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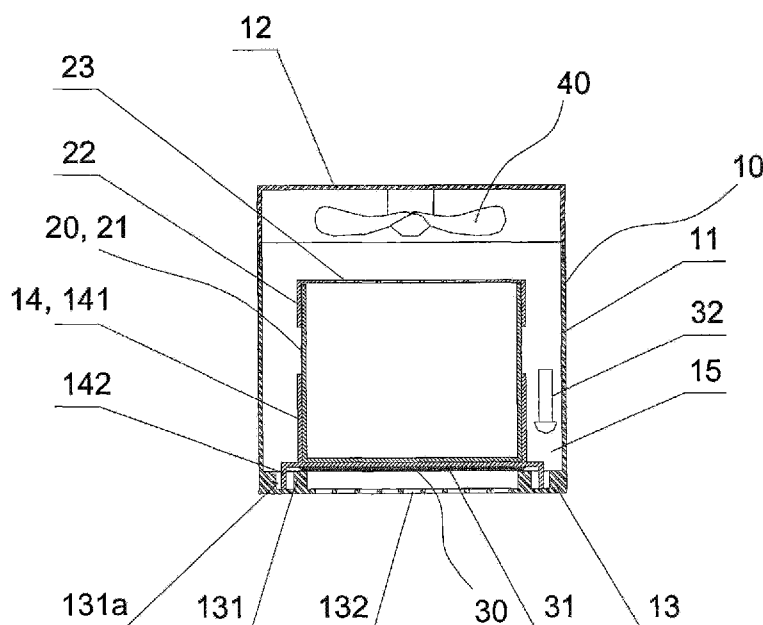
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(54) Title: PORTABLE SAUNA DEVICE WITH HERBAL ESSENTIAL OILS

Fig.3



(57) Abstract: The present invention relates to a portable sauna device with herbal essential oils including: a body (10); a medicinal tray (20) disposed fixedly in the body (10); a thermal, generating module (30) including thermal generating plate (31) located under the medicinal tray (20) and a thermal sensor (32); the blower (40) arranged above the medicinal tray (20); the controller (50) controls the operation of the thermal generating module (30) and the blower (40); and the power supply (60) provides power for the general operation of the device. With the configuration of the thermal generating module (30) operated by heat radiation to indirectly heat the medicinal herbs to produce hot-essential oils, thus ensuring the highest quality of essential oils and hygiene. By automating the process of heating, blowing essential oils and predetermined heat intake into the human body, the pain relief and treatment is highly effective, which meets the treatment-cure technique and requirements.



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— *of inventorship (Rule 4.17(iv))*

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PORTABLE SAUNA DEVICE WITH HERBAL ESSENTIAL OILS

[Technical Field]

[0001] The present invention relates to a sauna device with medicinal essential oils, more specifically, to a portable sauna device with herbal essential oils to bring essential oils with heat from medicinal herbs into acupuncture points on the human body for therapeutic purposes and especially effective in releasing pain, relaxation and losing belly fat.

[Background Art]

[0002] The method of treatment and cure by using heat source to diffuse directly essential oils from medicinal herbs or drugs, etc., into chakras, acupuncture points (especially in areas where treatment is needed) through the skin, which has become popular for hundreds of years (hereinafter referred to as the method of sauna), especially in Asian countries such as China, Vietnam, Japan, India, Korea, etc., this treatment method is used much.

[0003] This conventional method of sauna is carried out in many different ways and equipment/tools. The most common is the burning of wormwood bait on a slice of ginger placed on the skin or burning medicinal herbs to produce smoke of essential oils and then blow by mouth to allow the smoke of essential oils into acupuncture points, or sauna with essential oils created by heating medicinal herbs. However, the above methods and equipment / tools are often not really effective and not convenient.

[0004] In Vietnam, recently a moxibustion machine of patent no. 12215 published on January 27, 2014 of Khanh Thien Pharmaceutical JSC has been developed. This moxibustion device has brought effective results in wormwood inhalation. However, this moxibustion device is still not really effective because it is only better than the conventional methods in the point that the blower is used instead of using the mouth to blow smoke and heat into the area to be ventilated. All other operations such as burning the wormwood and pouring wormwood into the wormwood tube are by hand and allowing the free fire without temperature control, thus creating much smoke and causing burns if not

operated proficiently by physicians. Therefore, with diseases that require sauna in many different areas of the body, the above hand-held devices will not meet the treatment requirements.

