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LOW FREQUENCY STIMULUS INSTRUMENT

TECHNICAL FIELD

5 The present invention relates to a low frequency stimulus instrument, and more particularly to a low frequency stimulus instrument that can apply low frequency stimuli to feet through a feet-seating part provided on the upper side of the main body to seat feet, and simultaneously or selectively apply low frequency stimuli to different portions of a human body by connecting to the main body a low frequency pad part attached on specific portions of the human body and a low
10 frequency belt wrapping around a specific portion of the human body.

BACKGROUND ART

In general, feet reflect and concentrate the functions of the entire human body, and, since various diseases can be prevented when certain stimuli applied to the feet make blood circulations smooth, and activate the biological rhythm with the
15 stimuli of acupuncture points and the like as well as activate sensory functions, healthy feet enable an ideal health state to be kept.

Accordingly, diverse auxiliary health instruments have been developed and widely used to improve health through the stimuli of feet, and one example of which is one constructed to stimulate the acupuncture points distributed in the feet by
20 forming acupuncture protrusions on a feet-seating part provided on the upper side of the main body of a stimulus instrument, putting the feet on the protrusions, and exerting force on the feet. However, the feet stimulus instrument constructed as above has little or no stimulus effect on the feet so that it is difficult to expect a particular health improvement effect.

25 Therefore, Japanese Utility Model Registration No. 3010812 discloses a feet acupuncture stimulus instrument for improving the problem that the feet stimulus instrument for stimulating the feet by the acupuncture protrusions as above has.



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Such a feet acupuncture stimulus instrument mounts plural electrodes on the feet contact part and applies electric pulses to stimulate the acupuncture points distributed on the feet so that a predetermined treatment effect can be obtained, which is only to selectively stimulate the acupuncture points associated with various organs in the human body by a certain frequency and a voltage application period with respect to the acupuncture points distributed on the feet, but not to simultaneously apply electric stimuli to the feet and the human body, so that the feet acupuncture stimulus instrument is only to stimulate the acupuncture points through the feet, causing a problem that a treatment effect is not so great.

Accordingly, the present invention has been devised to solve the overall problems that the conventional feet stimulus instruments as stated above have, so it is an object of the present invention to provide a low frequency stimulus instrument that applies low frequency stimuli to feet through the feet-seating part mounted on the upper side of the main body of the stimulus instrument to seat feet, and applies low frequency stimuli to different portions of the human body by connecting the low frequency belt wrapping around a specific portion of the human body, and so on, to the main body, to thereby promote blood circulations and alleviate the pain of stiff muscles.

DISCLOSURE OF INVENTION

A low frequency stimulus instrument according to the preferred features of the present invention comprises a main body generating a low frequency; a feet-seating part mounted on an upper side of the main body and applying low frequency stimuli to feet; a low frequency pad part detachably connected to the main body and attached on specific portions of human body to apply low frequency stimuli thereto; and an adjustment part mounted on the upper side of the main body and adjusting a low frequency generation part of the main body and operations of other respective constituents.

A low frequency stimulus instrument according to the preferred features of the present invention comprises a main body generating a low frequency; a foot-seating part mounted on an upper side of the main body and applying low frequency stimuli to feet; a low frequency belt detachably connected to the main body and wrapping around a specific portion of human body to apply low frequency stimuli; and an adjustment part mounted on the upper side of the main body and adjusting a low frequency generation part of the main body and operations of other respective constituents.

BRIEF DESCRIPTION OF THE DRAWINGS

The above object and other features of the present invention will become more apparent by describing in detail a preferred embodiment thereof with reference to the attached drawings, in which:

Fig. 1 is an exploded perspective view for showing a low frequency stimulus instrument according to an embodiment of the present invention;

Fig. 2 is a view for showing as an illustration a state that a low frequency stimulus instrument according to an embodiment of the present invention is used;

Fig. 3 is a explode perspective view for showing the rear side of the low frequency belt shown in Figs. 1 and 2;

Fig. 4 is an exploded perspective view for showing a low frequency stimulus instrument according to another embodiment of the present invention;

Fig. 5 is a rear view for showing the low frequency belt shown in Fig. 4;

Fig. 6 is a view for showing as an illustration a state that the low frequency belt according to another embodiment of the present invention is used; and

Fig. 7 is a view for showing as another illustration a state that the low frequency belt according to another embodiment of the present invention is used.

