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C. H. RICHWOOD.

LIQUID ACTUATED VIBRATOR.

APPLICATION FILED APR. 16, 1907.

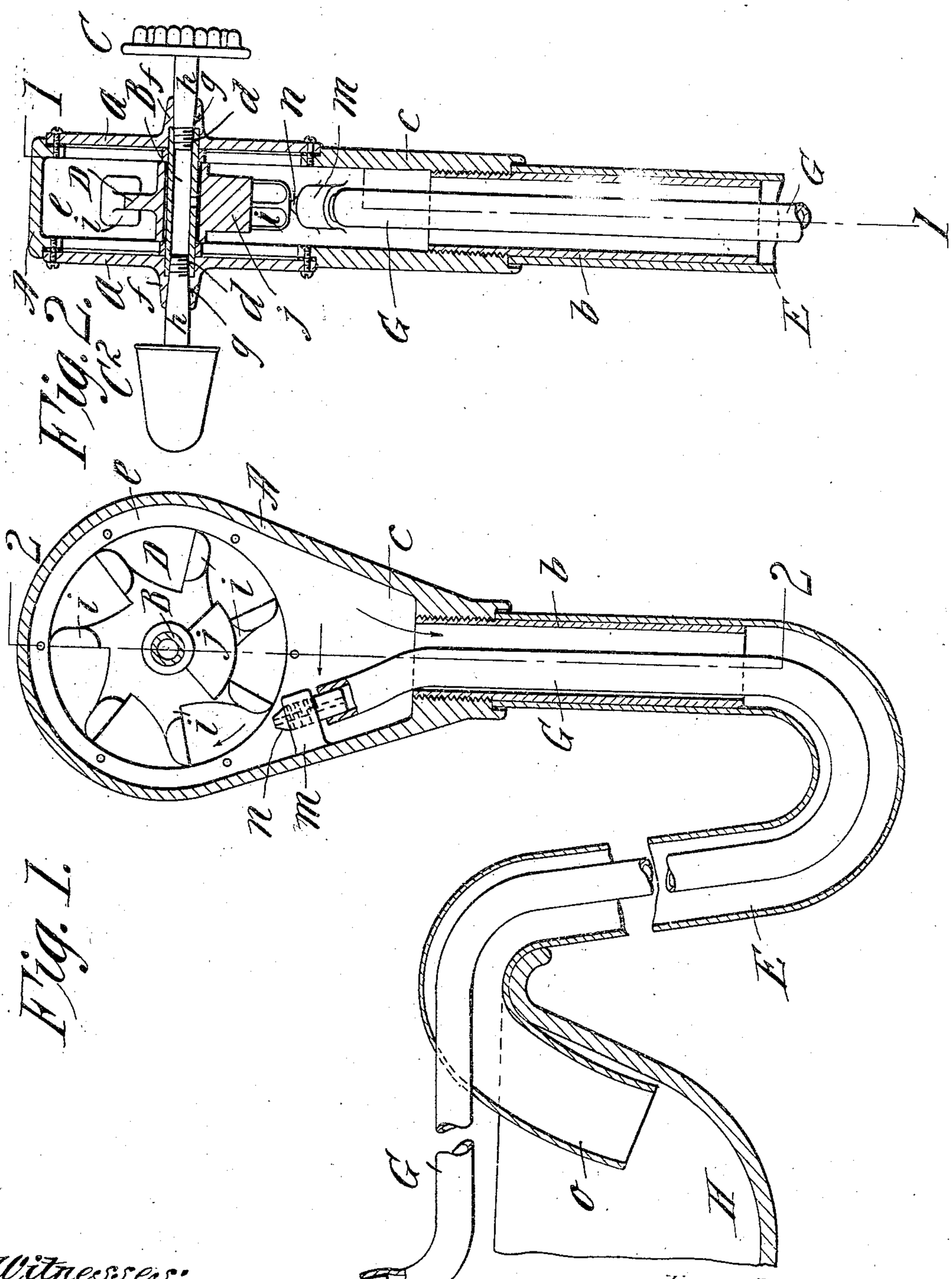

Fig. 1.

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LIQUID-ACTUATED VIBRATOR.

No. 890,709. Specification of Letters Patent. Patented June 16, 1908.

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To all whom it may concern:

Be it known that I, CLARENCE H. RICHWOOD, a citizen of the United States of America, and resident of Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Liquid-Actuated Vibrators, of which the following is a full, clear, and exact description.

