July 18, 1950 P. SCHAUFFLER 2,515,667

BATHING APPARATUS, INCLUDING MECHANISM FOR IMPARTING OSCILLATING MOVEMENTS TO WATER

Filed Dec. 21, 1948 2 Sheets-Sheet 1

FIG. 1.

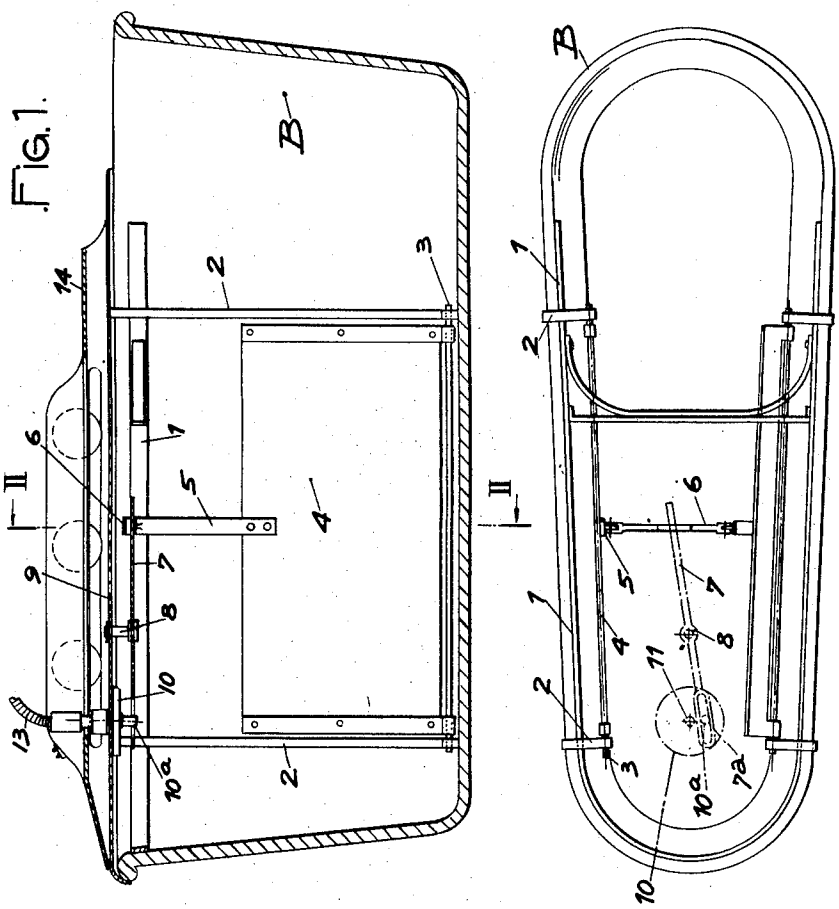


FIG. 3.

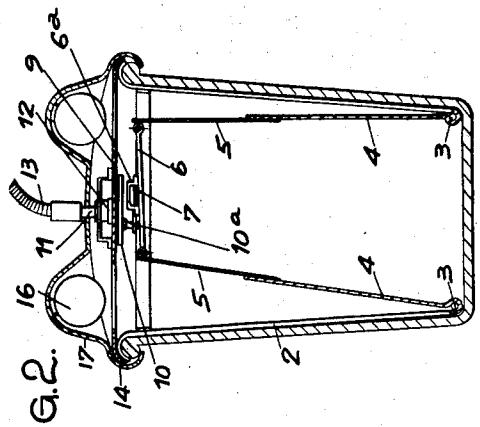


FIG. 2.

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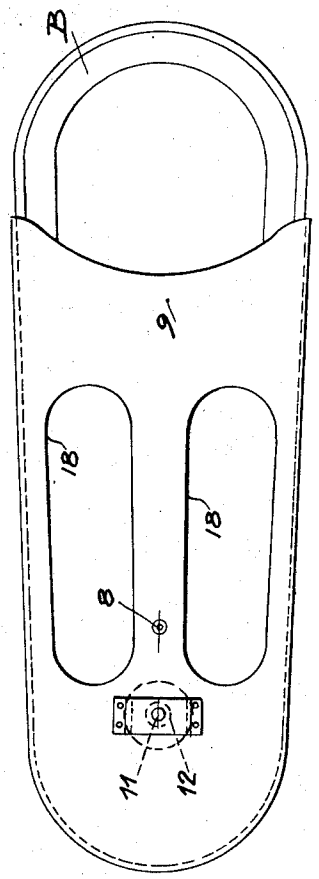


Fig. 6.