[0005] Previously, Chinese patent nos. CN 1359670 A, CN 2038371 U, and CN 201719542 U disclosed the types of hand-held moxibustion machines, facilitating to moxibustion and limit the amount of oil loss. These machines have a common structure including: a truncated pyramid or cylindrical shaped nozzle to guide the flow of hot air containing wormwood essential oil to the outside, a wormwood combustion chamber in which wormwood is burned to produce hot air containing wormwood essential oil, a blower to supply air to burn wormwood and blow hot air containing essential oils to go out into the acupuncture points to be treated, the case, and the handle part for easy control. However, these moxibustion machines have a disadvantage of only creating a stream of hot air containing the unique wormwood oil and the hot air flow of this wormwood oil when exits through the truncated pyramid or cylindrical shaped nozzle is still dispersed, not concentrated into a thin ray, the speed and spin of the air flow are low, resulting in the deep swirling of the hot air into the acupuncture point (similar to acupuncture needles) to get the maximum amount of essential oil into the patient's meridians is still limited.

[0006] In general, all of the above-mentioned conventional devices have the general principle of burning wormwood and blowing smoke containing wormwood oil into the area to be treated but still have not achieved the effectiveness, convenience and hygiene safety as well as device automation.

[Disclosure]

[Technical Problem]

[0007] An object of the present invention is to provide portable sauna device with herbal essential oil, which is capable of achieving the highest inhalation effect, the effectiveness, convenience and hygiene safety as well as device automation.

[Technical Solution]

[0008] In order to achieve the above-mentioned objects, the invention relates to a portable sauna device with herbal essential oil including: a body (10), a medicinal tray (20) disposed fixedly in the body (10), a thermal generating module (30), a blower (40) arranged above the medicinal tray (20), a controller (50) controlling the operations of the thermal generating module (30) and the blower (40), and a power supply (60) supplying electricity for general operations of the device, wherein:

[0009] the body (10) formed with a hollow round cylindrical structure and includes: a main body (11) with the top face of opened outlet; a cover (12) is fitted openable to the opened outlet of the main body (11); a base portion (13) formed with a plurality of installing cylinders (131) that formed at equal positions and protruding from the inner side of the base portion (13) and each of installing cylinder (131) having a mounting hole (131a), and a plurality of ejecting holes (132) spaced evenly with predetermined distances on the base portion (13); a support base (14) which formed in a hollow cylindrical shape with a predetermined diameter smaller than the diameter of the main body (11), with support wall (141) and four legs (142) protruding from its bottom to be fixed into the four mounting holes (131a) of the four installing cylinders (131), respectively, thereby forming a part of the essential oil guiding path (15) constituted between the inner wall of the main body (11) and the support wall (141) and between the bottom of the support base (14) and the base portion (13); a fitting portion (16) arranged on the outside of the main body (11);

[0010] the medicinal tray (20) is configured to include: a tray body (21) which is hollow and has a predetermined diameter to be fixed in the support wall (141) of the support base (14) to form a part of the essential oil guiding path (15) between the inner wall of the main body (11) and the tray body (21), and an opened top; a cap (22) formed to be fitted into the opened top face of the tray body (21); and a plurality of ejecting holes (23) formed on the cap (22); and

[0011] the thermal generating module (30) is configured to include: a thermal generating plate (31) disposed close to the bottom of the support base (14) to

provide heat from 60⁰C to 90⁰C for the medicinal tray (20); and at least one thermal sensor (32) located in the essential oil guiding path (15) and is close to the base portion (13) so that the thermal sensor (32) senses a predetermined temperature zone near the base portion (13) set in the range of 37⁰C to 42⁰C by the pre-program of the controller (50).

[Advantageous Effects]

[0012] With the arrangement of the thermal generating plate 31 working by heat radiation to indirectly heat the medicinal herbs to produce hot temperature bearing essential oils, thus ensuring the highest quality and hygiene of essential oils.

[0013] By automating the process of heating, blowing essential oils and pre-programed temperature into the human body, the effectiveness of pain relief and treatment is high thanks to technical response and treatment requirements.