This invention relates to a liquid actuated vibrator in which a water-propelled-wheel is comprised within an inclosed casing, which carries an externally located applicator connected with which casing is a pipe for supplying water under pressure into the casing and against, and for securing rotation of, the wheel, and said wheel is made or provided with an eccentrically located weight by means of which, under the rotations of the wheel, wabbling motions thereof are induced which are communicated to the casing and to the applicator for all desired vibratory effectiveness of the latter.

A principal object of the invention is to produce a vibrator for facial or other personal massage which is extremely cheap of production, capable of being operated from the water supply coming through an ordinary faucet in a bath room, or sleeping room, and rendering unnecessary the expensive apparatus or equipment heretofore required for operating vibrators electrically, or by pneumatic forces, or by combinations of electric and pneumatic instrumentalities.

The invention is illustrated in the accompanying drawings, described hereinafter in conjunction with such drawings, and is defined in the appended claims.

In the drawings,—Figures 1 and 2 are substantially central sectional views through the vibrating device or apparatus, as taken at right angles to each other, the lines 1—1 and 2—2 indicating the planes on which the respective sections are taken.

Proceeding to describe the device precisely as constructed, it is here expressly stated that minor changes in form and details may be made without departing from the invention or sacrificing any of the advantages thereof.

The vibrator comprises a hollow approximately oval casing A having flat removable opposite circular side walls *a a*, and having a rigidly united tubular handle extension *b* at its contracted portion *c*. The said casing has concentrically within its enlarged circular portion *e* a fixed axle B held or clamped between the opposite side walls, as shown in Fig. 2 and constructed with screw threaded openings *d d* in both of its ends. The said casing side walls are provided with outwardly extended hubs *f f* axially coincident with the said axle B; and said hubs have tapered sockets *g g* through them communicating with the screw threaded openings *d* in the end of said axle.

Applicators C and C^2 are shown in Fig. 2, the same being of different forms and characters for different qualities of massaging effect; and each applicator is carried by a stem *h* which is both tapered and screw threaded so as to be closely fitted in and through the tapered hub socket of the casing side walls and to derive a screw thread connection with the proximate end of the internal axle.

D represents a water propelled wheel which may be any one of many types or species of such wheel,—the one in the present instance comprising a plurality of radially extending bucketed blades or wings *i*; and the said wheel is loosely mounted for free rotation upon said axle within the casing and has an eccentrically located weight, as represented at *j* in the drawing.

A flexible conduit E,—which is the outlet or liquid discharge conduit of this apparatus,—is connected with the casing by being tightly fitted about the tubular handle extension *b*.

G represents a water supply conduit, which in practice may be rubber pipe, the same being of considerably smaller diameter than the said discharge conduit, and it is made somewhat longer than the discharge conduit. It will be perceived in Fig. 1 that the casing is constructed with an internal lug *m* located adjacent the edge of the water propelled wheel; and a tubular jet plug *n* is screw engaged through said lug and is tangentially directed relatively to the wheel. The rubber supply pipe G enters the larger discharge pipe through the side thereof near, but somewhat removed from the free end of the discharge pipe and being continued through the latter has a coupling engagement with the shank of the jet plug *n*.

As will be perceived in Fig. 1, the supply pipe G may be connected with an ordinary faucet provided near a wash bowl H, while the free end portion *o* of the discharge pipe may depend into the bowl.

A person grasping the casing by the tubular handle extension *b* thereof, while the

water is turned on at the faucet, may employ the apparatus for vibratory massage on the face or any part of the person, as desirable, it being understood that the water under pressure entering the casing through the pipe G and operating against the wheel D will cause rapid rotation of the wheel, and because of the provision of the eccentrically located weight *j*, the wheel will have an unsteady or wabbling motion which will be communicated to the axle, and the casing within which the axle is fixed and to the one or two applicators, accordingly as to whether a single one or two thereof are provided.

I claim:—

A vibrator consisting of a hollow approximately oval casing having a rigidly united tubular handle extension at its contracted portion, said casing having concentrically within its enlarged portion a fixed axle having a screw threaded opening in its end and said casing having one of its side walls provided with a hub having a tapered opening communicating with said screw threaded axle socket, an applicator provided with a tapered stem fitted in said hub socket and screw engaging in the end opening of said axle, a water propelled wheel mounted for rotation on said axle and having an eccentrically located weight, a flexible water discharge conduit connected with said tubular handle extension and a water supply conduit of smaller diameter than said discharge conduit extended through the latter and into the casing and having its delivery end tangentially directed edgewise relatively to said wheel.

Signed by me at Springfield, Mass., in presence of two subscribing witnesses.

CLARENCE H. RICHWOOD.

Witnesses:
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