

June 4, 1963

C. M. KINNEY

3,092,101

PORTABLE DEVICE FOR HYDROTHERAPY

Filed March 19, 1962

Fig. 1.

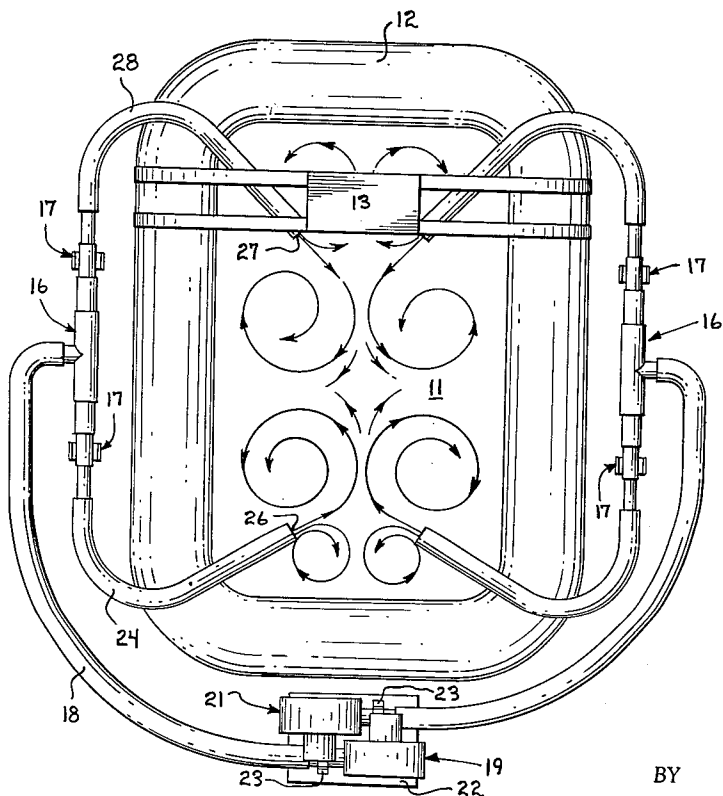
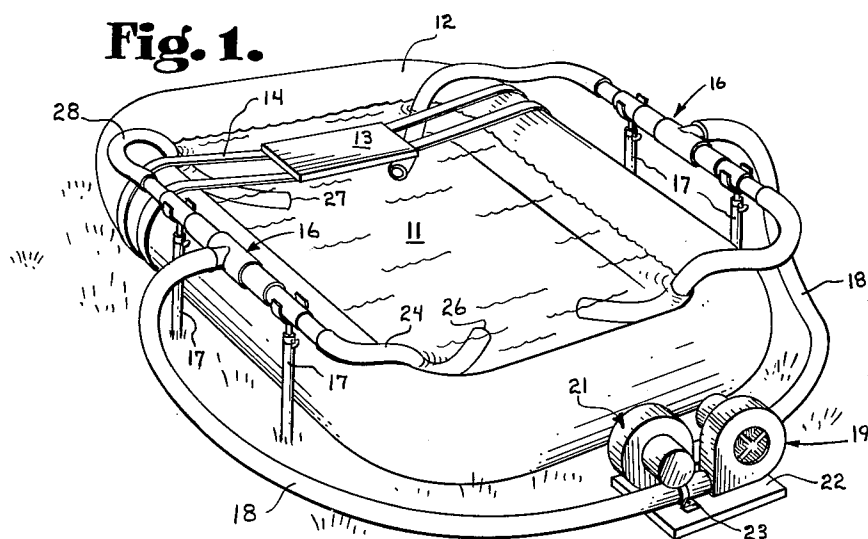


Fig. 2.

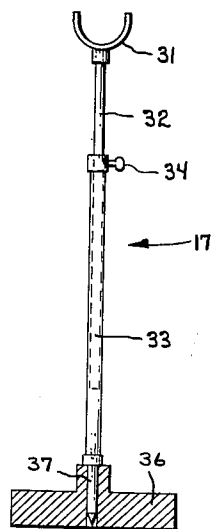


Fig. 3.

