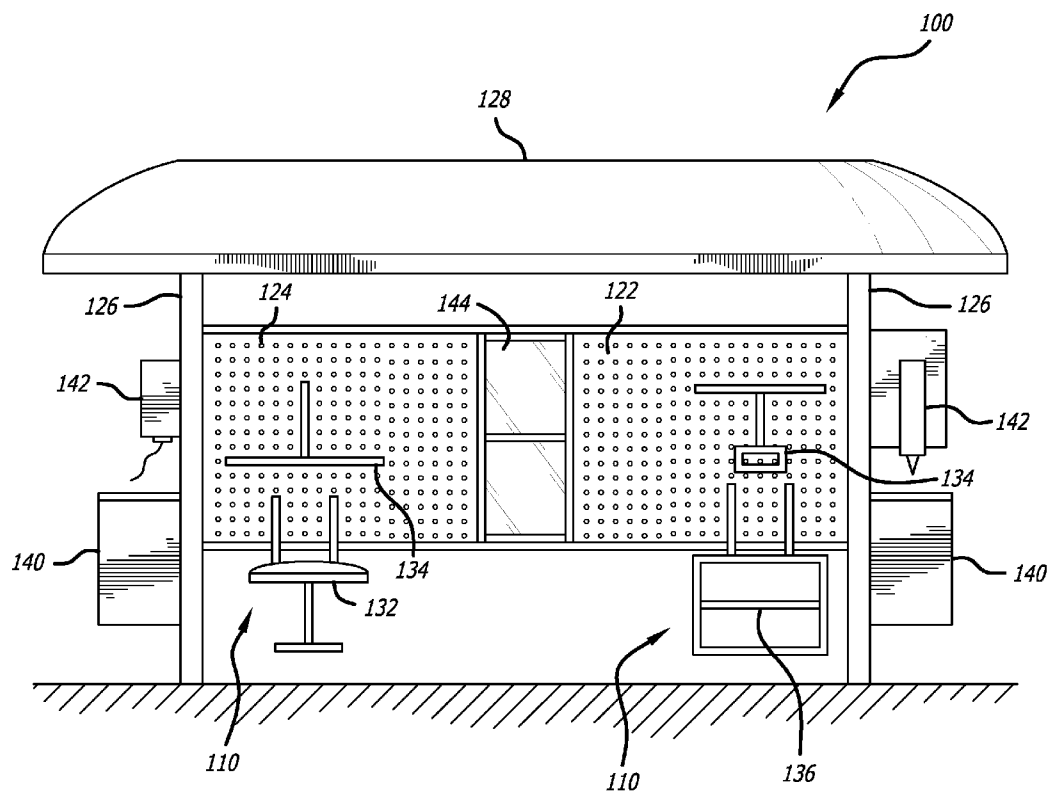


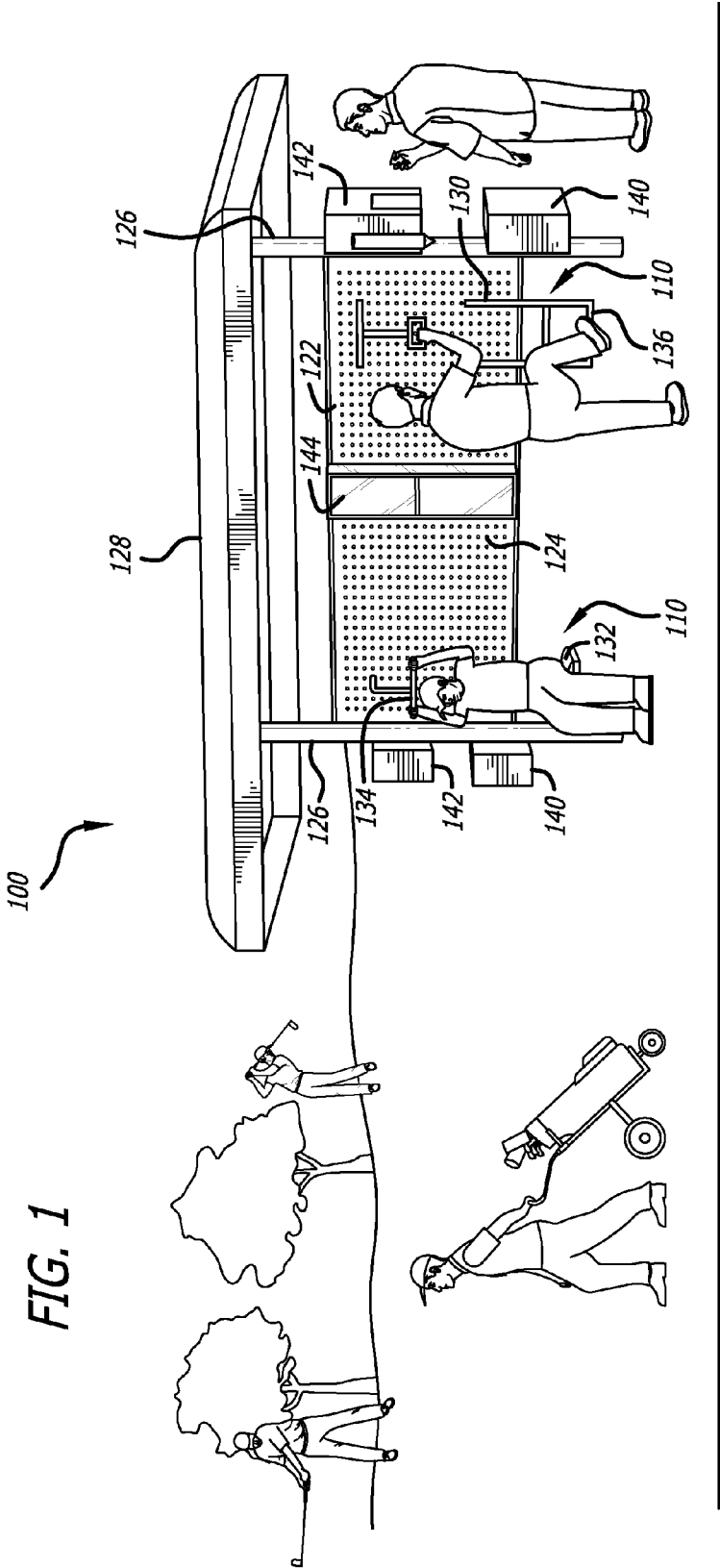


US 20120231935A1

(19) **United States**(12) **Patent Application Publication**
Langhart(10) **Pub. No.: US 2012/0231935 A1**(43) **Pub. Date: Sep. 13, 2012**(54) **PEGBOARD STRETCHING STATION**(76) Inventor: **Richard M. Langhart**, Litchfield
Park, AZ (US)(21) Appl. No.: **13/414,553**(22) Filed: **Mar. 7, 2012****Related U.S. Application Data**(60) Provisional application No. 61/464,616, filed on Mar.
7, 2011.**Publication Classification**(51) **Int. Cl.**
A63B 21/002 (2006.01)
E04H 15/02 (2006.01)(52) **U.S. Cl.** **482/91; 135/96**(57) **ABSTRACT**

A pegboard substrate is provided having holes on a surface thereof. The holes of the pegboard are configured to receive a plurality of components that interchangeably fit into the pegboard substrate to form a stretching station. The plurality of components may include pegs directly received in the holes and a handle, or a platform connected to at least one peg. The pegboard substrate together with the plurality of components received by the holes forms a modular stretching station for an individual to stretch any number of body parts to warm-up muscles prior to engaging in a physical activity. The pegboard substrate may be large enough to accommodate several stretching stations thereby forming a circuit such that a group of individuals can use the apparatus to stretch simultaneously. Add-on items may be provided including: vending machines, informational or marketing displays, trash cans, hand wipe dispensers, and the like.