[Description of Drawings]

[0014] Fig.1 is an illustration of the portable sauna device with herbal essential oil according to a preferred embodiment of the invention;

[0015] Fig.2 is a perspective view illustrating the portable sauna device with herbal essential oil of Fig.1, in which the handle is removed;

[0016] Fig.3 is a longitudinal section view of the device of Fig.2;

[0017] Fig.4 is a longitudinal section view of the device body; and

[0018] Fig.5 is a cross sectional view of the cut line A-A in Fig. 4.

[Mode for Invention]

[0019] Here after, the present invention will be described in detail through the preferred embodiments of the invention and illustrations, but it should be understood that the invention is not limited there. The attached drawings are simple drawings that merely illustrate the principle and technical nature of the invention, so in fact can be modified or improve similarly but not beyond the scope of the invention as attached in the below mentioned claims.

[0020] As shown in Fig.1 is an illustration of the portable sauna device with herbal essential oil according to a preferred embodiment of the invention; Fig.2

is a perspective view illustrating the portable sauna device with herbal essential oil of Fig.1, in which the handle is removed; Fig.3 is a longitudinal section view of the device of Fig.2; Fig.4 is a longitudinal section view of the device body; and Fig.5 is a cross sectional view of the cut line A-A in Fig. 4.

[0021] The portable sauna device with herbal essential oil 1 according to the preferred embodiment, which includes the body 10, the medicinal tray 20 arranged in the body 10, the thermal generating module 30 arranged inside the body 10, blower 40 arranged above the medicinal tray 20, the controller 50 controlling the operation of the thermal generating module 30 and the blower 40, and the power supply 60 providing power for the general operation of the device 1.

[0022] According to preferred embodiment, the body 10 formed with a hollow round cylindrical structure and made of heat resistant plastic to reach 200°C and has been tested for medical use, and includes: a main body 11 with the top face of opened outlet; a cover 12 can be opened into the opened outlet of the main body 11; a base portion 13 formed with four installing cylinders 131 formed at four positions spaced each other and protruding from the inner side of the base portion 13 and each of the installing cylinder 131 has a mounting hole 131a, and a plurality of the first ejecting holes 132 are arranged evenly with predetermined distances on the base portion 13; the support base 14 composed of a hollow cylindrical shape with a predetermined diameter smaller than the diameter of the main body 11, with a support wall 141 and four legs 142 protruding from its bottom to be fixed into four mounting holes 131a of four installing cylinders 131, respectively, so that part of the essential oil conducting path 15 is constituted by the inner part of the main body 11 combined with the support wall 141 and the bottom of the support base 14 combined with the base portion 13; a fitting portion 16 arranged on the outer circumference of the main body 11.

[0023] According to another preferred embodiment of the present invention, the body 10 may be configured in a rectangular shape and the base portion 13 is

formed with a concave or convex surface that is suitable for many positions on the human body, that is, the body 10 does not necessarily have a hollow circular cylinder structure as shown on the drawings.

[0024] According to the preferred embodiment, the base portion 13 also includes a protective layer (not shown in the figure) attached to the bottom of the base portion 13, in which the protective layer is made of soft material such as silicon or heat-resistant artificial leather.

[0025] According to the preferred embodiment, the medicinal tray 20 and the support base 14 are made of heat transfer material, preferably aluminum.

[0026] The medicinal tray 20 is configured as a hollow cylindrical shape including: a tray body 21 with an appropriate diameter to be fixed into the support wall 141 of the support base 14 to create a part of the essential oil conducting path 15 between the main body 11 and tray body 21, and has an opened top face; a cap 22 formed to cover the opened top face of the tray body 21; and a plurality of second ejecting holes 23 created on the cap 22. According to the preferred embodiment, the height of the tray body 21 is lower than the height of the main body 11 of the body 10.

[0027] The thermal generating module 30 is configured to include: a thermal generating plate 31 operating as heat radiation device, which arranged close to the lower bottom of the support base 14 for providing heat between 60⁰C and 90⁰C for the medicinal tray 20; and a thermal sensor 32 arranged in the essential oil conducting path 15 and close to the base portion 13 in order to sense and adjust the temperature between 37⁰C and 42⁰C near the base portion 13 (will be described in detail later). The thermal generating module 30 is electrically connected to the power supply 60 and the controller 50 to be operated and controlled according to the preprogrammed programming of the controller 50. In addition, according to another embodiment, the present invention may consist of multiple sets of thermal sensor 32.

