United States Patent [19]

[11] 3,868,949

[45] Mar. 4, 1975

[54] **HYDROMASSAGE DEVICE**

[75] Inventor: **Howard M. Arneson**, San Rafael, Calif.

[73] Assignee: **Arneson Products Inc.**, San Rafael, Calif.

[22] Filed: **Aug. 8, 1973**

[21] Appl. No.: **386,699**

[52] **U.S. Cl.** **128/66**

[51] **Int. Cl.** **A61h 9/00**

[58] **Field of Search** 128/66, 65, 56, 24.1, 24.2

[56] **References Cited**

UNITED STATES PATENTS

1,101,804	6/1914	Lauter	128/66
2,595,491	5/1952	Schweikert	128/66 UX
2,682,868	7/1954	Fortin	128/66

FOREIGN PATENTS OR APPLICATIONS

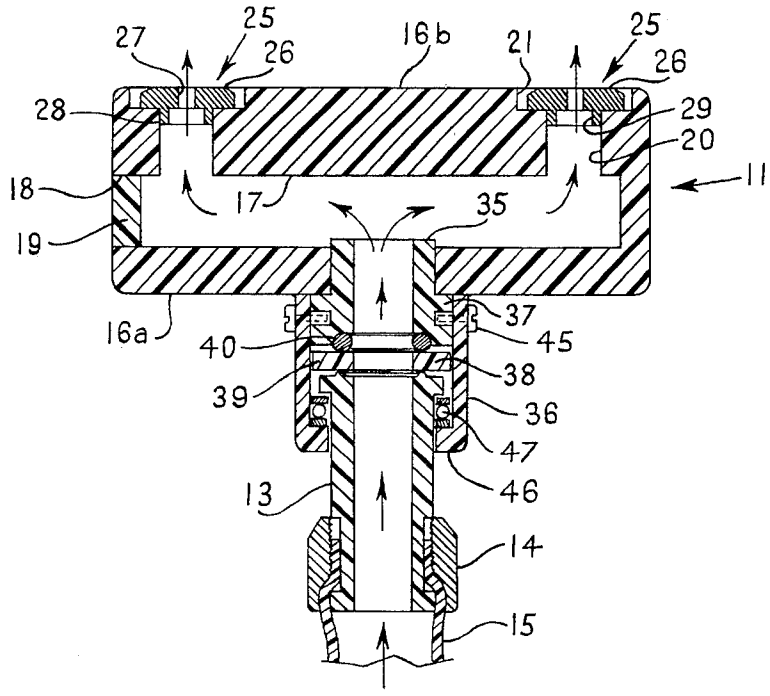
130,417	4/1902	Germany	128/66

Primary Examiner—Lawrence W. Trapp

[57] **ABSTRACT**

Hydromassage device comprising rotatable disc with water inlet and at least two water outlets which deliver water in streams so located as to create a torque and rotate the disc and to apply small, rotating, concentrated streams of water rather than large currents of water.

4 Claims, 5 Drawing Figures



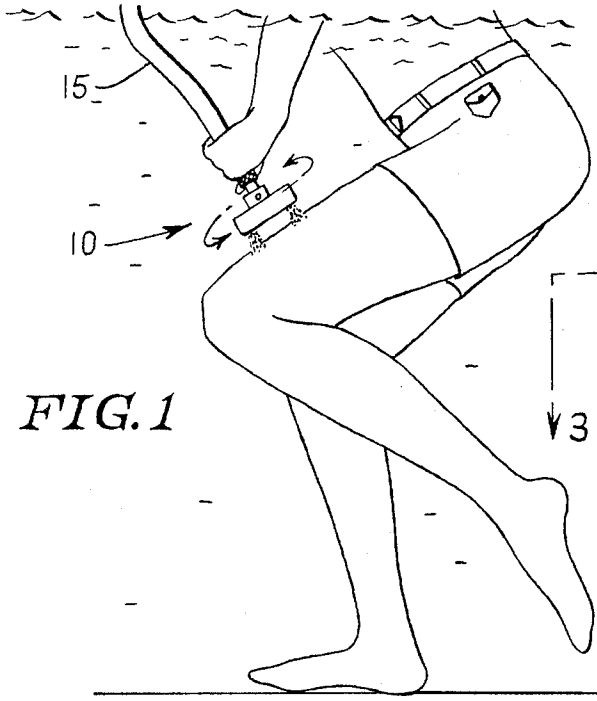
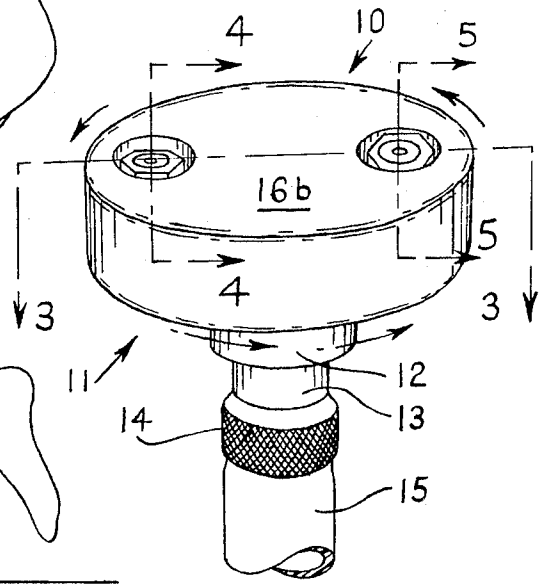