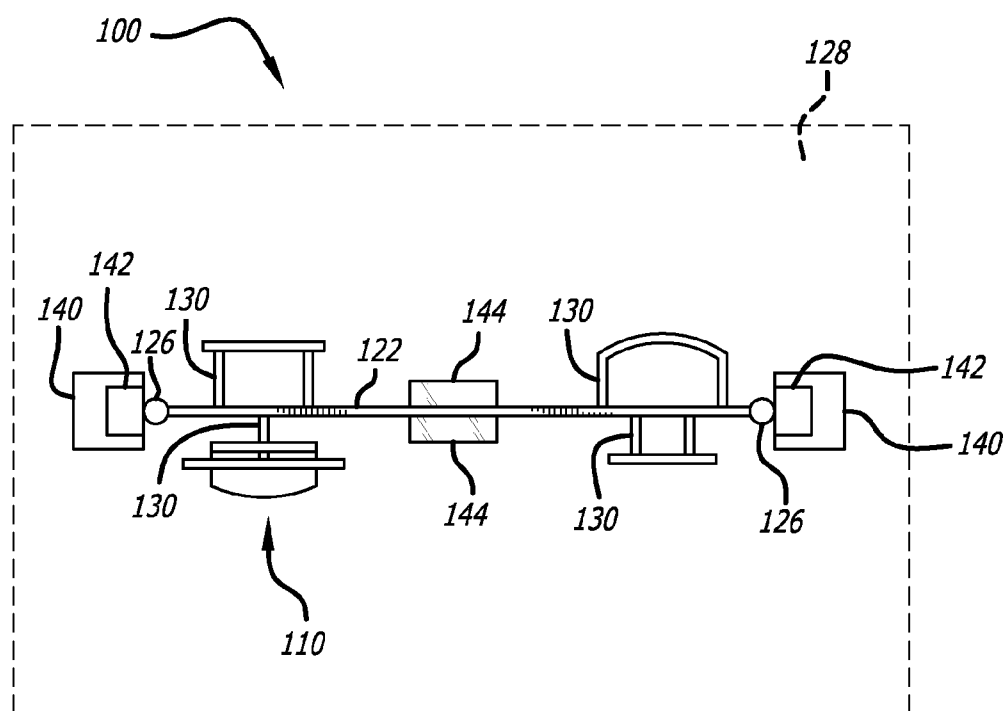


FIG. 2

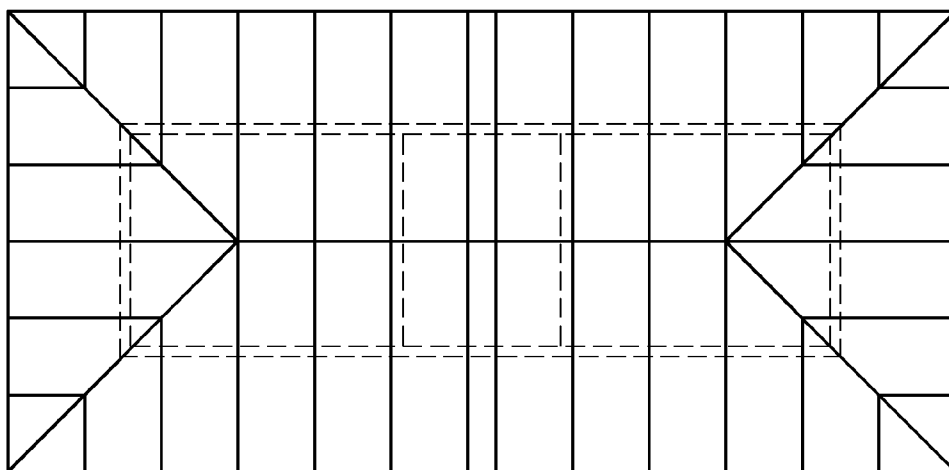


FIG. 3

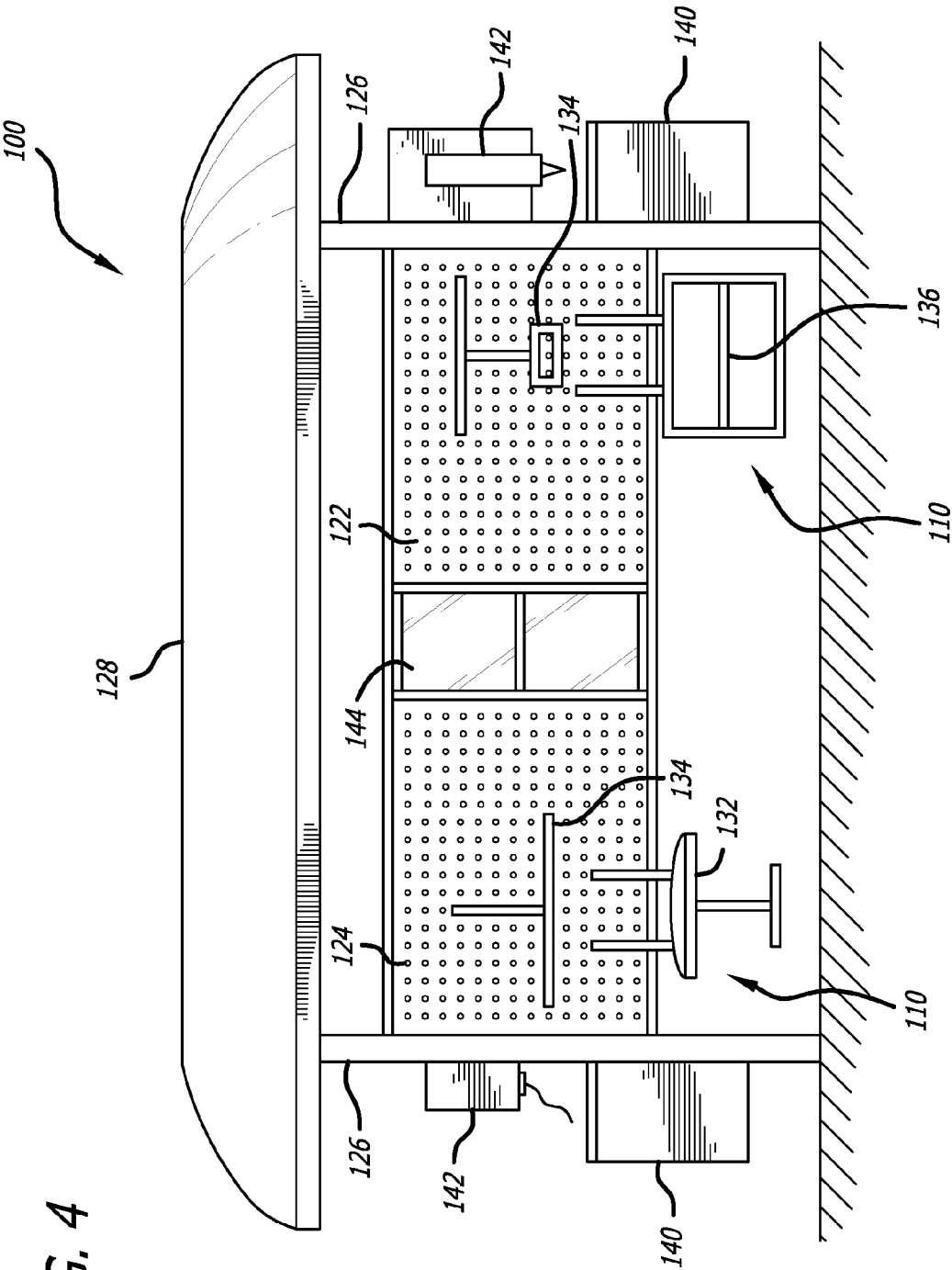
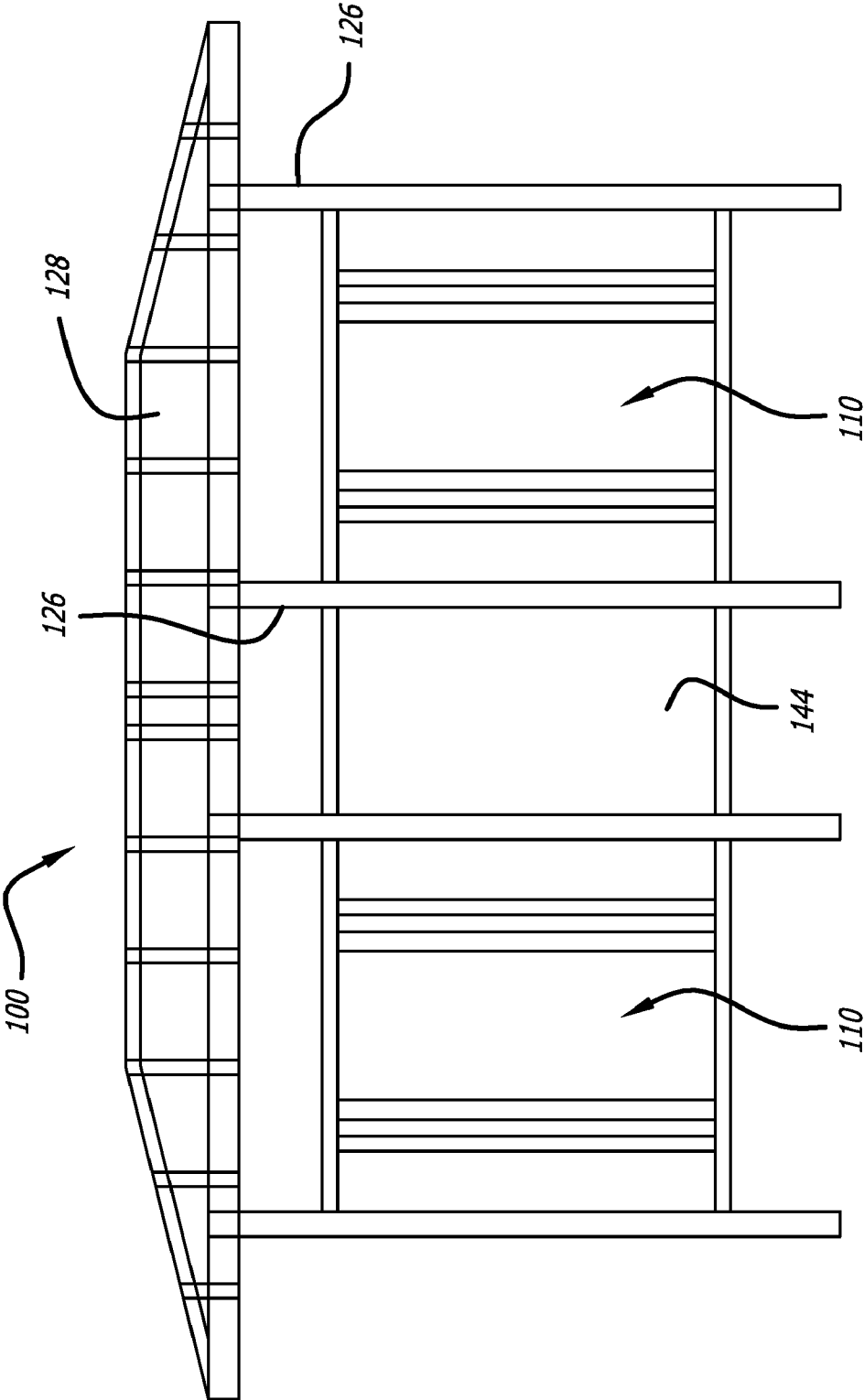


