To all whom it may concern:

Be it known that I, FRANK L. TALCOTT, a citizen of the United States, resident of the city of New York, borough of Manhattan, in the county and State of New York, have invented a new and useful Improvement in Apparatus for Applying Internal Massage, of which the following is a specification.

My invention is in the nature of an apparatus for applying internal massage to the various internal organs, but more especially to the prostate gland, with a suitable application of either heat or cold.

The invention is designed for the cure of inflammation of the prostate gland, whether of an acute, sub-acute, or chronic nature, and relieving all symptoms arising therefrom. The result is accomplished through the agency of water, or other fluid, at the proper temperature, which by a succession of intermittent hydraulic pulsations is made to impart a massage effect, without the water actually coming in contact with the walls of the passage into which the instrument is inserted. These pulsations accelerate the circulation and stimulate the blood vessels in an entirely different way and with different effect from the application of a steady continuous pressure, which latter acts to a large extent with a reverse effect.

My invention consists in the novel construction and arrangement of the various parts and combinations of the apparatus designed to carry out the above named results, as will be hereinafter more fully described with reference to the drawings, in which—

Figure 1 is a front elevation partly in section. Fig. 2 is a horizontal section on line 2—2 of Fig. 1. Figs. 3 and 4 are enlarged sectional details of the three-way valve, showing two positions of the same and Fig. 4 is an enlarged longitudinal section of the insertible massage member.

Similar letters of reference indicate the same parts in all the views.

In the drawing, Fig. 1, A represents an upright frame board, provided with a suitable base B. C is a reservoir for containing the liquid to be used as the medium of massage; D is a temperature indicator for ascertaining the temperature of the fluid; E is an electric heater for heating the circulating fluid; F is an incandescent electric lamp for indicating the flow of the electric current and illuminating the apparatus; G is a syringe bulb pump of well known type for circulating the fluid medium; H is the massage member to be introduced into the rectum or other cavity of the body; I is a three-way valve by which the fluid is first taken from the reservoir and the continuous cycle of circulation afterwards established through the heater, temperature indicator and massage member, and K L M, N and O are soft rubber circulation pipes connecting the various parts of the apparatus.

Referring to Fig. 1, the reservoir C is a glass vessel adapted to contain water or any other suitable fluid, which glass vessel is clamped between the two heads C', C" by means of tie rods C' and is fixedly supported upon the frame board A. Through the center of the upper head C' there extends a suction tube J, stopping short of the bottom of the reservoir and connected to the lower coupling of the three-way valve I, as seen in Figs. 3 and 4. The casing of this valve has two other nipple connections for the rubber pipes K and O, of which K communicates with the top of a tubular glass casing D held between heads D' D" by means of tie rods D' and supported on the frame board A. Within this glass casing is arranged a thermometer d whose graduations indicate the temperature of the liquid flowing through the casing around the thermometer tube. From the lower end of this casing a rubber pipe L leads to the inlet end of a collapsible syringe bulb G, or other form of pump. On one side of this bulb is an inlet check valve g and on the other side an outlet check valve g', so that the alternate compression and expansion of this bulb will cause a circulation of the fluid therethrough in one direction. From the outlet side of this bulb a rubber pipe M extends to the inlet nipple of the massage member H, hereinafter more fully described in detail, and from the outlet nipple of this massage member a rubber pipe N extends to the electric heater E. This heater, see Fig. 2, consists of an inner tube E' surrounded by insulation E' and around which insulation is wound any suitable number of turns of resistance wire E, forming, when an electric current passes through the wire, a means of heating the contents of the central tube E'. The electric heater is held between heads E 1 E' connected by tie rods e e and is fixedly mounted on the frame board A. From the 116
top of the heater a communicating rubber tube \( O \) extends to and communicates with one of the nipple connections of the three-way valve \( I \). Around each of the rubber pipes \( O \) and \( K \) is arranged a protecting coil of wire, \( o \) and \( k \), which prevent the kinking or collapsing of the soft rubber.

On two of the rods \( e \) of the electric heater is mounted an adjustable binding post \( P \) connecting with a circuit terminal wire \( a \). This binding post has two clamps \( r \) and \( r' \), see Fig. 2, which embrace the two tie rods \( e \) and are clamped thereupon by reason of the screw of the binding posts which connects the two clamps. On the inner one of the clamps is mounted a contact spring \( s \) which rides upon the bare coils of the resistance wire \( E \). By loosening the screw of the binding post, the latter with its contact spring \( s \) may be slid vertically on the rods \( e \) along the length of the resistance coil. The other terminal \( y \) of the electric circuit extends first to the electric lamp \( F \), and thence, by wire \( z \), to a lower collar \( t \) which is in electrical contact with the lower end of the resistance coil \( E \). The passage of the electric current from the wires \( a \) and \( z \), it will be seen, is through so much of the resistance coil \( E \) as happens to be between the collar \( t \) at the bottom and the adjustable binding post \( P \), and by raising or lowering the latter a variable amount of the coil may be brought into the circuit to impart any desired degree of heat to the contents of the central tube of the electric heater.

