

FAR INFRARED RAYS SAUNA BATH APPARATUS

This invention relates to a far infrared rays sauna bath apparatus, more particularly to a far infrared rays sauna bath apparatus including left and right far infrared ray-generating members that are disposed at different levels.

A conventional far infrared rays sauna bath apparatus normally includes ceramic plate heaters mounted on an upper part of a bath housing and disposed at the same level. As a consequence, the upper part of the bath housing has a higher temperature than a lower part of the bath housing. In addition, air circulation inside the bath housing with the ceramic plate heaters thus arranged is relatively poor.

Therefore, the object of the present invention is to provide a far infrared rays sauna bath apparatus that is capable of overcoming at least one of the aforesaid drawbacks of the prior art.

According the present invention, there is provided a far infrared rays sauna bath apparatus that comprises: a bath housing having left and right side walls; and left and right infrared ray-generating members disposed in the bath housing and mounted respectively on the left and right side walls. One of the left and right infrared ray-generating members is disposed at a level below the other of the left and right infrared ray-generating members.

In drawings which illustrate an embodiment of the invention,

Fig. 1 is a perspective view of the preferred embodiment of a far infrared rays sauna bath apparatus
5 according to this invention;

Fig. 2 is a schematic sectional view to illustrate how the user can be uniformly exposed to the far infrared rays generated from two far infrared ray-generating members of the preferred embodiment;

10 Fig. 3 is an exploded perspective view to illustrate the configuration of each of the far infrared ray-generating members of the preferred embodiment;

Fig. 4 is a fragmentary sectional view of the
15 far infrared ray-generating members of the preferred embodiment; and

Fig. 5 is a block diagram illustrating how a controller of the preferred embodiment controls operation of the far infrared ray-generating members
20 of the preferred embodiment.

Figs. 1 to 3 illustrate the preferred embodiment of a far infrared rays sauna bath apparatus according to the present invention.

The far infrared rays sauna bath apparatus
25 includes: a bath housing 3 defining an inner space
30 therein and having left and right side walls 31;
and left and right infrared ray-generating members

5 disposed in the bath housing 3 and mounted
respectively on the left and right side walls 31. The
left infrared ray-generating member 5 is disposed at
a level below the right infrared ray-generating member
5 5.

In this embodiment, the left and right side walls
31 are respectively formed with left and right inner
recesses 310. Each of the left and right infrared
ray-generating members 5 includes a box 51 fitted into
10 a respective one of the left and right inner recesses
310, and a plurality of ceramic plates 52 received
in and mounted on the box 51 and provided with a
respective electrical heating element 522. The box
51 of each of the left and right infrared ray-generating
15 members 5 has a reflective inner surface 510 for
reflection of far infrared rays into the inner space
30 of the bath housing 3.

The box 51 of each of the left and right infrared
ray-generating members 5 defines a box opening 511
20 for passage of far infrared rays generated from the
ceramic plates 52 into the bath housing 3. Each of
the left and right infrared ray-generating members
5 further includes a grid 53 covering the box opening
511 for preventing the user from coming into contact
25 with the ceramic plates 52 in the boxes 51 of the left
and right infrared ray-generating members 5. Referring
to Fig. 4, in combination with Fig. 3, the grid 53

includes grid rods 531, each made from a metal material and wrapped with an insulator protecting sheath 532 that is made from non-conductive fibers.

Referring once again to Figs. 1 and 2, the bath housing 3 further includes a top wall 33 that interconnects the left and right side walls 31 and that is formed with a plurality of vent holes 331 in fluid communication with the inner space 30 in the bath housing 3, and a front door 32 that has a bottom portion 320 formed with a plurality of air passages 321 which are in fluid communication with the inner space 30 in the bath housing 3.

A chair 4 is mounted in the bath housing 3 for sitting of an user 20, and has a level substantially the same as that of the left far infrared ray-generating member 5. Hence, the upper and lower body parts of the user 20 can be uniformly exposed to far infrared rays generated from the left and right far infrared ray-generating members 5.

The bath housing 3 further includes a front wall 34 connected to the door 32 and one of the left and right side walls 31. A temperature controller 6 is mounted on the front wall 34, and is coupled to the heating elements 522 on the ceramic plates 52 of the left and right infrared ray-generating members 5 so as to control the temperature of the ceramic plates 52 of the left and right infrared ray-generating

members 5.

Referring to Fig. 5, in combination with Fig. 1, the controller 6 includes a signal processing unit 61 connected to a power supply 62 and the heating elements 522 on the ceramic plates 52 of the left and right infrared ray-generating members 5, a temperature controlling unit 63 coupled to the signal processing unit 61, a timer 64 coupled to the signal processing unit 61, and a temperature sensing unit 65 coupled to the signal processing unit 61 for detecting temperatures of the ceramic plates 52 and sending temperature signals to the signal processing unit 61. The signal processing unit 61 controls the power supplied to the heating elements 522 according to the temperature signals from the temperature sensing unit 65, temperature settings from the temperature controlling unit 3, and timer signals from the timer 64.

By arranging the left and right infrared ray-generating members 5 at different levels, the aforesaid drawbacks associated with the prior art can be eliminated.

CLAIMS:

1. A far infrared rays sauna bath apparatus comprising:
a bath housing having left and right side walls;
and
5 left and right infrared ray-generating members
disposed in said bath housing and mounted respectively
on said left and right side walls, one of said left
and right infrared ray-generating members being
disposed at a level below the other of said left and
10 right infrared ray-generating members.
2. The far infrared rays sauna bath apparatus of claim
1, wherein said left and right side walls are
respectively formed with left and right inner recesses,
each of said left and right infrared ray-generating
15 members including a box fitted into a respective one
of said left and right inner recesses, and a plurality
of ceramic plates received in and mounted on said box
and provided with a respective electrical heating
element.
- 20 3. The far infrared rays sauna bath apparatus of claim
2, wherein said box of each of said left and right
infrared ray-generating members has a reflective inner
surface.
4. The far infrared rays sauna bath apparatus of claim
25 3, wherein said box of each of said left and right
infrared ray-generating members defines a box opening
for passage of far infrared rays generated from said

ceramic plates into said bath housing, each of said left and right infrared ray-generating members further including a grid covering said box opening.

5 5. The far infrared rays sauna bath apparatus of claim 4, wherein said bath housing defines an inner space therein and further includes a top wall that interconnects said left and right side walls and that is formed with a plurality of vent holes in fluid communication with said inner space, and a front door
10 that has a bottom portion formed with a plurality of air passages which are in fluid communication with said inner space.

6. The far infrared rays sauna bath apparatus of claim 5, wherein said bath housing further includes a front
15 wall connected to said door and one of said left and right side walls, said far infrared rays sauna bath apparatus further comprising a temperature controller mounted on said front wall and coupled to said heating elements on said ceramic plates of said left and right
20 infrared ray-generating members.