FIG. 4

FIG. 5



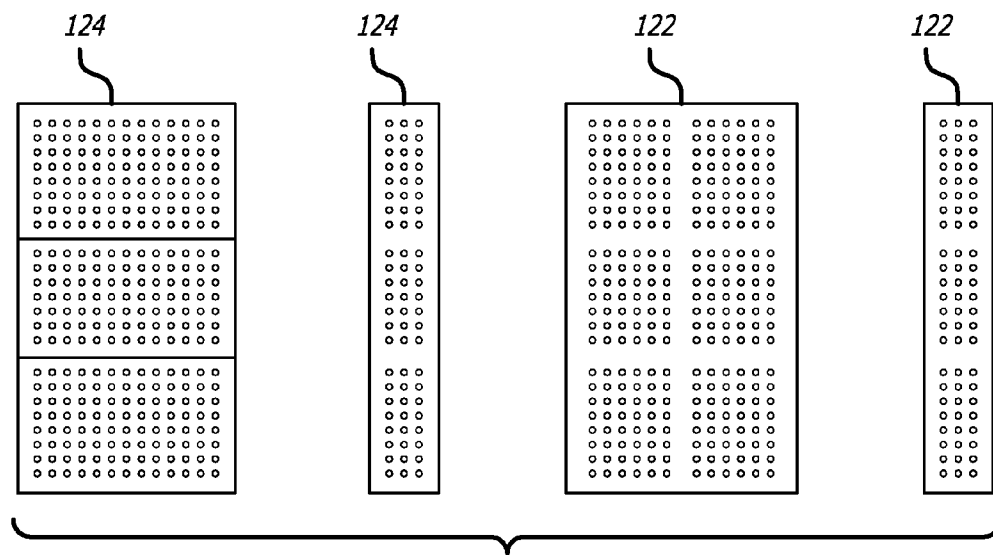


FIG. 6

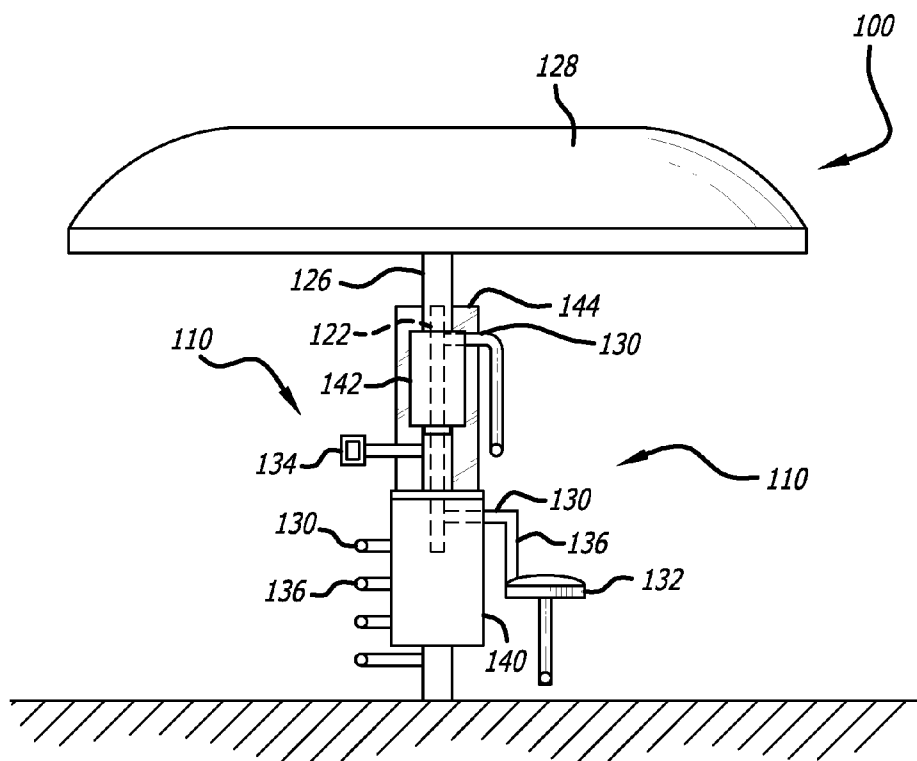
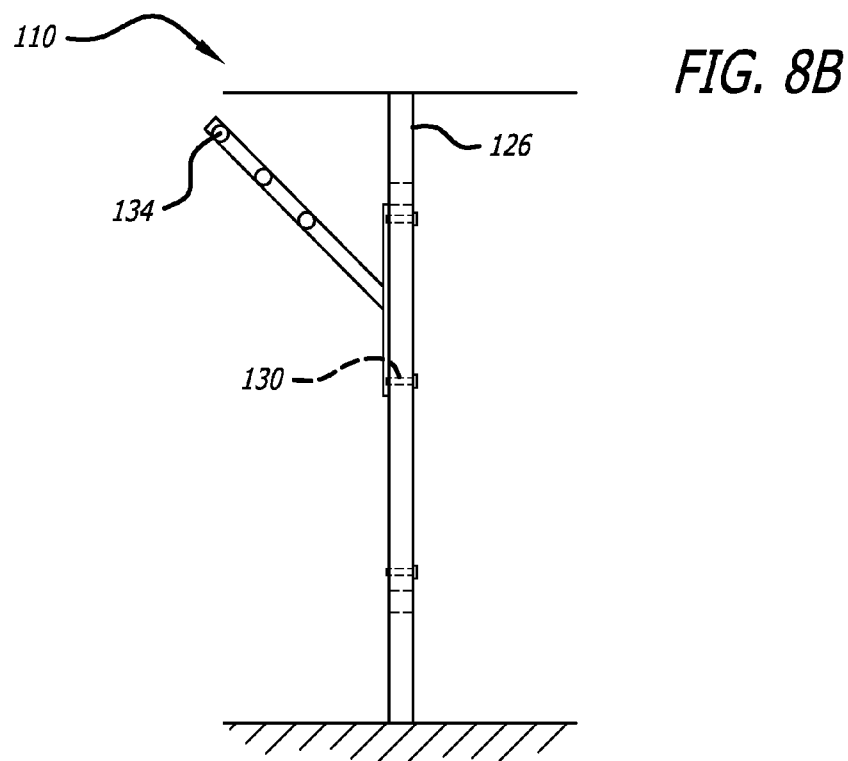