Referring now to Fig. 4, I will describe more in detail the construction and operation of the massage member \( H \). This consists of an inner metal tube \( a \), provided with inlet and outlet nipples for connection with the rubber circulation pipes \( M \) and \( N \). The tube \( a \) is closed at its outer end with a round terminal and near the outer end is provided with two or more lateral holes \( a' \). Closely enveloping this rigid tube is a thin soft rubber sheath \( b \) of highly elastic and tenacious quality. The part of this sheath surrounding the portion of the tube opposite the holes \( a' \) is thinner than that at the ends, so that thinnest part may readily respond to internal pressure and be inflated to the dotted line position, while the remaining portions tightly hug the metal tube. Near the nipple end of the tube it is formed with a swelled portion \( c' \) to hold the soft rubber sheath and the latter is retained in place by wrappings \( b' \) of wire or cord which wrappings are in turn covered over and concealed by the double or reversed return \( b'' \) of the soft rubber sheath.

The operation of my apparatus is as follows: The reservoir \( O \) being filled with water, the valve \( I \) is adjusted to the position shown in Fig. 3. The alternate compression and expansion of the bulb \( G \) will now suck the water out of the reservoir \( C \) and fill the thermometer casing, the bulb \( G \), the inner tube of the massage member, the electric heater, and the rubber piping. Electric current being turned on through the wire terminals \( x \) and \( y \), the valve \( I \) is by handle \( I' \) adjusted to the position shown in Fig. 3, which cuts off the reservoir and opens communication between the pipes \( O, K \). This establishes a complete cycle of circulation from the pumping bulb through the massage member, the electric heater, and the temperature indicator back to the bulb. After the circulation has been established by the alternate compression and expansion of the bulb and the proper temperature has been registered on the indicator, the massage member \( H \), having been previously mounted with vaseline or cocoa butter, is gently inserted into the rectum until the inflatable portion of the sheath is in the region of the prostate gland. Held in this position the rubber bulb is rapidly compressed and allowed to expand. This action injects into the massage member pulsations of warm water, whose egress from the massage member is sufficiently retarded by the friction of the circulating passages beyond as to cause an instantaneous inflation of the rubber sheath, as seen in dotted lines in Fig. 4, and which sheath instantaneously contracts again to normal size as soon as the impulse from the rubber bulb ceases. This rapid and recurrent expansion and contraction of the sheath applies to the prostate gland a massage effect which in a gentle but effective way stimulates the circulation in the blood vessels, reducing the inflammation and hypertrophy of the prostate gland and promoting the cure.

If desired the liquid employed may be cooled instead of heated, and any other fluid medium than water either liquid or gas may be employed. I furthermore do not confine my invention to the treatment of the prostate gland, as it may obviously be applied to the massaging of any of the internal cavities of the body. I am aware that an inflatable and deflatable elastic sheath has been hitherto employed to an insertible member for internal massage, and I do not claim this broadly, but I do not know that the efficient and complete apparatus herein shown and described has ever been known or used.

I claim—

1. An apparatus for applying internal massage, comprising a reservoir, a temperature indicator, a fluid heater, a three-way valve connecting the temperature indicator, fluid heater and reservoir, a circulating pump and a massage member having an inflatable sheath arranged in the path of circulation.

2. An apparatus for applying internal
massage, comprising a closed circulating passage including a pump, a massage member with an inflatable sheath, a temperature indicator and a fluid heater.

3. An apparatus for applying internal massage, comprising a closed circulating passage including a pump, a massage member with an inflatable sheath, a temperature indicator and a fluid heater, consisting of a hollow casing surrounded by an insulated heating coil.

4. An apparatus for applying internal massage, comprising a closed circulating passage including a pump, a massage member with an inflatable sheath, a temperature indicator and a fluid heater, consisting of a hollow casing surrounded by an insulated heating coil, and an adjustable terminal contact arranged to move over the heating coil to regulate the heating effect.

5. An apparatus for applying internal massage, comprising a closed circulating passage including a pump, a massage member with an inflatable sheath, a temperature indicator and a fluid heater, consisting of a hollow casing surrounded by an insulated heating coil, and an electric lamp introduced into the circuit of the heating coil.

6. An apparatus for applying hydraulic massage, comprising a closed circulating passage, a heater, a heat indicator, a circulating pump and an inflatable massage sheath all arranged in the circulating passage.

7. An apparatus for applying hydraulic massage, comprising a closed circulating passage, a heater, a heat indicator, a circulating pump and an inflatable massage sheath all arranged in the circulating passage, and a liquid reservoir with three-way valve connecting it with the circulating passage.

8. An apparatus for applying hydraulic massage, comprising a closed passage arranged to contain a circulating medium, a heater therefor, means for causing the intermittent circulation of said medium, and an inflatable massage sheath arranged to be acted on by said circulating medium and to be alternately inflated and deflated by said intermittent circulation.

9. An apparatus for applying hydraulic massage, comprising a closed passage containing a circulating medium, an inflatable massage sheath and means for alternately inflating and deflating said massage sheath through the intermittent currents of said circulating medium.

10. An apparatus for applying hydraulic massage, comprising a closed circulating passage, an inflatable massage member connected therewith, means for inflating and deflating said massage member through intermittent currents in said closed passage, and means for determining and regulating the temperature of said massage member.

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Witnesses:
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