EMBODIMENT

Hereinafter, the operations and features of the constituents as described

above will be described in detail through a low frequency stimulus instrument according to preferred embodiments of the present invention.

In the accompanying drawings, Fig. 1 is an exploded perspective view for showing a low frequency stimulus instrument according to an embodiment of the present invention, Fig. 2 is a view for showing as an illustration a state that a low frequency stimulus instrument according to an embodiment of the present invention is used, and Fig. 3 is a explode perspective view for showing the rear side of the low frequency belt shown in Figs. 1 and 2.

As shown in Figs.1 to 3, a low frequency stimulus instrument according to an embodiment of the present invention includes a stimulus instrument main body 10, a feet-seating part 40 mounted on the upper side of the main body 10 to seat feet, a fixing panel part 50 fixing the feet-seating part 40 to the main body 10, a low frequency pad part 60 mounted to the main body 10 and attached on specific portions of a human body, a low frequency belt 70 mounted to the main body 10 and wrapping around the belly portion of the human body, and an extremely long wavelength generator 80 mounted to the main body 10 and generating an extremely long wavelength.

On the upper side of the main body 10 is mounted an adjuster 20 adjusting the operations of individual constituents and a display part 30 enabling a user to check a strength of the generation of a low frequency and an extremely long wavelength, and below the adjuster 20 is installed a low frequency generator(not shown) generating a low frequency by the adjustment of the adjuster 20. In here, the adjuster 20 is electrically connected to and controls the operations of the feet-seating part 40, low frequency pad part 60, low frequency belt 70, extremely long generator 80, and display part 30. Meanwhile, on both sides of the main body 10 is formed a feet-shaped seating groove part 11 to which the feet-seating part 40 is fixed.

The feet-seating part 40 is fixedly inserted into the seating groove part 11 of the main body 10 so that feet are seated on the upper side of the feet-seating part 40, and the feet-seating part 40 is connected through electric wires 41 to the low frequency generator installed below the adjuster 20 and has a plurality of protrusions 40a formed protruded in one body in correspondence with the
5 acupuncture points of feet to apply low frequency stimuli to the acupuncture points of feet as a low frequency is outputted which is generated by the low frequency generator, to thereby promote the blood circulation of the feet. Such a feet-seating part 40 is made of conductive materials having an excellent low frequency
10 conductibility.

The respective protrusions 40a of the feet-seating part 40 are penetrated through the fixing panel part 50 which fixes the feet-seating part 40 to the seating groove part 11 of the main body 10.

The low frequency pad part 60 is connected to the low frequency generator
15 through the connection wires 61 and outputs a low frequency which is generated by the control of the control circuit, which can be attached here and there on portions of a human body to apply low frequency stimuli. At this time, the low frequency pad part 60 generally has a set of two pads for attachments, and can have plural pads in necessity to simultaneously stimulate various portions of a human body.

The low frequency belt 70 is put on the waist to stimulate the acupuncture
20 points of the belly portion, which has a belt part 71 on both ends of which engagement members 71a and 71b are formed in one body for the belt 70 to be put on the waist, a first seating member 73 connected in one body on the rear side of the belt part 71 and on which plural output inducers 72 outputting low frequencies
25 from their surfaces are mounted in correspondence with the acupuncture points of the belly portion, a second seating member 75 inserted between the belt part 71 and the first seating member 73 and on the surface of which heat wires 74 are attached,

and a temperature controller 77 mounted on the belt part 71, supplied with electric power through an electric wire 76 from the main body 10, and controlling a heat temperature of the heat wires 74.