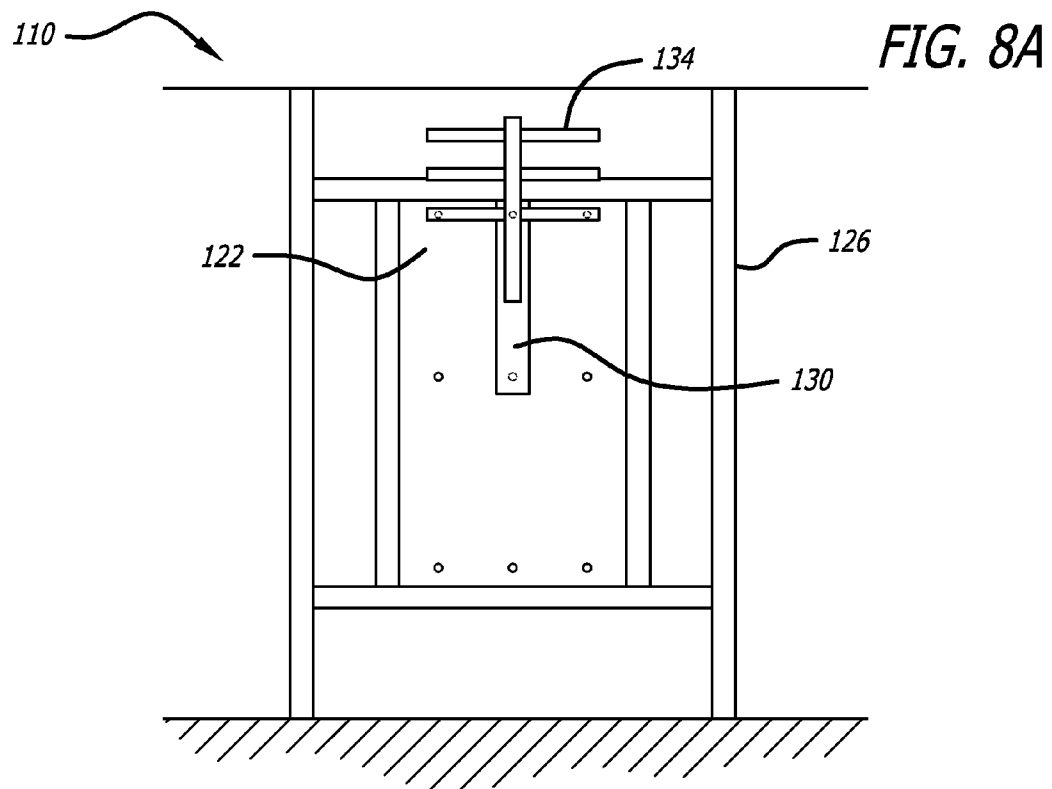
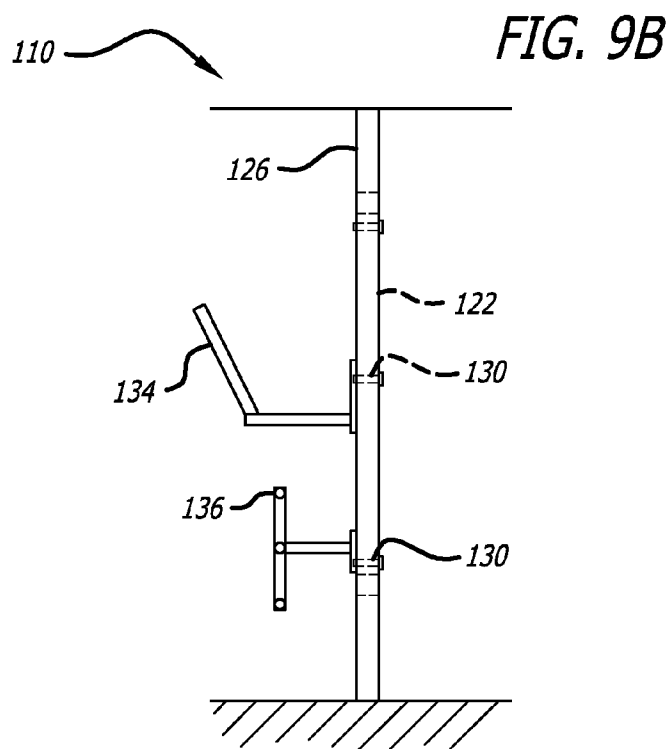
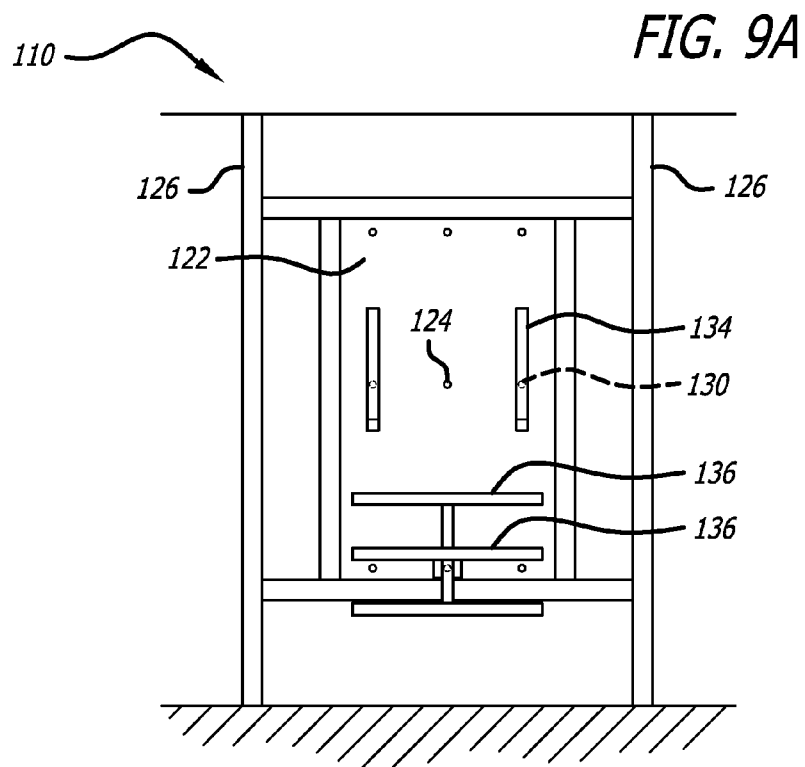
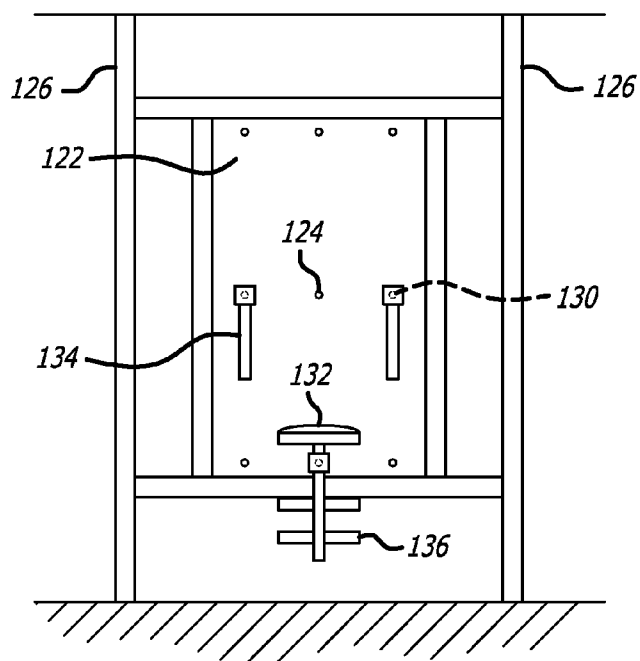


