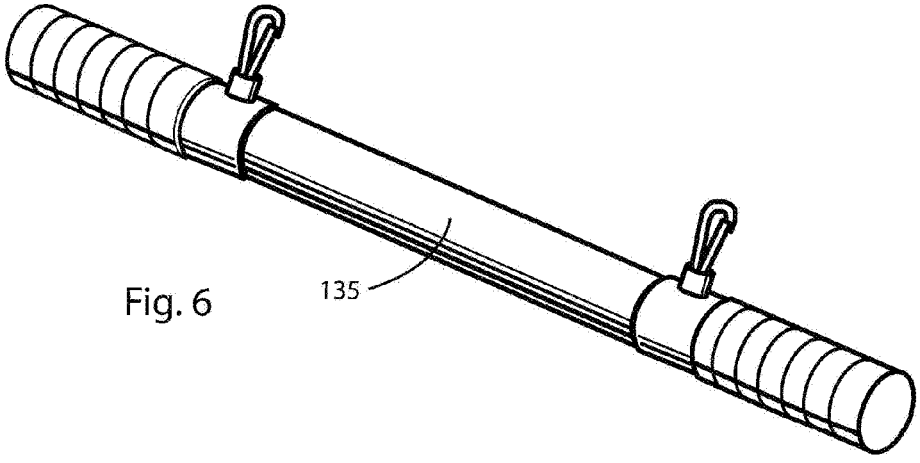


Fig. 6

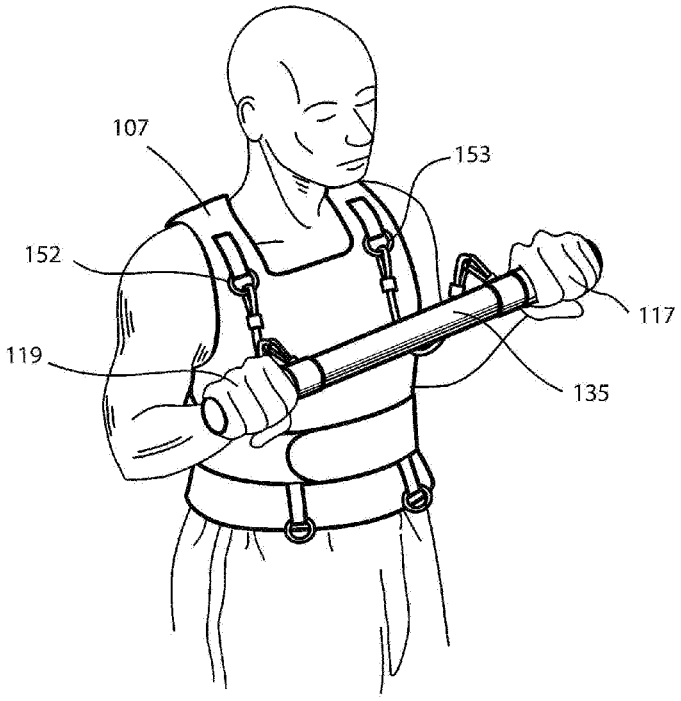


Fig. 7

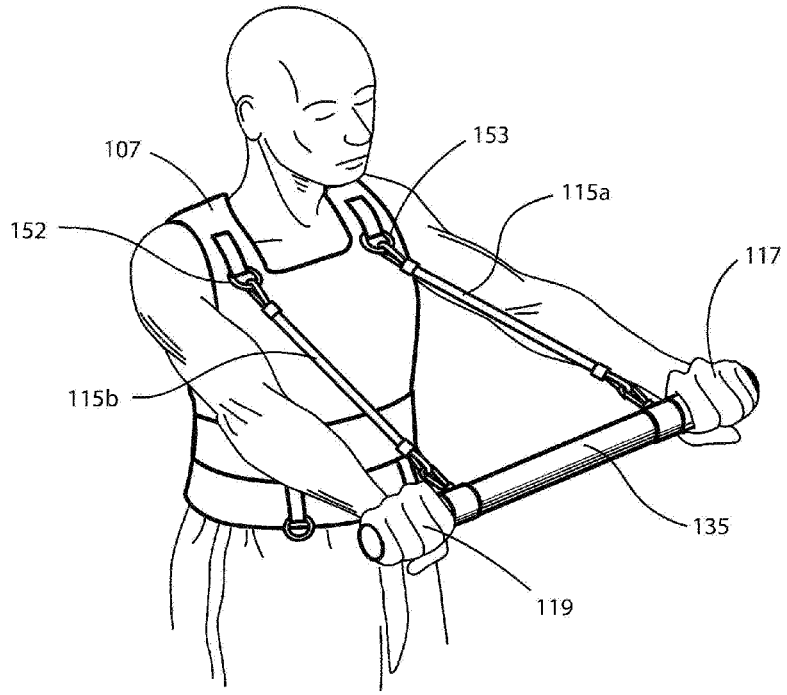


Fig. 8

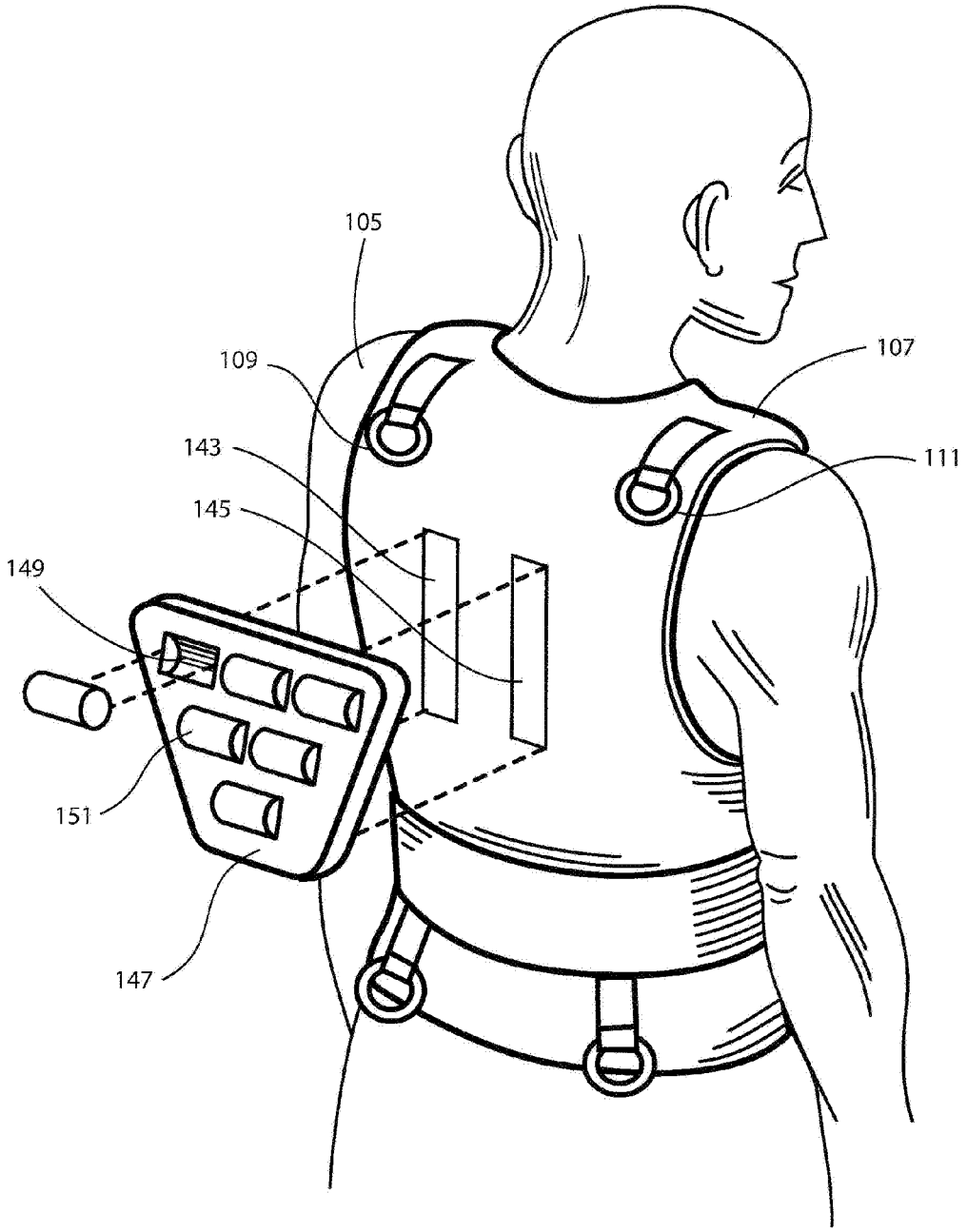


Fig. 9

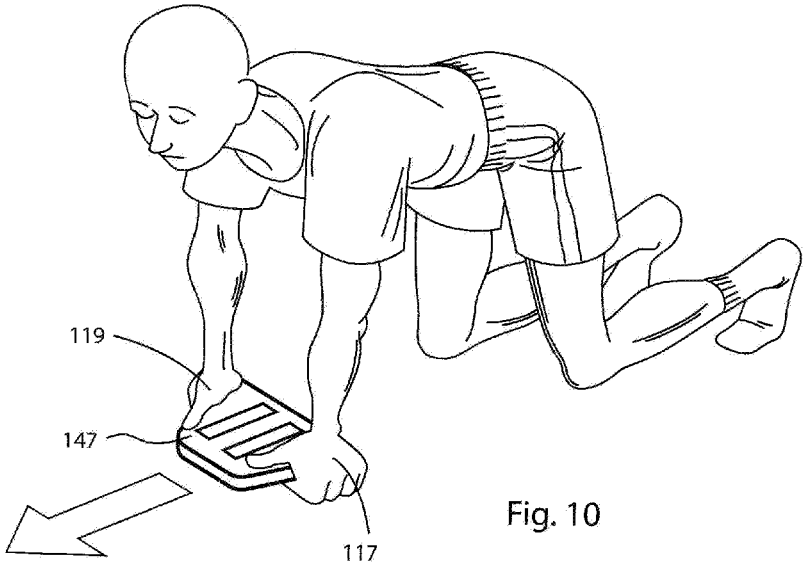


Fig. 10

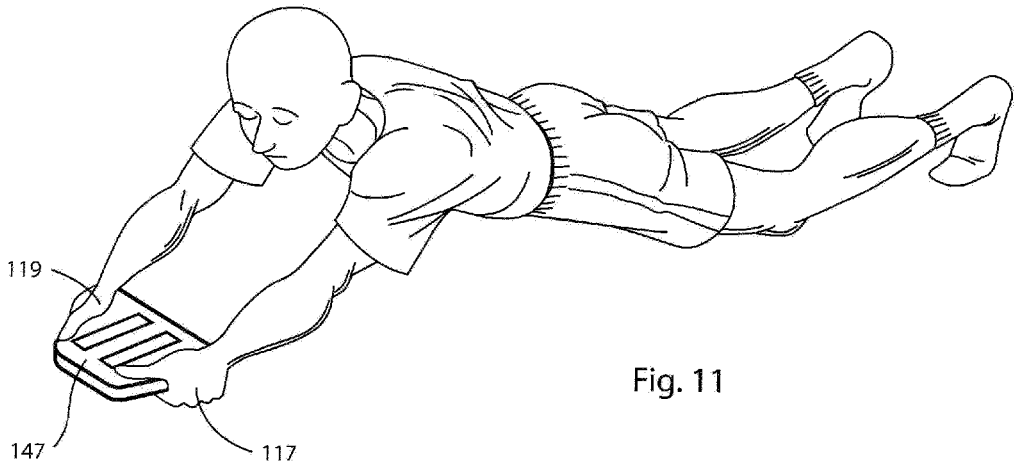


Fig. 11

MULTIFACETED EXERCISE SYSTEM

FIELD OF THE INVENTION

[0001] The present invention relates generally to a system for performing various exercises and is particularly related to a multifaceted exercise system having a combination of component parts which can be used to perform several aerobic and non-aerobic exercises at home or in a gym.

BACKGROUND OF THE INVENTION

[0002] Exercise devices and personal fitness equipment have become increasingly popular in recent years. Some of this equipment is used for aerobic exercises while others are used to develop the shape and strength