FIG. 1

FIG. 2



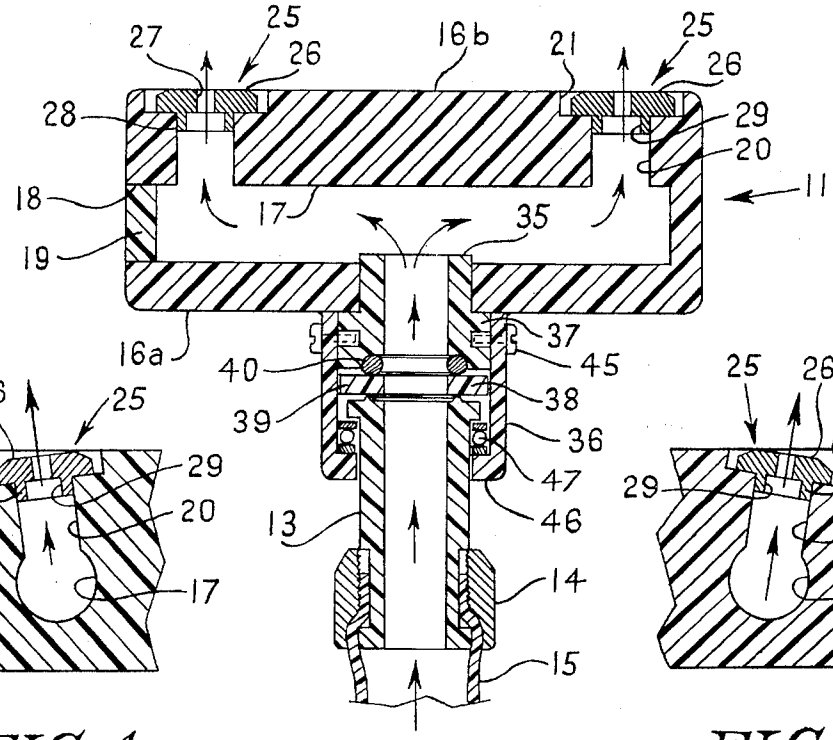


FIG. 3

FIG. 4

FIG. 5

HYDROMASSAGE DEVICE

This invention relates to a hydromassage device which is simple in construction and operation, which can be used with water supplied by an ordinary water tap in a swimming pool, in a bathtub, etc. and which had a pleasing effect, and is particularly adapted to use under water.

Massage devices presently available are not readily adapted to underwater use because they are electrically operated and are, therefore, dangerous to use under water and/or they are rather complex and expensive devices which, for example, depend upon maintaining a flow or current of water in a large body of water such as a pool or a bathtub. Moreover, a common hydromassage device merely circulates a large body of water without an adequate massaging effect.

It is an object of the present invention to provide a simple and effective hydromassage device capable of use under water, without the hazards, complications and expense of devices heretofore available.

It is a further object of the invention to provide a hydromassage device which is more effective than massage devices that merely cause a large body of water to circulate.

The above and other objects of the invention will be apparent from the ensuing description and the appended claims.

One embodiment of the invention is illustrated by way of example in the drawings, in which:

FIG. **1** shows the device of the invention applied to the thigh of a person under water;

FIG. **2** is a perspective view of the rotating jet part of the device showing a portion of the connecting hose or tubing which supplies the water;

FIG. **3** is a vertical mid-section taken along the line 3—3 of FIG. 2;

FIGS. **4** and **5** are vertical sections taken midway through each of the two nozzles showing how they are at an angle to one another.

Referring now to the drawings and first to FIGS. **2** and **3**, the device is generally indicated by the reference numeral **10** and it comprises a head member **11** connected by a connector member **12**, a connector tube **13** and a nut **14** to a flexible hose **15**. The flexible hose may be of ordinary type which is widely available, and it is connected at its other end (now shown) to a source of water under pressure. For example, the other end of the tube **15** may be connected by an adapter, by an expansible fitting or by a threaded fitting to the water tap of a bathtub or adjacent a pool.