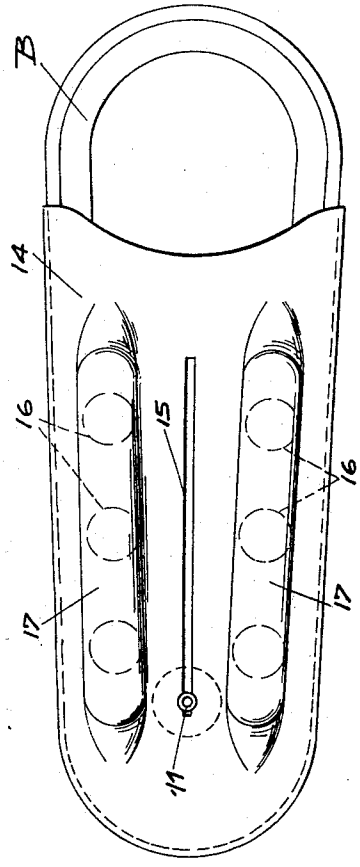


Fig. 5.

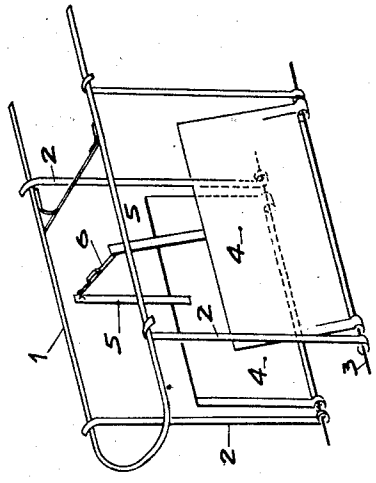


Fig. 4.

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UNITED STATES PATENT OFFICE

2,515,667

BATHING APPARATUS, INCLUDING MECHANISM FOR IMPARTING OSCILLATING MOVEMENTS TO WATER

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Application December 21, 1948, Serial No. 66,410

6 Claims. (Cl. 4—178)

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It is known that sea-bathing has beneficial effects upon the human body, from the therapeutic as well as from the hygienic and aesthetic point of view. The repeated shocks of the waves against the body have in particular a reducing action similar to that usually obtained by massage.

The present invention relates to a bathing apparatus which makes it possible to obtain the same genefits as those usual produced by sea-bathing, at least from the aesthetic point of view.

This apparatus is essentially characterized by the combination of a receptacle, such as a bath or a bathing-pool, with means adapted to impart to a liquid contained in said receptacle movements which produce artificial waves moving preferably in a direction transversal with respect to the body of the bather.

By adding to the water of the bath certain ingredients adapted to give it a composition similar to that of sea water, it is possible to obtain also the hygienic and therapeutic benefits usually produced by sea-bathing.

The above mentioned means are preferably adapted to produce the reciprocating movements of the water positively, that is to say, to submit the water to an effective impulsion during its displacements in either direction.

In a preferred embodiment, to which the invention is however not limited, the receptacle is provided with two flaps each of which is hingedly mounted by its lower part on a longitudinal axis, said flaps being connected to each other and receiving from a suitable mechanism an oscillating movement.

The two flaps are preferably connected at their upper part by a transversal rod which is reciprocated by a lever mounted on a vertical axis and receiving an oscillating movement by a pin which is eccentrically mounted on a rotating disc and engages a slot formed in said lever.

A stationary cover extending between the longitudinal sides of the receptacle and covering the mechanism carries the shaft on which said disc is mounted.

This shaft is preferably rotated by an electric motor placed at a certain distance and driving said shaft through a flexible transmission.

Above said cover is advantageously slidably mounted a second cover which limits, at the front end of the receptacle, a free space for the bust or the head of the bather.

Under the upper cover may be provided heating elements, such as powerful electric lamps, for the purpose of heating the water of the bath, suitable openings being formed in the lower cover for the passage of the calorific radiations emitted by said heating elements.

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The accompanying drawings show by way of example an embodiment of the bathing apparatus according to the invention.

Fig. 1 is a longitudinal section of the whole apparatus.

Fig. 2 is a cross section along the plane defined by the line II—II of Fig. 1.

Fig. 3 is a plan view of the apparatus, the covers being removed.

Fig. 4 is a perspective view of the supporting structure to which the flaps are hingedly connected.

Fig. 5 is a plan view of the whole apparatus, with both covers in working position.

Fig. 6 is another plan view of the whole apparatus, the upper cover being removed.

In the shown embodiment, the receptacle is a bath B, but it is obvious that the invention can be applied in connection with bathing-pools of larger size.

In the upper part of the bath B is placed a frame 1 (Fig. 4) which carries, on each side, two uprights 2 supporting at their lower ends a horizontal axis 3 on which is hingedly mounted a flap 4.