of different parts of the human body. There are several prior art patents which describe the types of devices currently used for different exercises. For example, U.S. Pat. No. 5,813,955 issued Sep. 29, 1998 describes a device used for aerobic exercises. The device described in that patent can be worn around the torso of the user and includes several attachment rings connected to the belt and head hook and loop fastening strips for removably attaching the belt assembly to the torso of the user as shown in FIGS. 1 and 2 of the patent.

[0003] U.S. Pat. No. 8,968,166 B2 issued Mar. 3, 2015 discloses a sport performance enhancing system having elastomeric bands connected between the belt and the shoe as illustrated in the drawings of that patent.

[0004] U.S. Pat. No. 9,278,248 B2 issued Mar. 8, 2016 discloses a weighted vest primarily used during squatting exercise as shown in FIG. 3 of that patent.

[0005] There are other prior art patents which describe different exercise devices used for different purposes. Once such patent, i.e., U.S. Pat. No. 8,968,166 B2 issued Mar. 3, 2015, describes an exercise system used for total body sports performance enhancement that allows the user to build strength while keeping the hands free.

[0006] The exercise systems described in the aforementioned patents, as well as in the prior art in general have shown some benefits for improving the muscle tones of different parts of the body. However, with increased emphasis in physical fitness, many exercise devices have been developed and are in use in many sports centers. Some of these devices are simply used to increase the muscle strength in specified parts of the body, while other devices are used to produce the desired effects in more than one part of the human body.