At this time, the respective output inducers 72 are made of materials of
5 conductive fabric paper, conductive silicon, and so on, mounted on locations in correspondence with various acupuncture points such as daewhaeng, jigjang, kwanwon, and so on, which are formed in the belly portion, and connected to the main body 10 through a connection wire 78.

The extremely long wavelength generator 80 is connected to the main body
10 80 through the connection wire to generate an extremely long wavelength by the control of the control circuit, and formed in a bar shape able to be held by hand.

A reference numeral 90 not described is a remote controller which is provided separately from the main body 10 to remotely control respective constituents. Accordingly, a user can adjust the generation of a low frequency and
15 an extremely long wavelength by using the adjuster 20 mounted on the upper side of the main body 10 and the remote controller 90.

In the meantime, jacks 100 are joined on the end portions of the electric wire 76 and the connection wires 61 and 78 connecting the low frequency pad part 60 and the low frequency belt 70 to the main body 10, and on the main body 10
20 is provided plural terminals 12 into which the respective jacks 100 are escapably connected. Accordingly, the low frequency pad part 60 and the low frequency belt 70 can be simultaneously or selectively used when the instrument is used, and can be kept in separation.

A description is made below on the operations of the low frequency stimulus
25 instrument structured as above according to an embodiment of the present invention.

First, in the state that electric power is turned off with the manipulation of the adjuster 20 or the remote controller 90, a user lightly puts his or her feet on the feet-

seating part 40, attaches the pads of the low frequency pad part 60 on the main portions of his or her body, wears the low frequency belt 70 around his or her waist, lightly holds the extremely long wavelength generator 80 by hand, and manipulates the adjuster 20 or the remote controller 90 to turn on the electric power. At this time, the user can simultaneously connect for use the low frequency pad part 60 and the low frequency belt 70 to the main body 10, but can selectively connect them for use.

If the user turns on the electric power of the adjuster 20, a low frequency generated by the low frequency generator mounted below the adjuster 20 is transferred to the feet-seating part 40, low frequency pad part 60, and low frequency belt 70 to apply low frequency stimuli to respective portions of his or her body, and an extremely long wavelength is generated from the extremely long wavelength generator 80 to apply extremely long wavelength stimuli to a hand. At this time, the low frequency belt 70 generates heat together with a low frequency so that the user can obtain low frequency stimuli and hot pack effects at the same time.

In the meantime, the user can freely apply the pads of the low frequency pad part 60 here and there on desired body portions, and adjust the generation of a low frequency and an extremely long wavelength and the generation amount thereof by using the adjuster 20 of the main body 10 and the separate remote controller 90. Further, the user can check in naked eyes the strength of a low frequency and an extremely long wavelength generated through the display part 30 mounted on the upper side of the main body 10.

In the accompanying drawings, Fig. 4 is an exploded perspective view for showing a low frequency stimulus instrument according to another embodiment of the present invention; Fig. 5 is a rear view for showing the low frequency belt shown in Fig. 4; Fig. 6 is a view for showing as an illustration a state that the low frequency belt according to another embodiment of the present invention is used; and Fig. 7 is

a view for showing as another illustration a state that the low frequency belt according to another embodiment of the present invention is used. The same reference numerals as those in Figs. 1 to 3 denote the same constituents having the same functions.

5 As shown in Fig. 4 and Fig. 5, a low frequency belt 110 of a low frequency stimulus instrument according to another embodiment of the present invention includes a belt part 111 to both ends of which engagement members 111a and 111b are mounted in one body to be put on arms, legs, and so on, and an output pad 112 attached on the rear side of the belt part 111 to be in contact with the human body and receiving and outputting a low frequency generated from the low frequency generator of the main body 10. In here, the output pad 112 receives a low frequency from the main body 10 through a connection wire 130 to the end of which a jack 120 is coupled and applies low frequency stimuli to arms, legs, and so on, of the human body.

15 In the meantime, the low frequency belt 110 further includes an extension belt part 113 as shown in Fig. 7. The both ends of the extension belt part 113 are releasably engaged to the engagement members 111a and 111b of the belt part 111 when put around the waist so that the belt part 111 is extended to be worn around the waist, and the extension belt part 113 has an elastic property to become tightened on the waist when put on.