The head portion **11** comprises a disc or cylindrical member **16**, preferably made of plastic such as nylon, polyester, polyethylene, etc. The disc **16** has a lower face **16***a* and an upper face **16***b*. The plastic disc **16** is shown as a single piece which is drilled out to provide an interior cavity **17** which communicates with the inlet and with the outlets, as hereinafter described. An opening **18** formed in drilling out the cavity **17** is closed by a plug **19**. Alternatively, the head member or disc **16** may be made in two parts by molding and the two parts joined together as by an adhesive, by heat sealing or by mechanical means such as screws. Two passages **20** are shown which, as illustrated, are on the same diameter. However, it is not necessary that the two openings **20** be on the same diameter. There may be three or more such openings if desired. However, the construction shown is simple and is quite effective and for such reasons it is preferred. Each of the outlet openings **20** widens at **21** to provide a well or countersink area, into each of which a nozzle **25** is seated. Each nozzle **25** has a wide head portion **26**, a central passageway **27** and a neck **28** having a central passageway **29**. The neck **28** may be of dimensions such that it fits snugly when applied by pressure into the respective outlet passage **20**, or a water-resistant adhesive may be used. The upper face **26** of each of the nozzles **25**, as shown, preferably does not protrude above the upper face **16***b* of the disc **16**. If desired, the nozzles may protrude somewhat or they may be located entirely below the face **16***b*.To minimize hard, unpleasant contact with the flesh, it is preferred that the nozzle members **25**, which may be of metal construction, do not protrude. The nozzles **25** may also be of plastic construction.

The bottom portion of the disc **16** is provided with an inlet tube **35** fitted within a central passageway **36** which is coaxial to the disc **16**. The tube **35** may be lodged by a forced fitting or it may be secured in place by an adhesive or both such means may be employed. If the disc **16** is made in two molded parts, the tube **35** may be an integral molded part.

The tube **35** forms part of a connector **12** which may be of any suitable type which allows free rotation of disc **16**. The connector **12** is shown in FIG. **3** as having a construction like that shown in my U.S. Pat. No. 3,372,948 to which reference may be made for details not herein described in full. This is a preferred form of connector or coupling.

Referring to FIG. **3**, the tube **35** is connected to the axially aligned connector tube **13** by a rotary coupling which includes a housing **36**. As will be seen, the tube **13** is affixed by a nut **14** to the tube or hose **15**. The tubes **35** and **13** have flanged ends **37** and **38**, respectively, which are separated by a washer **39** and an O-ring seal **40**. Screws **45** affix the housing **36** to the tube **35**. A ball bearing assembly **47** is lodged between the flanged bottom of housing **36** and the flange **39**. This assembly provides a connection which is water tight (although complete sealing is not required because the device is normally used under water) and which allows free rotation of disc **16**.

As will be seen in FIGS. **4** and **5**, the nozzles **25** are tilted and the tilting is in opposite directions whereby when water issues from the jet streams a torque is created and rotates the disc **16**. The effect is to impinge rotating jets or streams of water onto the body, as shown in FIG. **1** as applied under water to a person's thigh. This circular impingement of concentrated streams of water has a very pleasing effect. The device is best used under water, but it may be used out of water, for example, in a stall shower. For example, in a popular type of massage bath widely used today, large currents of water are created which do not have the concentrated effect of the streams issuing from the device of this invention. These rotating streams depress the skin locally and cause a very pleasing, rapidly moving massaging effect which is absent in the device mentioned above.

I claim:

1. A hydromassage device comprising a body member having an upper face, a lower face and a centrally located inlet on its lower face, means for connecting the body member by way of its inlet to a source of water under pressure, such means allowing free rotation of the body member, at least one jet nozzle on the

upper face of the body member, said jet nozzle being substantially in or below the plane of said upper face and means for rotating the body member while water is issuing from the jet nozzle.

2. The hydromassage device of claim **1** wherein said rotating means is hydraulic and is operated by the issuing stream or streams of water issuing from the jet nozzle or nozzles.

3. A hydromassage device comprising a body member having an upper face, a lower face and a centrally located inlet on its lower face, means connecting the body member via its inlet on its lower face, means connecting the body member via its inlet to a source of water under pressure, such means allowing free rotation of the body member, and at least two jet orifices on the upper face of said body member adapted to direct issuing streams of water so as to create a torque and rotate the body member and apply rotating streams of water to the skin of a person using the device, each said jet orifice being located substantially in the plane of said upper face.

4. A hydromassage device comprising a body having a central axis, an upper face and a water inlet and means supporting the body for rotation about said central axis, means for so rotating the body, means for applying water to said inlet, and at least one outlet in the form of a jet nozzle, such outlet being in fluid communication with said inlet and being substantially flush with or below the level of said upper face.

* * * * *