H. DREUW.

MASSAGE INSTRUMENT.

APPLICATION FILED DEC. 12, 1911.

1,076,490. Patented Oct. 21, 1913.

Fig. 1.

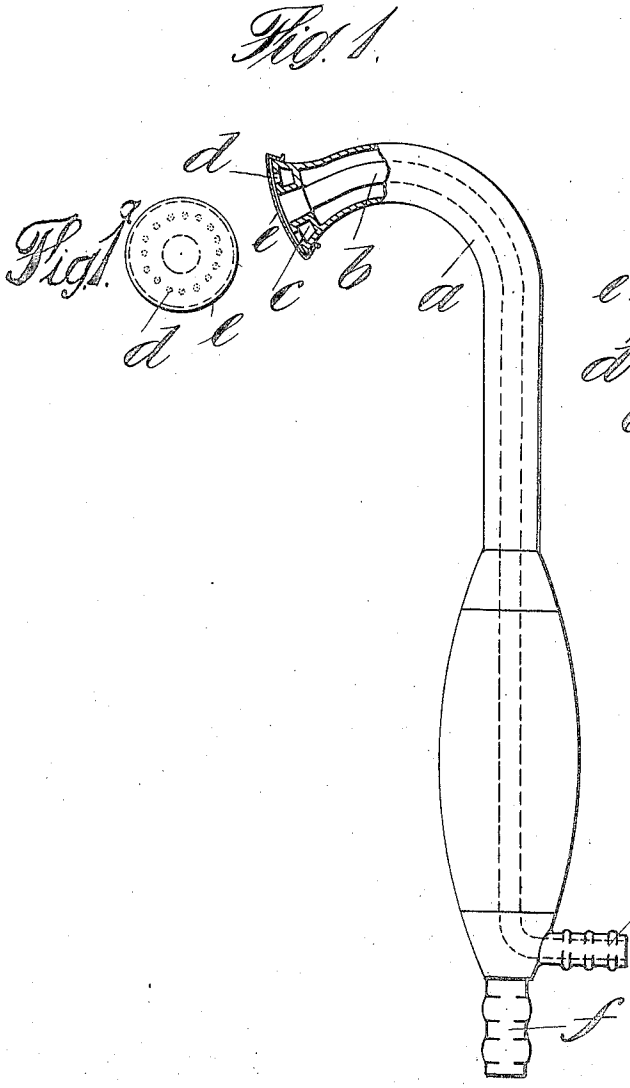
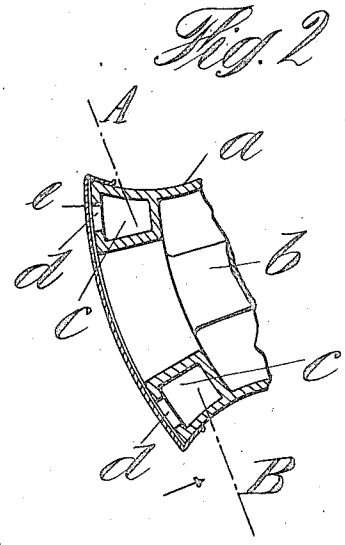


Fig. 2.



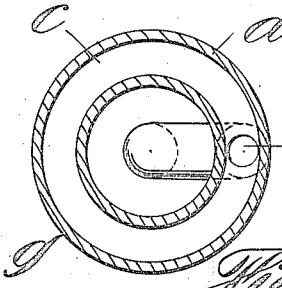


Fig. 3.

Witnesses

W. E. McDade.

Inventor

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Atty

UNITED STATES PATENT OFFICE.

HEINRICH DREUW, OF BERLIN, GERMANY.

MASSAGE INSTRUMENT.

1,076,490. Specification of Letters Patent. Patented Oct. 21, 1913.

Application filed December 12, 1911. Serial No. 665,333.

To all whom it may concern:

Be it known that I, HEINRICH DREUW, physician, a subject of the German Emperor, residing at Berlin, Germany, have invented a certain new and useful Improvement in Massage Instruments, of which the following is a specification.

This invention consists in a modification of the hydraulic massage instrument for cavities of the body, which is described in the specification of German Patent No. 239,100 and has for its distinctive feature a pair of concentric tubes, of which the outer one is provided with perforations, while the space between the inner and outer tube serves as a conduit for pressure water and the discharge takes place from the inner tube through branch tubes connecting the wall of the outer tube with that of the inner tube.

The novelty of the present invention chiefly consists in the fact, that for producing the vibrations, only one discharge opening is provided and thereby the construction of the apparatus is considerably simplified.

In the accompanying drawings Figure 1 is a side view of an instrument embodying my invention, the mouth piece being shown in section, Fig. 1ª is an end view of the mouth piece, Fig. 2 is a section of the mouth piece on a larger scale, Fig. 3 is a section along line A—B of Fig. 2.

The instrument comprises an outer tube *a*, which contains an inner tube *b*, said tube *a* terminating in an annular head *c* having in its face numerous perforations *d*. The head *c* constitutes the mouth-piece of the instrument, and is covered with an india-rubber cap stretched over its face. The opposite end of the tube *b* has a bend which forms a joint for a water supply pipe (not shown), while the free end *f* of the tube *a* forms a joint with a discharge pipe.

If pressure water is supplied to the tube *b* through the joint *g*, the water will flow to the head *c* and escape through the annular group of perforations *d*, thereby causing the flexible diaphragm *e* to bulge outward and allowing the water to escape into the tube *a*. The pressure water arriving through the tube *b* is resisted by the diaphragm *e* until the latter recedes and thereby allows the pressure water to escape. Thereupon the pressure water in tube *b* drops and ceases to act on the diaphragm, in consequence of which the latter returns to its original position. At that moment the diaphragm again offers a resistance to the discharge of water, and the same cycle of operations is repeated. Thus, although the tube is continuously supplied with pressure water, the constant or continuous current produces a constant vibration of the diaphragm. This motion may be utilized for massage purposes and for other purposes where a short but rapid vibration is required.

What I claim is:—

1. A continuous-current hydraulic massage instrument comprising an outer discharge tube having a hollow annular head whose outer face is provided with a series of perforations; an inner supply tube arranged within the outer tube in spaced relation to the wall thereof and opening into said head; and a flexible diaphragm stretched against the outer face of said head to normally cover said perforations, whereby the stream of water entering said head from said supply tube will pass outwardly through said perforations, and alternately distend and collapse said diaphragm, and then pass into and through said discharge tube, and will continuously vibrate said diaphragm during such passage.

2. A continuous-current hydraulic massage instrument comprising a hollow annular mouth-piece having a series of perforations formed in its outer face; a supply tube opening into the interior of the mouth-piece; a discharge tube in communication with the central open space in said mouth-piece; and a flexible diaphragm stretched over said face in position to normally cover said perforations and said open space, whereby the stream of water entering said head from said supply tube will pass outwardly through said perforations, and alternately distend and collapse said diaphragm, and then pass into and through said discharge tube, and will continuously vibrate said diaphragm during such passage.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

HEINRICH DREUW.

Witnesses:
WOLDEMAR HAUPT,
HENRY HASPER.