FIG. 7

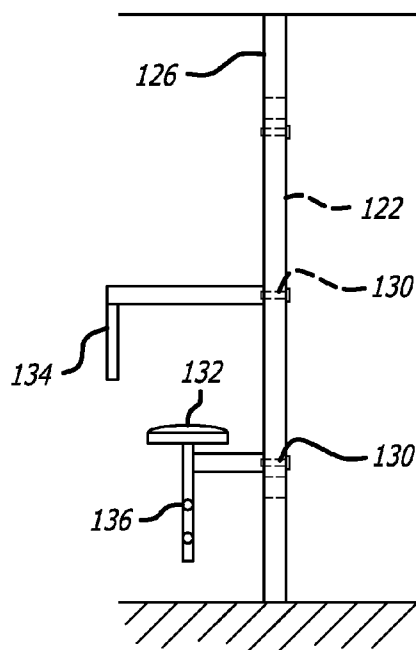


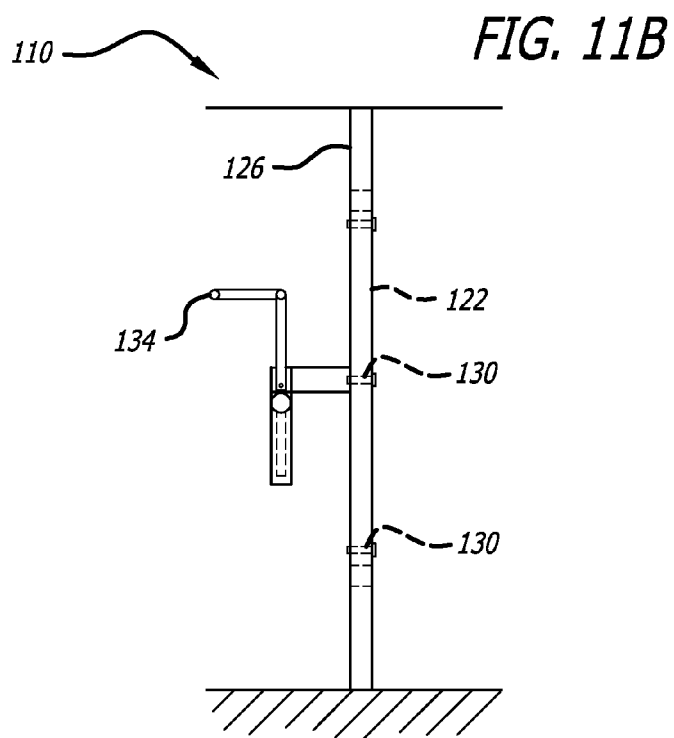
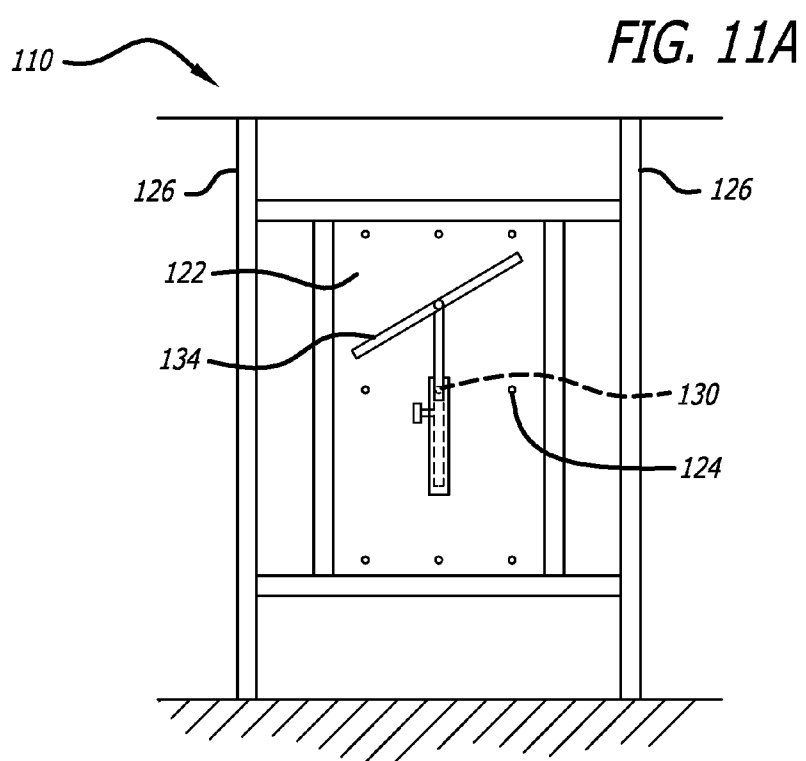