20 As described in detail, the low frequency stimulus instrument according to the present invention applies low frequency stimuli to feet through the feet-seating part mounted on the upper side of the main body of the stimulus instrument to seat feet, applies low frequency stimuli to different portions of human body by connecting the low frequency pad part attached on the main portions of human body, the low frequency belt wrapping around main portions of the human body, and so on, to the main body, and provides a heat stimulus effect to a hand with the extremely long

wavelength generator connected to the main body, so that it promotes blood circulations, to thereby bring out a fatigue relief and muscle-pain relief effect.

Further, the low frequency pad part and the low frequency belt are releasably coupled to the main body, so that the both can be all connected for use
5 as well as selectively connected for use.

Although the preferred embodiment of the present invention has been described, it will be understood by those skilled in the art that the present invention should not be limited to the described preferred embodiment, but various changes and modifications can be made within the spirit and scope of the present invention
10 as defined by the appended claims.

What is claimed is:

1. A low frequency stimulus instrument, comprising:

a main body generating a low frequency;

5 a feet-seating part mounted on an upper side of the main body and applying low frequency stimuli to feet;

a low frequency pad part detachably connected for mounting to the main body and attached on specific portions of human body to apply low frequency stimuli thereto; and

10 an adjustment part mounted on the upper side of the main body and adjusting a low frequency generation part of the main body and operations of respective constituents.

2. The low frequency stimulus instrument as claimed in claim 1, wherein
15 plural protrusions are formed in one body on the feet-seating part in correspondence with acupuncture points of feet.

3. The low frequency stimulus instrument as claimed in claim 2, further comprising a fixing panel part through which the respective protrusions of the feet-seating part are penetrated, and fixing the feet-seating part on the upper side of the
20 main body.

4. The low frequency stimulus instrument as claimed in claim 1 or claim 3, further comprising a low frequency belt detachably connected to the main body, and
25 wrapping around and applying low frequency to a specific portion of human body.

5. The low frequency stimulus instrument as claimed in claim 1 or claim 3,

further comprising an extremely long wavelength generator connected to the main body and generating an extremely long wavelength.

6. The low frequency stimulus instrument as claimed in claim 4, wherein
5 the low frequency belt includes:

a belt part on both ends of which engagement members are joined in one body so that the belt part is worn around the waist of human body;

a first seating member coupled in one body on the rear side of the belt part and having plural output inducers receiving and outputting low frequencies
10 generated from surfaces thereof, and the first seating member being attached in correspondence with acupuncture points formed in the belly portion of human body;

a second seating part inserted between the belt part and the first seating member and having heat wires on the surface thereof; and

a temperature controller mounted on the belt part, electrically connected to
15 the main body, and supplied with electric power from the main body to control a heat temperature of the heat wires.

7. The low frequency stimulus instrument as claimed in claim 4, wherein
the low frequency belt includes:

20 a belt part on the both ends of which engagement members are attached in one body to be put on arms, legs, and so on of human body; and

an output pad attached on the rear side of the belt part to be in contact with the human body and receiving and outputting a low frequency generated from the low frequency generation part of the main body.

8. The low frequency stimulus instrument as claimed in claim 7, further
25 comprising an extension belt part the both ends of the extension belt part are

releasably engaged to the engagement members of the belt part so that the belt part is extended to be worn around the waist, and the extension belt part having an elastic property to become tightened on the waist when put on

5 9. The low frequency stimulus instrument as claimed in claim 1, further comprising a remote controller provided separately from the main body and remotely controlling the operations of respective constituents.

10 10. A low frequency stimulus instrument, comprising:
a main body generating a low frequency;
a feet-seating part mounted on an upper side of the main body and applying low frequency stimuli to feet;
a low frequency belt detachably connected to the main body and wrapping around a specific portion of human body to apply low frequency stimuli thereto; and
15 an adjustment part mounted on the upper side of the main body and adjusting the low frequency generation part of the main body and operations of respective constituents.