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APPARATUS FOR THE ARTIFICIAL PRODUCTION OF CLIMATIC REMEDIES FOR THERAPEUTIC TREATMENTS

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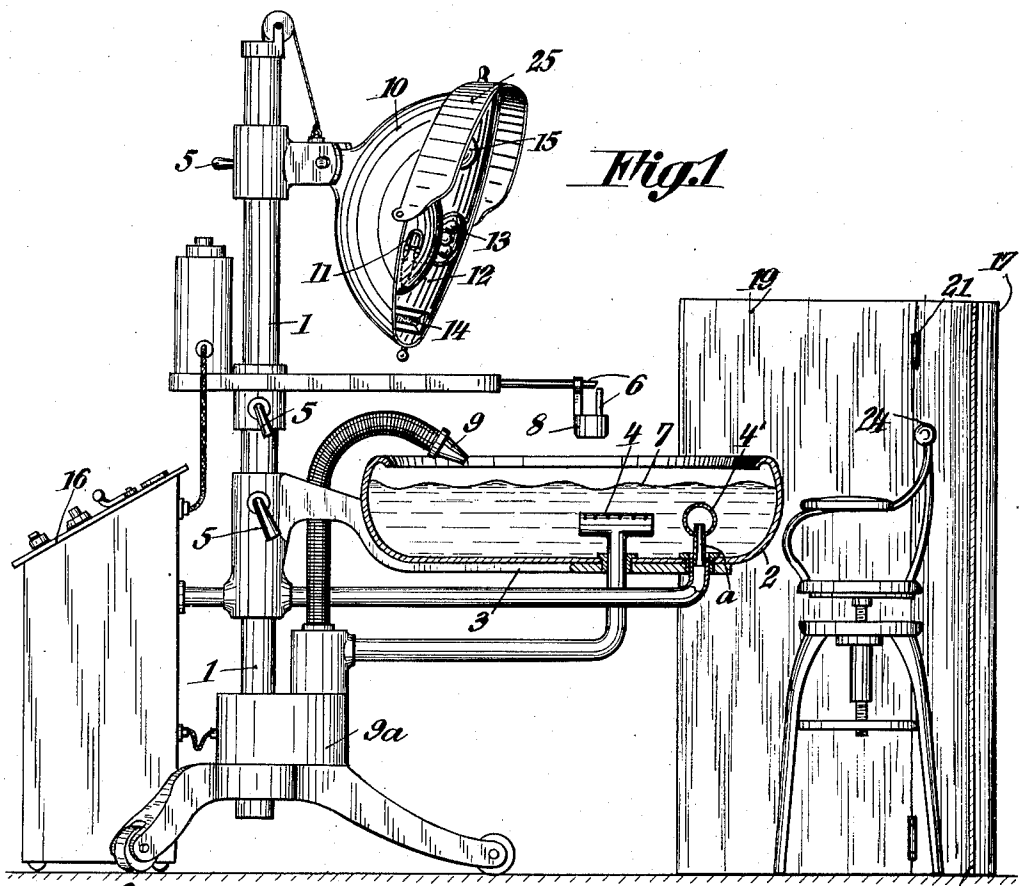


Fig. 1

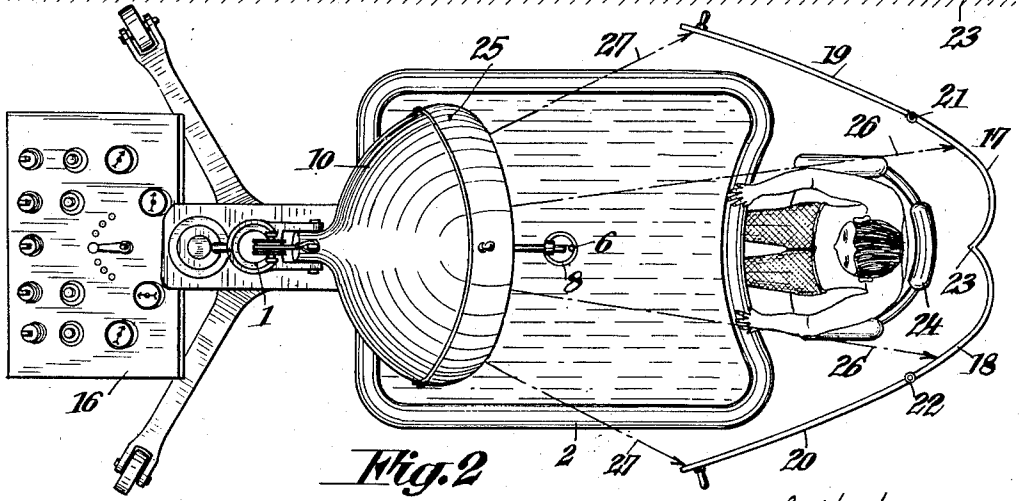


Fig. 2

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APPARATUS FOR THE ARTIFICIAL PRODUCTION OF CLIMATIC REMEDIES FOR THERAPEUTIC TREATMENTS

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3 Claims. (Cl. 128—395)

Irradiation is of very considerable importance in medicine and cosmetics, although its use is not quite satisfactory, because this kind of therapeutic treatment is confined solely to the action of the rays.