110 *FIG. 10A*



110 *FIG. 10B*





PEGBOARD STRETCHING STATION

CROSS-REFERENCES TO RELATED APPLICATIONS

[0001] This application claims priority from U.S. Provisional Application No. 61/464,616, filed Mar. 7, 2011 incorporated by reference in its entirety.

BACKGROUND

[0002] The present invention is generally directed to a stretching system. More specifically, the present invention is directed to a modular system configured to simultaneously accommodate a plurality of individuals.

[0003] It is difficult for many people to find an appropriate time and place to stretch their muscles or warm-up prior to engaging in a sport or other physical activity. Human psychology being what it is, some individuals don't want to stretch alone. For example, individuals stretching alone may feel "on display" on a golf course or on the side lines of a soccer field or tennis court. Given modern busy lives, there is often not time to stretch in the privacy of one's home as people typically go from work or other obligations directly to the course, field, or court. Alternatively, the limited space available in urban environments and apartment-style living can make finding the space to stretch at home difficult. In our mobile society frequent movers will find it burdensome to invest in home stretching equipment that could be expensive and difficult to move and store.

[0004] Yet stretching is extremely important to preventing sport-related injuries by properly loosening up and warming up muscle groups, tendons, ligaments, nerves, and the like before suddenly shocking the body with physical activity and greater ranges of motion than those demanded by daily living. Stretching stations that are available near athletic spaces or in public parks are frequently of the one-size fits all variety which may provide suboptimal stretching for any given individual using the station.

[0005] Another problem with many golf courses, race tracks, fields for soccer, baseball, football, tennis courts, and the like, particularly in large, spread-out complexes configured to accommodate several games or groups simultaneously is that there are no convenience stations or auxiliary service facilities nearby. For example, there is commonly an absence of vending machines with refreshments or sport-related items for purchase, trash cans, bathrooms, and the like near the playing field or course. In public parks, most stretching stations that are available only focus on that need, providing a place to stretch, and do not provide other helpful items, services, or functionalities.

[0006] Still another problem with several courses, tracks, fields, courts, and the like is that opportunities for socializing are limited compared to what they might be. It would be desirable to have a station adjacent to yet set apart from the competitive course, track, field, court, or the like where athletes could congregate to socialize, network, and share tips while warming-up or waiting for their turn to play. The present invention meets these and other needs.

SUMMARY OF THE INVENTION

[0007] In its most general aspect, the present invention provides a modular station for stretching muscles prior to engaging in a sport or other physical activity, including a pegboard substrate and a plurality of components configured

to interchangeably fit into the pegboard substrate to form a stretching station. The modular station may further include two vertical columnar supports separated by a distance, the distance being occupied by the pegboard substrate, the pegboard substrate having a plurality of sides, each of two of said plurality of sides secured to a different one of the two vertical columnar supports. The modular station may also include a canopy configured to shield an individual using the station from sun and rain while using the modular station, the canopy disposed above the pegboard substrate and the two vertical columnar supports, the canopy being supported by the two vertical columnar supports.

[0008] The stretching station provided by the modular station may be configured to stretch at least one element selected from the group consisting of: torso and hips. The stretching station may also be configured to stretch at least one element selected from the group consisting of: arms, elbows, and wrists. The stretching station may also be configured to stretch at least one element selected from the group consisting of: legs, knees, and ankles. The stretching station may also be configured to stretch a back of an individual using the station.

[0009] The plurality of components of the modular station may include a plurality of pegs receivable by a plurality of holes in the pegboard substrate. More specifically, at least one peg disposed in a first hole of the plurality of holes in the pegboard substrate can be transferred to a second hole thereby adjusting at least one physical dimension of the stretching station to accommodate users of different sizes. The plurality of components may also include a seat for a user to sit on while stretching, the seat connected to one of the plurality of pegs. The plurality of components may also include a handle for a user to grip while stretching, the handle connected to one of the plurality of pegs. The plurality of components may also include a platform configured to support a body part of an individual using the apparatus, the platform connected to one of the plurality of pegs.

[0010] According to another aspect, the present invention provides a modular circuit for a plurality of individuals to simultaneously stretch muscles prior to engaging in a sport, including a plurality of the modular stations for stretching muscles, each modular station including a pegboard substrate and a plurality of components configured to interchangeably fit into the pegboard substrate to form a stretching station. Each station of the modular circuit may share the same pegboard substrate or a plurality of interconnected pegboard substrates.

[0011] The modular circuit may further include two vertical columnar supports separated by a distance, the distance being occupied by the pegboard substrate(s), the pegboard substrate(s) having a plurality of sides, each of two of said plurality of sides secured to a different one of the two vertical columnar supports. The modular circuit may also include a canopy configured to shield a plurality of individuals using the station from sun and rain while using the modular station, the canopy disposed above the pegboard substrate(s) and the two vertical columnar supports, the canopy being supported by the two vertical columnar supports.

[0012] The modular circuit may also include at least one of a receptacle and a dispenser supported by at least one of the two vertical columnar supports, the receptacle or the dispenser oriented upon the vertical columnar support so as not to interfere with any of the stations. At least one display may also be provided as part of the modular circuit, the display positioned on a surface of the pegboard substrate, the display

configured to communicate information to a plurality of individuals using the circuit. The common pegboard substrate or the plurality of interconnected pegboard substrates may have a plurality of holes on at least two faces of the substrate(s) to accommodate modular stretching stations facing in different directions.

[0013] Other features and advantages of the present invention will become apparent from the following detailed description, taken in conjunction with the accompanying drawings, which illustrate, by way of example, the principles of the invention.

BRIEF DESCRIPTION OF THE DRAWINGS

[0014] FIG. 1 is a perspective view of a pegboard stretching circuit in accordance with a first embodiment of the present invention.

[0015] FIG. 2 is a top view of a pegboard stretching circuit in accordance with a first embodiment of the present invention.

[0016] FIG. 3 is another top view of a pegboard stretching circuit in accordance with a second embodiment of the present invention.

[0017] FIG. 4 is a front view of a pegboard stretching circuit in accordance with a first embodiment of the present invention.

[0018] FIG. 5 is another front view of a pegboard stretching circuit in accordance with a second embodiment of the present invention.