[0007] It is therefore an object of the present invention to provide an exercise device which is useful in developing most parts of the body of an exerciser;

[0008] It is also an object of the present invention to provide an exercise device having several components which can be used during exercise to act simultaneously on different body parts;

[0009] It is thus a further object of this invention to obviate the need to use several devices to achieve the exercise benefits which can be achieved using the system of the present invention.

[0010] The foregoing and other advantageous features of the system of the present invention will become more apparent from the following detailed description of the invention and accompanying drawings.

SUMMARY OF THE INVENTION

[0011] The present invention provides a multifaceted exercise system which can be used by an exerciser for performing several different exercises. The exercise system of this invention comprises a vest which can be worn by the exerciser and which has a front segment and a back segment. The back segment of the vest is provided with a left O-ring and a right O-ring, a left resistance band and a right resistance band, said left resistance band having one end engaged into said left O-ring and having its other end grasped by the left hand of said exerciser, and said right resistance band having one end engaged into said right O-ring and having its other end grasped by the right hand of said exerciser wherein said resistance bands are forced forward or laterally for exercising the chest of the exerciser. A panel member is attached to the back segment of said vest, said panel member having at least one row of roller receiving cavities, and a roller placed within each of said roller-receiving cavities for performing a squatting exercise by moving said panel member up and down against a flat surface such as a wall.

[0012] The back segment of the exercise system is provided with a left O-ring and a right O-ring, a left elongated resistance band and a right elongated resistance band, whereas the left elongated resistance band is secured to the left O-ring and the right resistance band is secured to the right O-ring and whereas the lower ends of each resistance band is secured to the left foot and the right foot of the exerciser. The exercise system is adapted to conduct abdominal exercises by removing the panel member from the back of the vest, placing it on a flat surface and pushing and pulling the panel member by the hands of the exerciser.

BRIEF DESCRIPTION OF THE DRAWINGS

[0013] In the drawings wherein like reference numerals designate like parts:

[0014] FIG. **1** is a rear perspective view of an exerciser equipped with the exercise system o this invention having the various components of the system;

[0015] FIG. **2** is a side perspective view of the exerciser walking with bands attached to the ankle cuffs and hand cuffs attached to the hands of the exerciser;

[0016] FIG. **3** is a side perspective view of the exerciser equipped with the exercise system of this invention while performing a squatting exercise;

[0017] FIG. **4** is a perspective view of the exerciser's hand and wrist showing a wrist cuff with an O-ring attached to the wrist cuff;

[0018] FIG. **5** is a schematic side perspective view of the foot and ankle of the exerciser with an ankle cuff and O-ring attached to the ankle cuff;

[0019] FIG. **6** is a front perspective view, mostly of the upper body of an exerciser holding a bar;

[0020] FIG. **7** is a view similar to FIG. **6** with the exercise bar pushed forward from its position shown in FIG. **6**;

[0021] FIG. **8** is a perspective side view of the bar shown in FIG. **7**;

[0022] FIG. **9** is a perspective side view of the upper back of the exerciser with a triangular panel member having rows of roller receiving cavities, in exploded view; and

[0023] FIGS. **10** and **11** are perspective views of the exerciser using the panel member shown in FIG. **9** at the start of the exercise (FIG. **10**) and in stretched position (FIG. **11**).

DETAILED DESCRIPTION OF THE INVENTION

[0024] Referring to FIGS. **1-3**, the exerciser is shown using the exercise system having the various components of the exercise system for exercising various parts of the exerciser's body **101** showing the left exerciser's arms **103***a*, and the right exerciser's arm **103***b*, the exerciser's back **105**, a vest **107** at the upper exerciser's body, a pair of O-rings, a left O-ring **109**, and a right O-ring **111**, attached to the back of the vest **113** (see FIG. **9**) worn by the exerciser. A resistance band **115***a*, made from a stretchable elastic material, stretches between, and is engaged by the left O-ring **109** at one end, and is grasped by the left hand **117** of the exerciser, and the resistance band **115***b* stretches between and is engaged by the O-ring **111** at the right end and is grasped by the right hand **119** (see FIG. **4**). The right O-ring **120** is securely attached to the wrist cuff **121** and strapped to the right hand **119** by the right hand strap **119***a*. Similarly, the left O-ring (not shown) is securely attached to the wrist cuff **118** and strapped to the left hand **117** by the left hand strap **117***a*. At the other end, a resistance band **115***b* is grasped by the right hand **119** of the exerciser and, as seen in FIG. **1**, during one exercise the hands move forward and laterally, in the direction of the arrows.