The present invention has for its object to improve the action of the rays by simultaneously creating similar conditions, to which the organism is exposed actually, if the patient visits a health resort, a seaside place and so forth.

For this object, the apparatus according to the present invention is provided not only with lamps generating various types of rays, but also with a moistening or drying plant, a fan or the like generating a convenient current of air which passes over the water-level, an apparatus for the supply of oxygen and carbonic acid and so forth, so that practically a small climatic plant is produced, which is adapted to subject the patient to an artificial climatic treatment, which corresponds to the natural climatic treatment.

One mode of carrying out the present invention is illustrated by way of example diagrammatically in the accompanying sheet of drawings in which Figs. 1 and 2 show the apparatus in part-sectional side view and in plan view respectively.

A basin 2 is mounted on a platform 3, which is vertically and laterally adjustable on an upright post 1. In the illustrated embodiment, an irradiation device 10 and one or more spraying devices 6 for moist air, dry air, steam and the like are mounted to be vertically and laterally adjustable on the post 1. Clamping devices operated by handles 5 serve for securing in position the platform 3 as well as the said devices.

Further a blast apparatus 9a is mounted on the post 1 and carries a nozzle 9, which is adapted to be directed in the direction of the liquid level of the basin 2.

Pipes 4 and 4', provided with nozzles such as a, terminate within the basin 2, the pipe 4 being connected with an air-compressor, while the pipe 4' may be placed in communication with an oxygen cylinder or with a carbonic acid cylinder. The reflector 10 is adjustable at different angles with respect to the liquid level and carries lamps for producing rays of light of different wavelengths (from infra red to ultra violet). According to the present invention a mercury-vapor lamp 11 is disposed at the focus of the reflector 12, and lamps 13 of different colors, such as neon-red and so forth, and lamps 14 of different radiations of heat, among them also heating spirals, are arranged around said mercury-vapor lamp. Also a common incandescent lamp 15 is arranged in the reflector 12. According to the lamp or lamps placed in circuit at the time, rays or combinations of rays of the desired wave-lengths are directed towards the patient or on to the water contained in the basin 2 in such a way, that it is possible to produce the solar spectrum varying in accordance with the altitudes at respective points on the earth's surface. In the construction shown in Fig. 1, the lamps 11, 13, 14 and 15 are arranged in the reflector 12 independently controlled and movable with respect to one another, so that when switching on different lamps at the same time and turning the lamps to the desired angles, it is possible to obtain the desired degree of mixture and intensity of the convenient kinds of rays. A reflecting shield 25 is hinged to the reflector 12. Either the direct rays or the indirect rays, reflected by the liquid-level or by other reflecting surfaces, are directed against the patient. However, the reflector may be set at such an angle, that both effects may be produced simultaneously. Air of the desired pressure may be directed against the patient or towards the liquid-level by controlling the blower 9a, so that in the case first mentioned, the patient may be subjected to a cool or hot current of air, while in the case last mentioned, also waves or eddies of different strengths may be produced on or in the water.

By connecting the pipe 4 with the source of compressed air, or by establishing communication between the pipe 4' and the source of oxygen or carbonic acid it is possible to establish oxygenous or carbonated atmospheric conditions or an atmospheric condition which is free from dust, because during its passage through the water, the air is purified or the composition of the air can be varied according to requirement. The sprayers 6 are adjustably arranged above the basin, thus between the source of rays and the water and they are supplied with convenient essences (pine leaf oil, salt or the like), which are deposited in a cup 8, preferably secured to the sprayers 6 in convenient manner. A switchboard 16 is arranged on the apparatus and serves for operating the different devices and instruments.

