WATER THERAPY AIR BUBBLE DISTRIBUTION BOX

Field of Invention

The present utility model relates to a water therapy air bubble distribution box, and more particularly to a water therapy device that can be submerged in water to generate air bubbles.

Background of The Invention

Living in a tense environment, modern people struggle to relieve tension, especially, muscle stiffness and muscle soreness; relaxation has become increasingly difficult. Currently, massage is one method to effectively aid relaxation of the human body. Pressure exerted externally through massage can improve stiffness or soreness of muscles to rest and relax the body.

Most massage tools available in the market relax muscle by applying pressure on muscle tissue, which may easily cause injury if such pressure is applied incorrectly. Therefore, in view of established medical developments, inherent characteristics of water are being utilized for massage, especially related to temperature, buoyancy, pressure and flow to massage or by a conventional air bubble generation cushion using air flow through water to accelerate water speed to achieve a massage effect for relaxation and pain-relief.

However, due to localized air pockets causing buoyancy, the conventional air bubble generation cushion is not easily submerged in water and the massaging effect is noticeably reduced. As such, the conventional air bubble generation cushion requires refinement.

Summary of The Invention

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The main objective of the present invention is to provide a water therapy air bubble distribution box, which can be stably submerged in water mitigating reduced massaging effects due to floating caused by air contained therein.

To achieve the aforementioned main objective, a water therapy air bubble distribution box is provided to address:

a box having a chamber formed by an upper lid and a bottom board mounted on a bottom side of the upper lid, wherein the upper lid is formed by a top wall and a side wall, a plurality of parallel trenches formed on a top surface of the upper wall, a plurality of orifices formed on the bottom of the trenches, and an air valve mounted on the top wall; and

a distributor mounted in the chamber of the box and having a tube, wherein the tube has a duct sleeved in the air valve of the box so that the duct communicates with the air valve, and a plurality of through holes formed on the tube.

Using the aforementioned means enables the distributor to uniformly distribute air all around the chamber so preventing localized accumulation of air, which would cause the box to float and significantly reduce massaging effects.

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

Fig. 1 is a perspective view showing a first preferred embodiment of the present utility model;

Fig. 2 is an assembly view showing the first preferred embodiment of the present utility model;

Fig. 3 is an enlarged bottom perspective view of an upper lid in accordance with the first preferred embodiment of the present utility model;

Fig. 4 is a bottom view of the upper lid in accordance with the first preferred embodiment of the present utility model;

Fig. 5 is a perspective view showing a second preferred embodiment of the present utility model;

Fig. 6 is an schematic view showing the operation of the first preferred embodiment of the present utility model; and

Fig. 7 is a cross-sectional schematic view showing the operation of the first preferred embodiment of the present utility model.

Detailed Description of The Invention

One skilled in the art will readily appreciate that the present invention is well adapted to carry out the objects and obtain the ends and advantages mentioned, as well as those inherent therein. The embodiment described herein is not intended as limitations on the scope of the invention.

With reference to Fig. 1 to Fig. 4, the present utility model is a water therapy air bubble distribution box having a box (10), a distributor (20) and a plurality of ceramic granules (30).

With further reference to Fig. 1 and Fig. 2, the box (10) takes a rectangular form and has a chamber (11) therein. The box (10) has a top lid (12) and a bottom board (13), in which the top lid (12) has a top wall (14) and a side wall (15), a plurality of parallel trenches (141) are formed on the top surface of the top wall (14), a plurality of

orifices (142) are formed on the bottom sides of the trenches (141) and through the top walls (14) between trenches (141), an air valve (143) is mounted on the top wall (14) communicating with the chamber (11), the air valve (143) has an annular fitting slot (144) adapted to engage an air-filling tube of an air pump to charge air. With reference to Fig. 3, a plurality of connectors (145) are mounted on the bottom of the top wall (14). The bottom board (13) has a rabbet (131) formed around the perimeter thereof for the bottom side of the upper lid (12) to be inserted into the bottom board (13), and a plurality of connector mounts (132) corresponding to the connectors (145) respectively are formed on the bottom board (13) to correspond to the connectors so that the bottom board (13) can be tightly attached with the bottom side of the upper lid (12). Meanwhile, at least one vacuum cup (16) is mounted on the bottom side of the bottom board (13) to attach the box (10) to a mounting surface.

With reference to Fig. 4, The distributor (20) is mounted in the chamber (11) of the box (10). The distributor (20) has a U-shaped tube (21) with a duct (22) thereon. The duct (22) is sleeved in the air valve (143) of the box (10) so that the duct (22) and the air valve (143) of the box (10) may mutually communicate. A plurality of through holes (23) are formed on the tube (21) for the injected air to be uniformly distributed through the chamber (11) of the box (10). As the ceramic granules (30) are mounted in the chamber of the box (10) and may emit far infrared rays, hard water can be converted into soft water to refine water quality.

With further reference to Fig. 5 showing another preferred embodiment of the present utility model, differing from the aforementioned embodiment in that the plurality of orifices (142) are further formed through the top wall (14) to increase air bubbles generated and further enhance massaging effect.

With further reference to Fig. 6 and Fig. 7, when an air pump (40) charges air through the air valve (143), the air can be allocated to the chamber (11) of the box (10) by virtue of the through holes (23) on the distributor (20), then the air passes through the

orifices (142) between the trenches (141) to generate air bubbles in the water. Flow speed of water can also be increased by the foregoing such that stiff muscles submerged in water can be properly massaged to relax and reduce muscle soreness.

Mounting the distributor (20) guides air to be uniformly allocated throughout the chamber (11) and discharged from the orifices (142) of the box (10). As such, localized air pockets are not formed in the box (10) so floating is prevented and massaging effect is improved accordingly.

Even though numerous characteristics and advantages of the present utility model 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.

Claims

1.A water therapy air bubble distribution box, comprising:

a box (10) having a chamber (11) and having an upper lid (12) and a bottom board (13) mounted on a bottom side of the upper lid (12), wherein the upper lid (12) has a top wall (14) and a side wall (15) , a plurality of parallel trenches (141) are formed through a top surface of the upper wall, a plurality of orifices (142) are formed through the bottom of the trenches (141), and an air valve (143) is mounted on the top wall (14); and

a distributor (20) mounted in the chamber (11) of the box (10) and having a tube (21), wherein the tube (21) has a duct (22) sleeved in the air valve (143) of the box (10) and communicating with the air valve (143), and a plurality of through holes (23) are formed through the tube (21).

2. The water therapy air bubble distribution box as claimed in claim 1, wherein a plurality of orifices (142) are formed through the top wall (14) located between the trenches (141).

3. The water therapy air bubble distribution box as claimed in claim 2, wherein the bottom board (13) has a rabbet (131) mounted around a perimeter thereof for the bottom side of the upper lid (12) to be inserted in the bottom board (13).

4. The water therapy air bubble distribution box as claimed in claim 3, wherein a plurality of connectors (145) are mounted on the bottom of the top wall (14), and a plurality of connector mounts (132) corresponding to the connectors (145) respectively are formed on the bottom board (13) and attaching the bottom board (13) to the bottom side of the upper lid (12).

5. The water therapy air bubble distribution box as claimed in claim 4, wherein the air valve (143) has an annular fitting slot (144) therein.

6. The water therapy air bubble distribution box as claimed in claims 1~5, wherein at least one vacuum cup (16) is mounted on the bottom of the bottom board (13) to attach the box (10) to a mounting surface.

7. The water therapy air bubble distribution box as claimed in claim 6, wherein the air bubble distribution box further has a plurality of ceramic granules (30) mounted in the chamber (11) of the box (10).