INVENTOR.
CECILE M. KINNEY

BY
Lockwood, Woodard, Smith & Wikart
Attorneys

1

3,092,101

PORTABLE DEVICE FOR HYDROTHERAPY

Cecile M. Kinney, 5322 Hill St., Indianapolis 19, Ind.

Filed Mar. 19, 1962, Ser. No. 180,776

6 Claims. (Cl. 128-66)

This invention relates generally to hydrotherapy and more particularly to a simple, inexpensive, truly portable device for hydrotherapy whereby hydrotherapeutic treatment may be made readily available to many people who would otherwise be unable to obtain such treatment without great inconvenience or, in some instances, unable to obtain such treatment under any circumstances.

The many benefits which can be derived from hydrotherapy are well known to those working in the art. In many cases of human illness, hydrotherapeutic treatments afford great relief and in some types of illness, are beneficial in the healing process. Examples of illnesses where hydrotherapy is frequently used are cerebral palsy, polio, muscular dystrophy, arthritis, and epilepsy. Hydrotherapy is also of considerable benefit in the case of discomfort resulting from strained muscles, bruises, and other causes of irritation.

Heretofore, equipment for hydrotherapy has been generally unavailable any place other than in hospitals, clinics, and other institutional facilities. As a result, many people who need hydrotherapy either do not have access to it at all or cannot obtain it without considerable inconvenience and only infrequently.

When it is recognized that some patients, such as polio patients, must have hydrotherapy every day in order to make progress toward recovery, the need for improving accessibility of such treatments to these persons can readily be recognized. Also, in the case of arthritics, the pain can be much relieved and life made much less miserable if the person can obtain hydrotherapy daily. Yet, for such people who can get to a place where treatments are provided, it nevertheless means that they cannot be far from the place having a facility and are therefore not free to make trips whether for business purposes or vacations. Furthermore, considerable time is required to get to the facility and obtain the treatments including whatever waiting time is necessary at the facility.

Usually, the main reason for the limitation of availability of hydrotherapy units is the fact that they have generally been quite complicated and expensive permanent installations. Though some attempts have been made to provide portable devices, they generally have been characterized by at least two serious shortcomings. One is the fact that while theoretically portable, they have been heavy and substantially nonportable for even healthy persons, to say nothing of the patient who must use them. Furthermore, they have generally been characterized by difficulty of preparation for use and actual use. Some have been complex with attendant weight and cost disadvantages.

It is a general object of the present invention to provide means for increasing availability of hydrotherapy to society.

It is a further object of the present invention to provide a truly portable and inexpensive device for hydrotherapy which is easy to install and use.

It is a further object of this invention to provide means for hydrotherapy which can readily be sponsored, supported and furnished by health and welfare foundations as well as by individuals themselves.

Described briefly, a typical embodiment of the present invention incorporates telescopic tubing of rigid material coupled to a blower of the hair dryer type, and providing a manifold supported alongside a tub, pool or other reservoir of water. A flexible tube is connected to each end of the telescopic tube and has one end submerged in the

2

water to emit bubbles upon operation of the blower. The provision of the flexible tubes and their orientation generally toward each other provides for a thorough distribution of air bubbles throughout the reservoir and particularly around the patient in the reservoir.

The full nature of the invention will be understood from the accompanying drawings and the following description and claims.

FIG. 1 is a perspective view illustrating a typical embodiment of the present invention.

FIG. 2 is a top plan view of the embodiment of FIG. 1.

FIG. 3 is an elevation, partially in section, illustrating a portion of the typical embodiment.

Referring to the figures of the drawing, a reservoir 11 of water is provided by the inflatable tube 12 having a floor (not specifically shown) sealed thereto. Thus, the reservoir can be provided by many of the plastic play-pools, currently available on the market. A head rest 13 is suspended across the reservoir adjacent one end thereof by means of the straps 14 which extend around the sides of the tube 12. By employment of the head rest, the patient can remain in a position where substantially his entire body is covered by the water without being required to extend any effort in keeping his head above water.

A telescoping rigid tube unit 16 is mounted on supports 17 and extends along one side of the reservoir 11 and slightly above the tube 12. The tube 16 may be made of any light weight material such as aluminum or plastic. The supports 17 may be made of the same material.