[0028] The blower 40 is fixed at the center of the inner bottom of the cover 12 to blow the essential oil produced from the medicinal herbs inside the

medicinal tray 20 into the essential oil conducting path 15 (to be described later). The blower 40 is electrically connected to the power supply 60 and the controller 50 to be operated and controlled according to the preprogrammed programming of the controller 50.

[0029] According to the present invention, the power supply 60 is a battery with input voltage of 220V-250V and the output voltage of 24V, and the controller 50 is pre-programmed controlling programs of the blower 40 and the thermal generating module 30.

[0030] In addition, the body 10 also includes a handle 17 on which the controller 50 and power supply 60 are installed. The handle 17 fitted removable to the main body 11 through the mounting portion 16. Thus, the power supply 60 on the handle 17 can be charged easily and conveniently, and the body 10 can also be cleaned and easier to store. Furthermore, the handle 17 formed with two parts that can be rotated relatively to each other by a swivel joint 171, so that the body 10 can rotate relatively to the parts of the human body.

[0031] The following operation principle of the portable sauna device 1 will be described in detail through the steps and activities of the parts.

[0032] Preparation step including: opening the cover 12 and the cap 22 to input dry medicinal herbs with a predetermined amount into the tray body 21 of the medicinal tray 20; closing the cap 22 and the cover 12 of the body 10 in turns; mounting the handle 17 into the mounting portion 16; and adjusting the deflection angle between the body 10 and the handle 17 through the swivel joint 171 to be able to use the device 1 in the most convenient position.

[0033] The operation of the thermal generating module 30: the thermal generating plate 31 is powered by the power supply 60 through the control of the controller 50 to generate heat in the range from 60°C to 90°C for the medicinal tray 20, thereby the medicinal herbs inside the medicinal tray 20 indirectly heated to produce vapor of herbal essential oil to enter into the essential oil conducting path 15 through the second ejecting holes 23 of the cap 22; the thermal sensor 32 has sensing to thermal zone predetermined between 37°C and

42°C near to the base portion 13; in case the thermal zone near to the base portion 13 is outside the temperature range predetermined from 37°C to 42°C, the controller 50 will turn on/off the power supply 60 powering to the thermal generating plate 32 and/or the blower 40.

[0034] The operation of the blower 40 is activated/stopped by the pre-programmed control of the controller 50; in details, the blower 40 will operate to blow the oil vapor from medicinal herbs to outside of the device 1 through the essential oil conducting path 15 and the first ejecting holes 132, and the blower 40 will stop operating after a predetermined time or the temperature around the thermal sensor 32 is out of the pre-determined range from 37°C to 42°C.

[0035] Principle of treatment by the portable sauna device with herbal essential oil 1 of the present invention: with a pre-determined temperature from 37°C to 42°C, it is the most suitable for dilating capillaries and pores, easily accessible into the system of chakras, acupuncture points and target organs on the body that need sauna. The high quality and safety herbal essential oil produced thanks to the chair of the patent will be diffused, absorbed and directed directly into parts of the human body so that the therapeutic and treatment effect is fast.

[CLAIMS]**[Claim 1]**

A portable sauna device with herbal essential oil including: a body (10), a medicinal tray (20) disposed fixedly in the body (10), a thermal generating module (30), a blower (40) arranged above the medicinal tray (20), a controller (50) controlling the operations of the thermal generating module (30) and the blower (40), and a power supply (60) supplying electricity for general operations of the device, wherein:

the body (10) formed with a hollow round cylindrical structure and includes: a main body (11) with the top face of opened outlet; a cover (12) is fitted openable to the opened outlet of the main body (11); a base portion (13) formed with a plurality of installing cylinders (131) that formed at equal positions and protruding from the inner side of the base portion (13) and each of installing cylinder (131) having a mounting hole (131a), and a plurality of ejecting holes (132) spaced evenly with predetermined distances on the base portion (13); a support base (14) which formed in a hollow cylindrical shape with a predetermined diameter smaller than the diameter of the main body (11), with support wall (141) and four legs (142) protruding from its bottom to be fixed into the four mounting holes (131a) of the four installing cylinders (131), respectively, thereby forming a part of the essential oil guiding path (15) constituted between the inner wall of the main body (11) and the support wall (141) and between the bottom of the support base (14) and the base portion (13); a fitting portion (16) arranged on the outside of the main body (11);