[0025] Referring again to FIGS. **1-3**, the exerciser is shown wearing the vest **107** having a pair of spaced apart O-rings attached to the lower back of the vest, a left O-ring **123** and a right O-ring **125**, a left resistance band **127** having its upper end attached to the left O-ring **123** by a hook **123***a* and its lower end strapped to the left foot **129** by the left foot strap **129***a*. Similarly, a right resistance band **131** has its upper end attached to the right O-ring **125** by a hook **125***a* and its lower end strapped to the right foot **133** by the right foot strap **133***a* (see FIG. **5**).

[0026] Alternatively, the lower end of the left resistance band **127** can be attached to the left foot **129** by securing the lower end of the left resistance band **127** by means of the hook **137** and O-ring **139** to the left foot cuff **141** and left strap **141***b* and attaching the lower end of the right resistance band **131** by means of the hook **143** and O-ring **145** to right foot cuff **146** and right foot strap **147** the right foot **133**.

[0027] In still another exercise mode using the system of the present invention, the exerciser is shown in kneeling position as shown in FIG. **10** with the panel member **147** removed from the back of the exerciser and placed flat on the floor and used to exercise the abdominal muscles by stretching the knees and hands as shown in FIG. **11**. For the sake of simplicity of illustration, the exerciser is shown without the other components of the system.

[0028] As it can be appreciated from the foregoing detailed description and the drawings, the system of the invention can be used to perform several exercises using the various components as arranged and described herein.

[0029] FIGS. **6**, **7** and **8** show the exerciser in different mode using an exercise bar **135**, such as an iron bar, having its ends, grasped by the hands of the exerciser and being stretched forward to strengthen the arms of the exercise. As seen from these figures, the resistance band **115***a* is retained between the O-ring **152** next to the right shoulder of the exerciser at one end and is secured to the bar **135** at the other end by a hook or other means. Similarly, the resistance band **115***b* is retained between an O-ring **153** on the left shoulder at one end and is secured to the bar **135** at the other end by a hook or other means. The exercise shown in FIGS. **7** and **8** are designed to strengthen the arms as well as the upper body (chest) of the exerciser.

[0030] In another exercise using the system of this invention, the exerciser is shown in FIG. **3** performing a squatting exercise, as seen in FIG. **3**, the exerciser is shown wearing a vest **107** as shown in FIG. **9**, attached to the back of the exerciser by a pair of Velcro® strips **143**,**145** attached to the panel member **147** shown n triangular form having roller-receiving cavities **149** each being frictionally fitted with a roller **151**. The exerciser is able to squat as shown in FIG. **3** by squatting and rolling the panel member **147** up and down against a wall or any flat surface as shown in the drawing.

1-8. (canceled)

9. A multi-faceted exercise system for exercising the upper body, the lower body and the legs of an exerciser, said system comprising:

a) A vest worn by the exerciser, said vest having a front segment and a back segment, said back segment having spaced apart O-rings, a left O-ring on the left side of said back segment, and a right O-ring on the right side of said back segment, a left resistance band secured to said left O-ring and a right resistance band secured to said right O-ring, said left resistance band having one end attached to said left O-ring and having its other end grasped by the left hand of said exerciser, and said right resistance band having one end attached to said right O-ring and having its other end grasped by said right hand of said exerciser, and wherein said resistance band is adapted to be pulled forward and laterally by the hands of said exerciser for exercising the chest of the exerciser;

b) Said back segment of said vest being provided with a panel member having roller receiving cavities, each of said cavities being fitted with at least one roller for performing a squatting exercise by moving said back panel member up and down against a flat surface; and

c) Said back segment being also provided with a left O-ring and a right O-ring, a left resistance band and a right resistance band, said left resistance band having two ends, an upper end secured to said left O-ring and a lower end secured to the left foot of said exerciser, and a right resistance band having its upper end secured to said right O-ring and its lower end secured to the right foot of said exerciser.

10. A multifaceted exercise system as in claim **9** wherein said exerciser is grasping an elongated bar having one end grasped by the right hand of said exerciser and having the other end grasped by the left hand of said exerciser for forcing said elongated bar away from and toward said exerciser.

11. An exercise system as in claim **9** wherein said panel member is removed from said vest by said exerciser and placed on a flat surface in front of said exerciser while said exerciser pushes said panel member forward and back during exercise.

12. An exercise system as in claim **10** wherein said panel member is removed from said vest by said exerciser and

placed on a flat surface in front of said exerciser while said exerciser pushes said panel member forward and back during exercise.

* * * * *