A flexible pipe 18 is connected to the tube 16 intermediate the ends of the tube and couples the air supply from the blower 19 to the tube 16. The blower 19 and blower 21, the latter of which supplies like components at the opposite side of the reservoir 11, are disposed in oppositely directed nesting relation as shown to minimize the space requirement thereof. The blowers may be typically conventional hair dryer blowers with the outlets thereof secured to the board 22 by means of the strap 23. If desired, in the interest of economy, the heating unit normally found in hair dryers can be eliminated in this application.

To each end of the telescopic tube 16 is connected a flexible tube 24, 28 which may also be of a plastic material similar to that of tube 18. The open end 26 of tube 24 is submerged in the water of reservoir 11 and the end 26 of the tube 24 and the end 27 of the tube 28 as well as the ends of the tubes at the opposite side of the reservoir are all generally facing or directed toward each other as illustrated particularly in FIG. 2. This provides thorough coverage of the portion of the reservoir occupied by the patient by creating swirls of bubbles as generally illustrated by the arrows and lines in FIG. 2. The tubes or pipes 24, 28 and 18 may all be made of the same type of plastic or other suitable flexible material.

Referring to FIG. 3 particularly, the support 17 includes a U-shaped receiver 31 atop the post 32 which is slidably received in the sleeve 33. A suitable height adjustment is provided by the thumb screw 34. A weighted base 36 may be provided for use on a solid or relatively impenetrable surface and the sleeve 33 has its lower pointed end 37 received by the base 36. However, in the event the device is to be used outdoors on a soft, penetrable surface rather than on a hard surface, the pointed ends 37 may be removed from the base 36 and embedded in the ground.

From the foregoing it will be apparent that the device of the present invention may be used indoors or outdoors with a pool of the type disclosed. It may also be used indoors with a bathtub if desired. It will be recognized that by virtue of the nature of the materials employed and the specific construction of the parts, that the entire

3

device can be neatly packaged in a lightweight small-sized container affording true portability. Also, obviously the cost can be very nominal. Thus it affords an effective device capable of making hydrotherapy available to anyone who needs or desires it, thus achieving this and all of the other objects set out herein.

While the invention has been disclosed and described in some detail in the drawings and foregoing description, they are to be considered as illustrative and not restrictive in character, as other modifications may readily suggest themselves to persons skilled in the art and within the broad scope of the invention, reference being had to the appended claims.

The invention claimed is:

1. A portable device for hydrotherapy comprising:
 - a first lightweight rigid elongated tube;
 - a flexible conduit coupled to said tube intermediate the ends of said tube;
 - a flexible tube connected to each end of said rigid tube, one end of each of said flexible tubes being adapted to be submerged in a reservoir of water;
 - means supporting said rigid tube;
 - and a blower connected to said conduit to provide a flow of air in said tubes to emit bubbles in said reservoir.
2. The device of claim 1 wherein said blower is a hand-supported type of hair dryer.
3. In hydrotherapy,
 - a reservoir of water;
 - a pair of rigid tubes extending in parallel relation;
 - a flexible pipe connected to each of said tubes intermediate the ends of said tubes;
 - a flexible tube connected to each end of said rigid tubes, each of said flexible tubes having an end submerged

4

in said reservoir, the submerged ends being directed generally toward each other;

adjustable means supporting said rigid tubes;

and blower means connected to said flexible pipes to provide a flow of air through said flexible tubes into said reservoir to emit and circulate bubbles of air in said reservoir.

4. The combination set out in claim 3 wherein said blower means comprises:

- a first blower having an outlet secured to one of said flexible pipes;
- and a second blower having an outlet secured to another of said flexible pipes.

5. The combination set out in claim 3 wherein said supporting means includes:

- a receiver to receive said rigid tube,
- a post carrying said receiver,
- a sleeve receiving said post and having a pointed end portion to adapt said supporting means to employment in earth or the like.

6. The combination set out in claim 3 wherein said supporting means includes:

- a receiver to receive said rigid tube,
- a post carrying said receiver,
- a sleeve receiving said post and having a pointed end portion to adapt said supporting means to employment in earth or the like,
- and a base having an aperture therein receiving said pointed end portion to adapt said support to employment on a comparatively impenetrable surface.

References Cited in the file of this patent

UNITED STATES PATENTS

1,775,942 Millmather Sept. 16, 1930