However, a considerable part of the rays emitted by the different lamps of the irradiation device 10 is lost, because only the rays directly falling on to the patient are utilized, while the lateral rays bounded by the lines 26 and 27, pass the patient without exerting any beneficial effect. According to the present invention the rays, bounded by the lines 26 and 27 and which pass the patient without effect, are utilized for irradi-

ating the back as well as the sides of the patient. In order to attain this object a reflector is placed behind the patient, e. g., in front of the basin 2, in such a manner, that the patient rests between the basin 2 and the said reflector. This reflector consists of reflecting surfaces 17, 18, which are arranged side by side and the adjacent borders of which are abutting substantially in heart-shaped manner. The reflecting surfaces 17, 18 are substantially straight in longitudinal section and of parabolic shape in cross-section. Reflecting wings 19, 20 of substantially straight longitudinal section and of a cross-sectional shape preferably forming the continuation of the parabola of the reflecting surfaces 17, 18, are hinged at 21 and 22 to the free end of said reflecting surfaces. Thus the rays, which otherwise are not utilized, are reflected by the reflecting surfaces and wings on to the back and sides of the patient, so that all parts of the body may be treated in the desired manner. The abutting edges 23 of the heart-shaped reflector surfaces 17, 18 are disposed substantially in a plane with the middle line of the basin 2 or of a seat 24, so that the said edges 23 are directed towards the spine of the patient. The seat 24 is disposed between the basin 2 and the reflector 17, 18. A further advantage of the arrangement of this reflector consists in that the various climatic substances are intercepted partly by the reflector and thus they are utilized in a favorable manner; further the patient is enclosed in a sort of cabin, so that a draught is rendered impossible and the patient is subjected to a possibly uniform irradiation heat.

From the above it is clear that, by the suitable combination of the different devices and by adding a convenient essence (salt, iodine, radium-salts and so forth) to the water contained in the basin 2 as well as by employing a convenient spraying liquid, it is possible to produce the desired climatic conditions and further it is possible to regulate the temperature by suitably heating the current of air. Thus the patient can be treated under the same conditions as would be the case in the open air and further combined climatic conditions can be produced, which in the open air are quite distinct from one another.

While we have described our invention as taking a particular form, it will be understood that we do not limit ourselves to the precise construction set forth, but consider that we are at liberty to make such changes and alterations as fairly come within the scope of the appended claims.

What we claim is:

1. An apparatus for the artificial production of climatic remedies for therapeutic treatments, comprising in combination a post, a reflector slidably mounted on said post, a plurality of lamps for producing different types of radiations having different wave lengths and for producing rays from infra-red to ultra-violet arranged in said reflector, a spraying device slidably mounted on said post below said reflector, a liquid basin adjustably mounted on said post underneath said reflector, means secured to said post for the supply of fresh air and of a gaseous body for producing a certain climatic condition, the liquid level reflecting the rays towards a patient, and an upright reflector at the side of the basin opposite said irradiation lamps, said upright reflector comprising reflecting surfaces arranged side by side and being substantially straight in longitudinal section and of parabolic shape in cross-section and the adjacent borders of said reflecting surfaces abutting substantially in heart-shaped manner, so that practically a small climatic cabinet is produced by which the patient can be subjected to an artificial climatic treatment.

2. An apparatus for the artificial production of climatic remedies for therapeutic treatments, comprising in combination a post, a reflector slidably mounted on said post, a plurality of lamps for producing different types of radiations having different wave lengths and for producing rays from infra-red to ultraviolet arranged in said reflector, a spraying device slidably mounted on said post below said reflector, a liquid basin adjustably mounted on said post underneath said reflector, means secured to said post for the supply of fresh air and of a gaseous body for producing a certain climatic condition, the liquid lever reflecting the rays towards a patient, and an upright reflector disposed at the side of said basin opposite said irradiation lamps, said upright reflector comprising reflecting surfaces which are arranged side by side and are substantially straight in longitudinal section and of parabolic shape in cross-section and the adjacent borders of said reflecting surfaces abutting substantially in heart-shaped manner, and a reflecting wing hinged to the free end of each reflecting surface, each reflecting wing being of substantially straight longitudinal section and of a cross-sectional shape forming the continuation of the parabola of said reflecting surfaces, so that practically a small climatic cabinet is produced by which the patient can be subjected to an artificial climatic treatment.

3. An apparatus for the artificial production of climatic remedies for therapeutic treatments, comprising in combination a post, a reflector slidably mounted on said post, a plurality of lamps for producing different types of radiations having different wave lengths and for producing rays from infra-red to ultra-violet arranged in said reflector, a spraying device slidably mounted on said post below said reflector, a liquid basin adjustably mounted on said post underneath said reflector, means secured to said post for the supply of fresh air and of a gaseous body for producing a certain climatic condition, the liquid level reflecting the rays towards a patient, and an upright reflector arranged behind said seat, said upright reflector comprising reflecting surfaces which are arranged side by side and are substantially straight in longitudinal section and of parabolic shape in cross-section and the adjacent borders of said reflecting surfaces abutting substantially in heart-shaped manner, and a reflecting wing hinged to the free end of each reflecting surface, each reflecting wing being of substantially straight longitudinal section and of a cross-sectional shape forming the continuation of the parabola of said reflecting surfaces, so that practically a small climatic cabinet is produced by which the patient can be subjected to an artificial climatic treatment.

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