[0019] FIG. 6 is a front view of a plurality of pegboard substrates for use in a stretching circuit in accordance with a second embodiment of the present invention.

[0020] FIG. 7 is a side view of a pegboard stretching circuit in accordance with a first embodiment of the present invention.

[0021] FIGS. 8A and 8B are front and side views, respectively, of a pegboard stretching station for the back in accordance with an embodiment of the present invention.

[0022] FIGS. 9A and 9B are front and side views, respectively, of a pegboard stretching station for the hamstrings in accordance with an embodiment of the present invention.

[0023] FIGS. 10A and 10B are front and side views, respectively, of a pegboard stretching station for hip rotation in accordance with an embodiment of the present invention.

[0024] FIGS. 11A and 11B are front and side views, respectively, of a pegboard stretching station for the shoulders in accordance with an embodiment of the present invention.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

[0025] In one of its various embodiments, the present invention provides a modular stretching station including a pegboard. In another embodiment, the present invention provides a modular stretching circuit including a plurality of stretching stations sharing a common pegboard or a plurality of interconnected pegboards mounted to or supported by a common frame. The common frame may include two or more columnar supports with the pegboard(s) spanning the distance between at least two columns. A canopy, tarp, umbrella, or shield may be provided above the stretching circuit or stations to protect individuals using the apparatus from sun, rain, and other disruptive conditions.

[0026] The stretching circuit is advantageous in that it enables a group of individuals to simultaneously stretch their

muscles prior to engaging in an athletic activity, including group sports. By socializing the stretching process and conveniently placing the circuit adjacent a course, track, field, court, or other venue for athletic activities it is expected users will be more encouraged and motivated to stretch. Stretching before athletic endeavors reduces the risk of injury and promotes a general sense of well-being.

[0027] Examples of groups of muscles that may be exercised at the stations include: torso and hips; arms, elbows, and wrists; legs, knees, and ankles; and the back. However, the invention is not limited to these muscle groups as the particular structural features of the plurality of components that make up each station can be optimized depending upon the objective.

[0028] Incorporation of the pegboard substrate is ideal for the modular nature of the stations. The peg holes allow a plurality of components to interchangeably fit into the pegboard substrate through pegs attached to the components and receivable into the peg holes. The peg holes may be regularly or irregularly spaced apart and may be uniform or variable in size. One station for stretching a certain body part may be transformed into a different station for stretching another body part by changing out the different components. Additionally, the dimensions of a stretching station may be varied to accommodate users of different sizes by moving the components from one set of peg holes to another, thereby adjusting the dimensions of the stretching station. Any number of components can be added or taken away from the pegboard. Accordingly, in different embodiments, the stations of the circuit can be optimized for different athletic activities or sports based on the major muscle groups emphasized or susceptible to injury in a particular sport.

[0029] The pegboard substrate or a plurality of interconnected pegboard substrates may be arranged to have two primary faces, facing opposite directions so that non-interfering stretching stations may be provided on each face. For example, a north-facing side and a south-facing side or an east-facing side and a west-facing side. See side view in FIG. 7 showing stations on both faces.

[0030] On a face of the pegboard substrate within a region that does not interfere with a user's freedom of movement at the stretching stations, a display may be provided in the form of a bulletin board, an electronic sign, a roster or scoreboard, stretching instructions, advertising, marketing or promotional literature, or the like.

[0031] The same frame structure that supports the pegboard may be used to support other items having value to athletes. For example, trash or other receptacles may be provided mounted to the ends of the columns holding up the pegboards so as not to interfere with an individual user's movements at the various stretching stations. Further, dispensers or vending machines of various sorts may be provided including dispensers of hand sanitizers, towels, golf balls, golf tees, gloves, tennis balls, water, sunglasses, sunscreen, Chapstick®, first aid kits, disposable cameras, and any number of possible commodities that an individual using the station may find valuable or be inclined to purchase.

[0032] Referring to the Figures which are provided by way of example, and not by way of limitation, a pegboard stretching circuit 100 including a plurality of pegboard stretching stations 110 is shown according to an embodiment of the present invention. More specifically, in FIG. 1 the pegboard stretching circuit 100 includes a pegboard substrate 122 or a plurality of interconnected pegboard substrates supported by

at least two vertical columnar supports **126**. The left and right sides of the pegboard substrate or plurality of interconnected pegboard substrates are secured to the columns. The columns may be configured for installation in turf or ground or for fixation to a convention center floor. For some applications, an additional baseboard or floorboard may be provided with the columns secured to the baseboard or floorboard.

[0033] The pegboard stretching circuit in accordance with the present invention may be fabricated from any of a plethora of suitable materials known in the art that are capable of withstanding the force or weight of a plurality of individuals using the circuit simultaneously. If the circuit is to be placed outside then the materials selected should also be capable of withstanding environmental and weather conditions through the inherent features of the materials selected or through weatherproof coatings, sealants, and varnishes.

[0034] According to one embodiment, the entire structure may be made of powder coated steel. Some of the stretching and exercising components may also be made of powder coated steel. However, the handles and seating are preferably made of, or at least coated with neoprene, plastic, leather, or like materials for durability and user comfort. All of the various accessory components including the displays, audio centers, receptacles, and dispensers may be formed of other materials specific to their function.

[0035] The pegboard substrate or the plurality of interconnected pegboard substrates and the roof or canopy may be secured to the structural columns and frame in any functional manner. For example, the various elements of the structure may be attached by way of screws, nails, adhesives, locks, specially shaped corresponding pieces that mate like a puzzle, and the like.

[0036] On the left and right sides of the pegboard substrate or plurality of interconnected pegboard substrates and on both the front face and the back face of the stretching circuit individual stretching stations **110** are provided. For example, in FIG. **1** the left side of the front face shows a stretching station for the torso by way of hip rotation and the right side of the front face shows a stretching station for the hamstring. Any number of other different types of stretching stations may be provided for stretching or warming-up other muscle groups as shown, for example, in FIGS. **8-11**. The stretching stations need not be positioned at the ends but may also be centrally located along the pegboard substrate. Further, more than two stations may be provided on a single face of the substrate and the pegboard substrate or plurality of interconnected pegboard substrates may be as large as necessary to accommodate the desired number of stretching stations.

[0037] Each stretching station includes a plurality of components secured to the pegboard **122** through pegs **130** receivable in the holes **124** of the pegboard. For example, the plurality of components may include but are not limited to a seat **132**, a handle **134**, and a platform **136**. The plurality of components work together to form a stretching station. The plurality of components are designed and ergonomically configured to be engaged by an individual using the apparatus. For example, depending upon the particular purpose of the exercise station, the plurality of components may be required to support the weight of a user as the user frequently accomplishes stretching by applying an opposing force to a component.

[0038] In order to ensure a safe stretch, the pegs and peg holes may be specially designed to prevent slippage or disengagement when a user is applying an opposing force to the

component. For example, the peg to peg hole attachment mechanism may include a locking option or the pegs may include a right angle that can be used to lock a peg in the internal cavity of the pegboard accessible via the peg hole rather than conventional straight pegs and cylindrical holes.

[0039] The canopy **128** above the stretching circuit **100** protects individuals using the circuit from sun, rain, wind, and the like. Optionally, other components may be added including panels (not shown) around the outside to provide additional protection from wind and sideways rain enabling the circuit to be a shelter during a downpour. The canopy may be supported by the same columns **126** that hold up the pegboard.