the medicinal tray (20) is configured to include: a tray body (21) which is hollow and has a predetermined diameter to be fixed in the support wall (141) of the support base (14) to form a part of the essential oil guiding path (15) between the inner wall of the main body (11) and the tray body (21), and an opened top; a cap (22) formed to be fitted into the opened top face of the tray body (21); and a plurality of ejecting holes (23) formed on the cap (22); and

the thermal generating module (30) is configured to include: a thermal generating plate (31) disposed close to the bottom of the support base (14) to provide heat from 60⁰C to 90⁰C for the medicinal tray (20); and at least one thermal sensor (32) located in the essential oil guiding path (15) and is close to the base portion (13) so that the thermal sensor (32) senses a predetermined temperature zone near the base portion (13) set in the range of 37⁰C to 42⁰C by the pre-program of the controller (50).

[Claim 2]

The device of claim 1, wherein the base portion (13) further includes a protective layer attached to the bottom of the base portion (13), wherein the protective layer is made of soft material such as silicon, heat-resistant artificial leather.

[Claim 3]

The device of claim 1, wherein the device body (10) is made of heat-resistant medical plastic.

[Claim 4]

The device of claim 1, wherein the medicinal tray (20) and the support base (14) are made of the heat transfer material such as aluminum.

[Claim 5]

The device of claim 1, wherein the blower (40) fixed at the center of the inner bottom of the cover (12) to blow the essential oil produced from the medicinal herbs inside the medicinal tray (20) into the essential oil guiding path (15) and then going outside through the ejecting holes (132), wherein the operates of the blower (40) controlled by the pre-programed programming of the controller (50).

[Claim 6]

The device of claim 1, wherein the power supply (60) is the battery with input voltage from 220V to 250V and output voltage of 24V.

[Claim 7]

The device of claim 1, wherein the body (10) further includes a handle (17) on which the controller (50) and the power supply (60) are installed, wherein the handle (17) removed from the main body (11) through the mounting portion (16).

[Claim 8]

The device of claim 7, wherein the handle (17) is composed of two parts that rotated relative to each other by a swivel joint (171) so that the body (10) rotates in accordance with parts on human body.