Each of the two flaps 4 is provided with an arm 5 which is hinged to a connecting rod 6, by which the movements of the flaps 4 are synchronised. A slot 6*a* formed on the rod 6 is engaged with vertical play by one end of a lever 7 which is pivotally mounted on a vertical axis 8 carried on a stationary cover 9. The opposite end of said lever 7 is shaped as a fork or formed with a slot 7*a* which is engaged by a pin 10*a* eccentrically mounted on a rotating horizontal disc 10. The shaft 11 carrying said disc 10 is rotatably mounted in a bearing 12 carried by the cover 9 and receives its rotation, for example, through a flexible transmission 13 driven by an electric motor (not shown) placed at a convenient distance, so as to avoid any risk of accidents.

It will be understood that when the disc 10 is rotated, the lever 7 oscillates in a horizontal plane, *a*, *d* the flaps 4 oscillate together about their axes 3, so as to impart to the water in the bath a reciprocating movement causing the formation of artificial waves, which produce upon the body of the bather effects similar to those obtained by sea-bathing, from the aesthetic point of view. These effects may be completed at will by therapeutic and hygienic effects, by adding to the water in the bath, for example, ingredients

adapted to give it a composition similar to that of sea water.

The apparatus is advantageously completed by a slidably mounted upper cover 14 which is placed as shown in Fig. 5 when the bather is in position. This cover 14 is formed with a slot 15 for the passage of the shaft 11. The cover 14 may be provided on its inner side with heating elements such as powerful electric lamps 16 housed in bent up portions 17. In this case, convenient openings 18 are formed in the lower cover 9, for the passage of the calorific radiations emitted by the lamps 16, for the purpose of heating the water of the bath, which has a tendency to cool off due to the movements imparted to it by the flaps 4.

It will be understood that the invention is not limited to the embodiment which has been described and shown. Any other suitable mechanism may be used for imparting the movements to the flaps. On the other hand, the waves, instead of being produced by flaps, may be produced by movable opposite surfaces of the receptacle itself. The transversal movement of the waves has also been indicated by way of example only, but the waves may as well be caused to move in the longitudinal direction of the receptacle.

I claim:

1. A bathing apparatus comprising a receptacle adapted to accommodate the body of at least one bather, two flaps each of which is placed adjacent to one of the side walls of said receptacle and hingedly mounted so as to be able to oscillate about a longitudinal axis located at its lower part, and mechanical means for imparting transversal oscillating movements to said flaps.

2. A bathing apparatus comprising a receptacle adapted to accommodate the body of at least one bather, two flaps each of which is placed adjacent to one of the side walls of said receptacle and hingedly mounted so as to be able to oscillate about a longitudinal axis located at its lower part, and mechanical means for imparting synchronous transversal oscillating movements to said flaps.

3. A bathing apparatus comprising a receptacle adapted to accommodate the body of at least one bather, two flaps each of which is placed adjacent to one of the side walls of said receptacle and hingedly mounted so as to be able to oscillate about a longitudinal axis located at its lower part, a transversal connecting rod connecting the upper parts of said flaps to each other, a rotatable shaft, mechanical means for rotating said shaft, a pin eccentrically connected to said shaft, and transmission means operatively connected to said pin and to said connecting rod so as to reciprocate said connecting rod when said shaft rotates.

4. A bathing apparatus comprising a receptacle adapted to accommodate the body of at least one bather, two flaps each of which is placed adjacent to one of the side walls of said receptacle and hingedly mounted so as to be able to oscillate about a longitudinal axis located at its lower part, a transversal connecting rod connecting the upper parts of said flaps to each other, a rotatable shaft, mechanical means for rotating said shaft, a pin eccentrically connected to said shaft, transmission means operatively connected to said pin and to said connecting rod so as to reciprocate said connecting rod when said shaft rotates, a cover placed on said receptacle, and air heating means in said cover.

5. A bathing apparatus as claimed in claim 2, wherein said means comprise a transversal connecting rod connecting the upper parts of said flaps to each other, a rotatable disc, mechanical means for rotating said disc, a pin eccentrically mounted on said disc, and a link operatively connected to said pin and to said connecting rod so as to reciprocate said connecting rod when said disc rotates.

6. A bathing apparatus as claimed in claim 2, wherein said means comprise a transversal connecting rod connecting the upper parts of said flaps to each other, a cover placed on said receptacle, a shaft rotatably mounted in said cover, a disc mounted on said shaft beneath said cover, a pin eccentrically mounted on said disc, mechanical means for rotating said shaft, and a link operatively connected to said pin and to said connecting rod so as to reciprocate said connecting rod when said shaft rotates.

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