[0040] As shown in FIGS. **1, 2, 4, 5**, and **7**, the pegboard substrate or plurality of interconnected pegboard substrates may also include a region for placing a display **144**. The display may be electronic including for example a flat screen liquid crystal display or plasma monitor. Alternatively, the display may include text written on paper or plastic along with images. The display may be used for advertising, club notices, a score board, a roster, instructions for performing various exercises, and any number of other purposes. The display may include both audio and visual components of any variety that would be helpful to an individual or group using the stretching circuit. For example, the display may also include music in the form of a radio, a CD player, or a docking station for a portable music player. A plurality of earphone jacks may also be provided for headphones or ear buds. The display may also include news or weather information either via network news and weather channels or on-site weather sensing components attached to the circuit.

[0041] Additionally, the pegboard substrate or the columnar supports may accommodate other items including receptacles **140** and dispensers **142**. The receptacles may be for trash, recycling, dirty towels or laundry, team jerseys, golf balls, athletic equipment or accessories, and any number of other possibilities. The dispensers may be vending machines, water stations, clean towels, and any number of other possibilities. As shown, placing these items on other faces of the circuit not occupied by stretching stations ensures there is no interference.

[0042] Referring to FIGS. **2** and **3**, top views of the stretching circuit are provided. FIGS. **4** and **5** provide side views of the stretching circuit.

[0043] FIG. **6** illustrates exemplary pegboard substrates **122** that may be used in forming a stretching circuit. While the holes **124** shown are uniformly spaced they may also be non-uniformly spaced or of variable sizes. In some embodiment requiring greater structural support additional columns may be provided with each pegboard having two ends between two columns or intermediary support structures.

[0044] FIG. **7** shows a side view of the pegboard stretching circuit **100** in accordance with an embodiment of the present invention having stations **110** on each face of the pegboard **122**.

[0045] FIGS. **8A** and **8B** illustrate front and side views, respectively, of an exemplary pegboard stretching station **110** for stretching the back muscles. Similarly, FIGS. **9A** and **9B** illustrate front and side views, respectively, of an exemplary pegboard stretching station **110** for stretching the hamstring muscles. FIGS. **10A** and **10B** illustrate front and side views, respectively, of an exemplary pegboard stretching station **110** for stretching the torso and sides or lateral muscles, for example through hip rotation. FIGS. **11A** and **11B** illustrate

front and side views, respectively, of an exemplary pegboard stretching station 110 for stretching the shoulder muscles.

[0046] According to a first embodiment of the present invention as shown in FIGS. 1, 2, 4, and 7, a single pegboard mounting surface is provided. All of the holes of the pegboard may be designed to accommodate stretching components and accessories. Alternatively, only some of the holes may be designed to receive and retain the stretching components and other holes may be for appearance only or have other functions such as for accommodating other accessories. The stretch station options illustrated in FIGS. 8-11 may be used with the first or second embodiments.

[0047] According to a second embodiment of the present invention as shown in FIGS. 3, 5, and 6, four or more pegboard-like mounting surfaces may be provided as shown in FIG. 6. These substrates may be provided between a plurality of supporting structural frames formed of steel or other material. In one particular variation, four mounting faces are provided with one or more of the four mounting faces being four feet wide for optimal structural soundness. The pegboard-like mounting surfaces may have specific mounting points designed to receive stretching components and other accessories. A pegboard aesthetic may be provided by covering the pegboard-like mounting surface with superficial skins having a plurality of designs resembling holes thereon. Some of the holes may be inoperative and for aesthetic purposes only to provide a pegboard aesthetic. Other skins may also be provided over the pegboard-like mounting surfaces. For example, skins displaying logos or with advertising messages to communicate. The skins may be interchangeable without destroying the surface of the pegboard-like mounting surfaces.

[0048] The present invention is not limited to the embodiments described above. Various changes and modifications can, of course, be made, without departing from the scope and spirit of the present invention. Additional advantages and modifications will readily occur to those skilled in the art. Accordingly, various modifications may be made without departing from the spirit or scope of the general inventive concept as defined by the appended claims and their equivalents.

I claim:

1. A modular station for stretching muscles prior to engaging in a sport, comprising a pegboard substrate and a plurality of components configured to interchangeably fit into the pegboard substrate to form a stretching station.

2. The modular station of claim 1, further comprising two vertical columnar supports separated by a distance, the distance being occupied by the pegboard substrate, the pegboard substrate having a plurality of sides, each of two of said plurality of sides secured to a different one of the two vertical columnar supports.

3. The modular station of claim 2, further comprising a canopy configured to shield an individual using the station from sun and rain while using the modular station, the canopy disposed above the pegboard substrate and the two vertical columnar supports, the canopy being supported by the two vertical columnar supports.

4. The modular station of claim 1, wherein the stretching station is configured to stretch at least one element selected from the group consisting of: torso and hips.

5. The modular station of claim 1, wherein the stretching station is configured to stretch at least one element selected from the group consisting of: arms, elbows, and wrists.

6. The modular station of claim 1, wherein the stretching station is configured to stretch at least one element selected from the group consisting of: legs, knees, and ankles.

7. The modular station of claim 1, wherein the stretching station is configured to stretch a back of an individual using the station.

8. The modular station of claim 1, wherein the plurality of components includes a plurality of pegs receivable by a plurality of holes in the pegboard substrate.

9. The modular station of claim 8, wherein at least one peg disposed in a first hole of said plurality of holes in the pegboard substrate can be transferred to a second hole thereby adjusting at least one physical dimension of the stretching station to accommodate users of different sizes.

10. The modular station of claim 8, the plurality of components also including a seat for a user to sit on while stretching, the seat connected to one of said plurality of pegs.

11. The modular station of claim 8, the plurality of components also including a handle for a user to grip while stretching, the handle connected to one of said plurality of pegs.

12. The modular station of claim 8, the plurality of components also including a platform configured to support a body part of an individual using the apparatus, the platform connected to one of said plurality of pegs.

13. A modular circuit for a plurality of individuals to simultaneously stretch muscles prior to engaging in a sport, comprising a plurality of the modular stations of claim 1.

14. The modular circuit of claim 13, each station sharing the same pegboard substrate or a plurality of interconnected pegboard substrates.

15. The modular circuit of claim 14, further comprising two vertical columnar supports separated by a distance, the distance being occupied by the pegboard substrate(s), the pegboard substrate(s) having a plurality of sides, each of two of said plurality of sides secured to a different one of the two vertical columnar supports.

16. The modular circuit of claim 15, further comprising a canopy configured to shield a plurality of individuals using the station from sun and rain while using the modular station, the canopy disposed above the pegboard substrate(s) and the two vertical columnar supports, the canopy being supported by the two vertical columnar supports.

17. The modular circuit of claim 15, further comprising at least one of a receptacle and a dispenser supported by at least one of the two vertical columnar supports, the receptacle or the dispenser oriented upon the vertical columnar support so as not to interfere with any of the stations.

18. The modular circuit of claim 13, further comprising at least one display positioned on a surface of the pegboard substrate, the display configured to communicate information to a plurality of individuals using the circuit.

19. The modular circuit of claim 14, wherein the common pegboard substrate or the plurality of interconnected pegboard substrates has a plurality of holes on at least two faces of the substrate(s) to accommodate modular stretching stations facing in different directions.

* * * * *