Fig.1

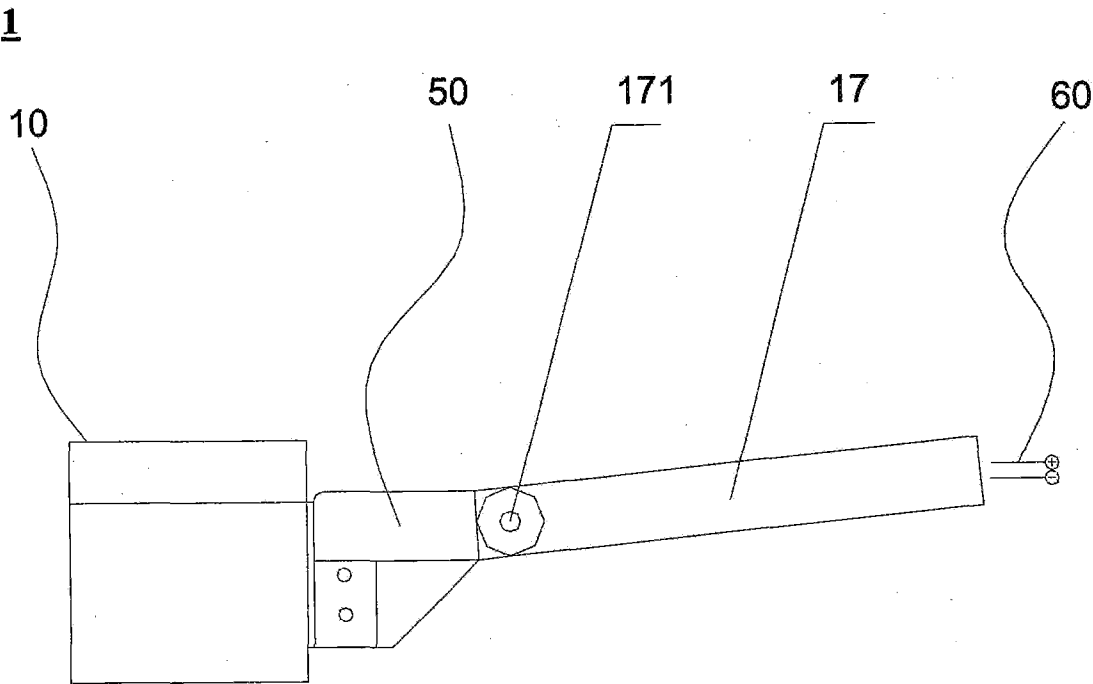
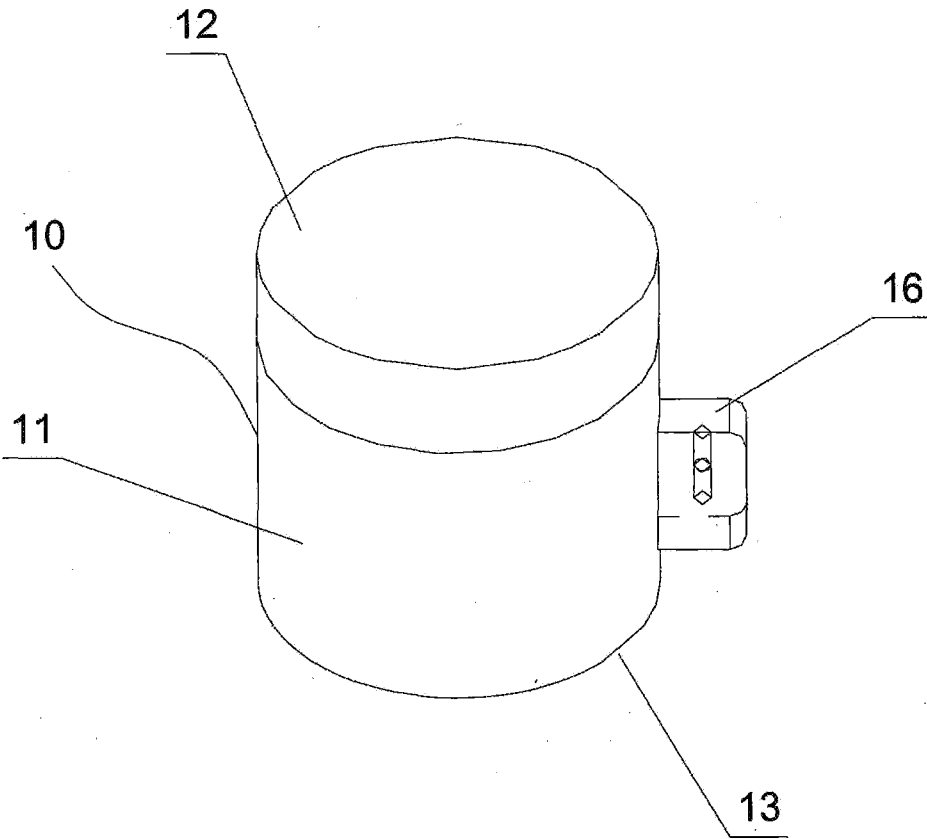


Fig.2



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Fig.3

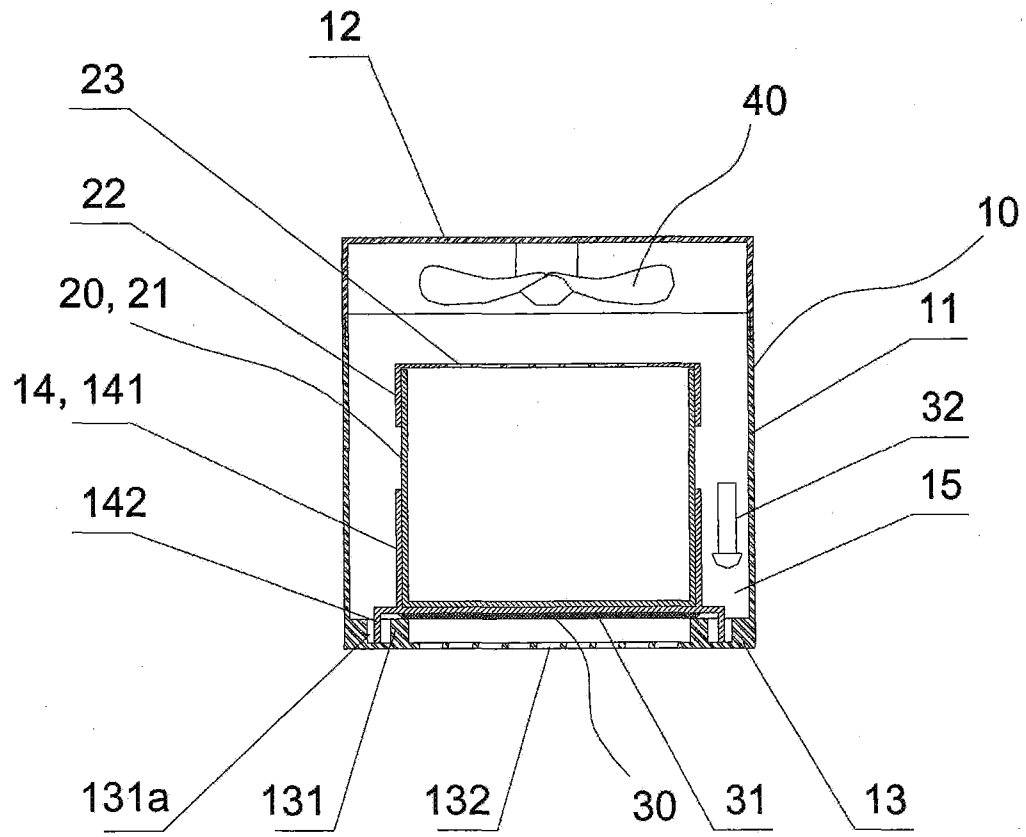
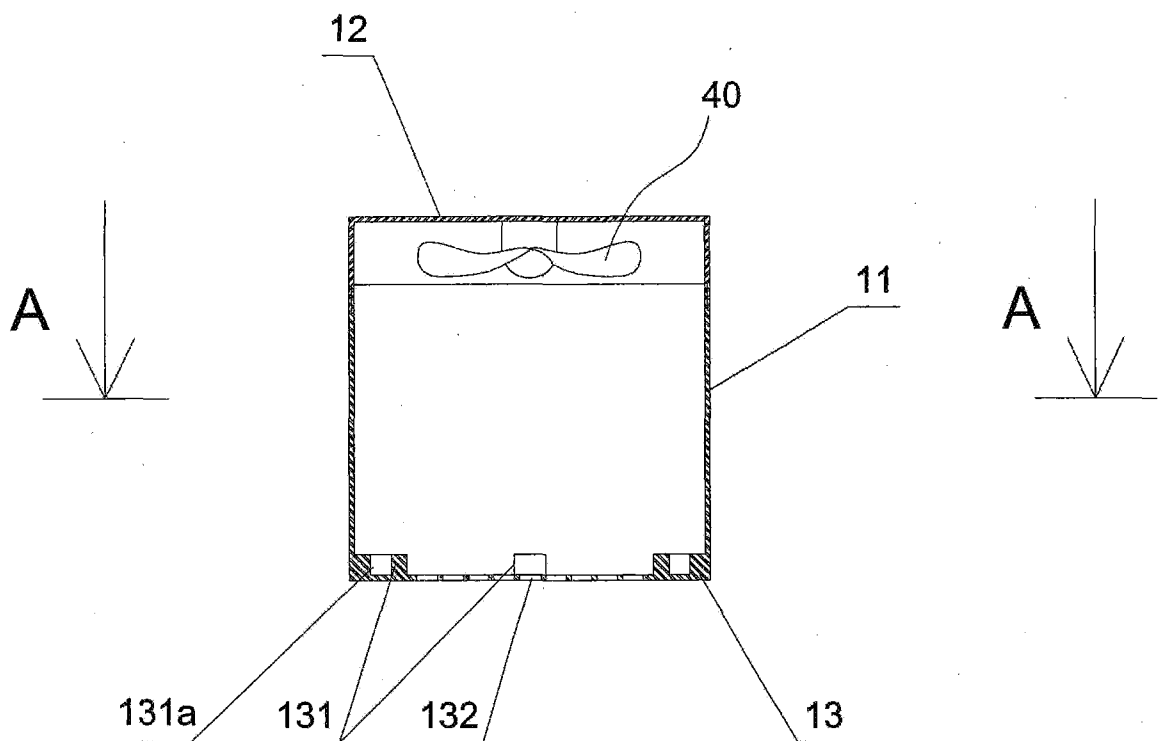
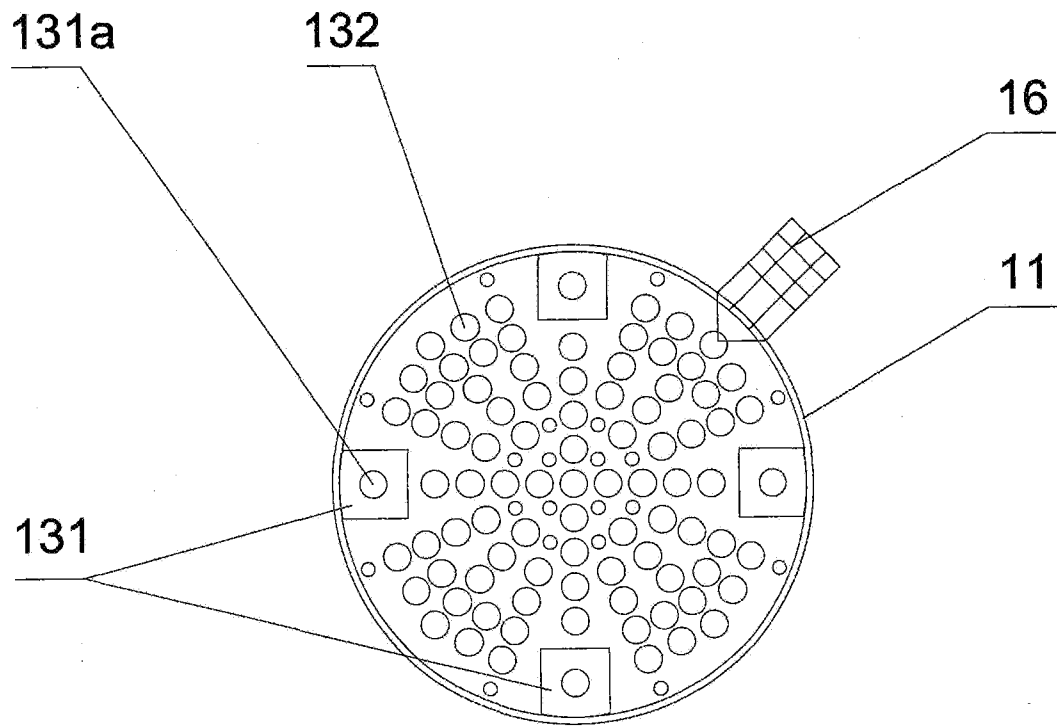


Fig.4



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Fig.5



INTERNATIONAL SEARCH REPORT

International application No

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A. CLASSIFICATION OF SUBJECT MATTER

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ADD.

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

A61H A61N A61F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

EPO-Internal, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	CN 207 554 386 U (GUANGZHOU YIZHUAI HEALTHCARE TECH CO LTD) 29 June 2018 (2018-06-29) claims 1-5; figures 1-11 -----	1-8
X	CN 201 609 484 U (*) 20 October 2010 (2010-10-20) claims 1-5; figures 1-5 -----	1-8
X	CN 205 683 281 U (GAO GUOLANG) 16 November 2016 (2016-11-16) claims 1-8; figures 1-5 -----	1-8
X	CN 104 042 440 A (SHI GUOZHONG) 17 September 2014 (2014-09-17) claims 1-6; figure 1 -----	1-8



Further documents are listed in the continuation of Box C.



See patent family annex.

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INTERNATIONAL SEARCH REPORT

Information on patent family members

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Patent document cited in search report		Publication date	Patent family member(s)	Publication date
CN 207554386	U	29-06-2018	NONE	
CN 201609484	U	20-10-2010	NONE	
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