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MEDICAL DOUCHE

Filed March 2, 1931

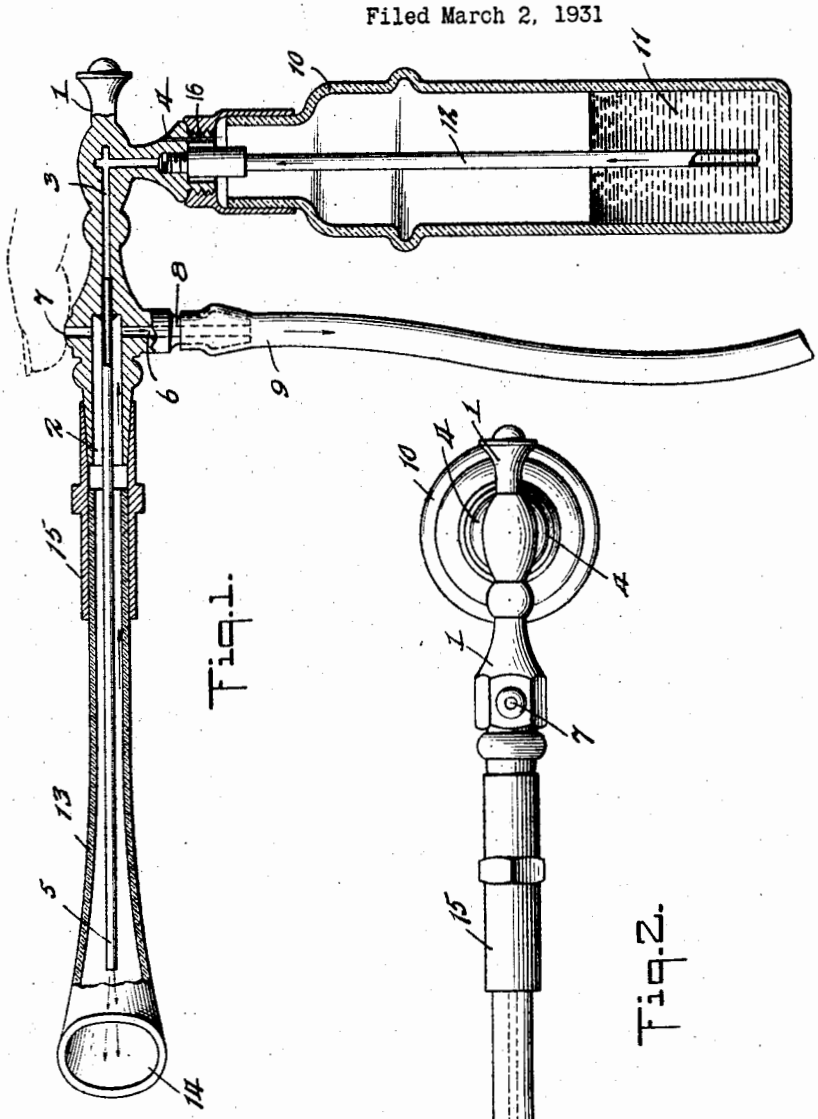

Fig. 1.

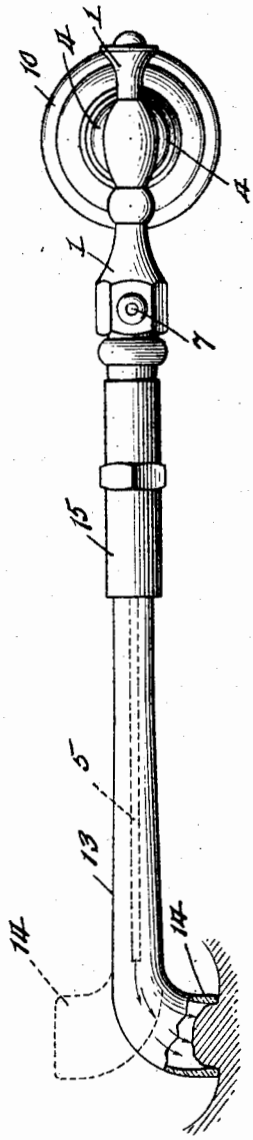

Fig. 2.

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UNITED STATES PATENT OFFICE

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MEDICAL DOUCHE

Application filed March 2, 1931. Serial No. 519,646.

This invention relates to a medical douche and has for its object to provide a simple and efficient device of this type adapted to spray the affected parts and draw out secretions in a single operation.

Another object of the invention is to provide a device for spraying the tonsils and body cavities and simultaneously applying suction to the parts to remove secretions and open the crypts to the spray.

Still another object of the invention is to control both the suction and spray by means of a common valve which may be operated by one finger of the hand in which the device is held.

I shall illustrate the invention in connection with a device which is used for cleaning tonsils but may be used for other purposes as well. It consists of a tube having its end shaped to fit over the tonsil, a control valve for applying suction to the tube, and a spray bottle to hold the medicated solution. The spray bottle is connected to a small spray pipe which extends through the tonsil tube in position to direct the spray upon the tonsil.

The device is operated by merely placing the index finger over the top of the suction valve, thus creating a suction which draws the tonsil into the end of the tube and opens the crypts and crevices. At the same time the suction draws the medicated solution through the inner spray pipe and allows it to penetrate into the crypts and assist in carrying out the secretions. The solution, carrying the secretions from the affected parts is drained off through the tube by the suction and disposed of in any suitable manner.

This embodiment of the invention will be described in detail in connection with the accompanying drawing, in which:

Fig. 1 is a longitudinal section of the device; and

Fig. 2 is a plan view showing the method of using the device.

The device shown in the drawing consists of a metal body or pistol 1 having a longitudinal channel 2 in the front portion and a narrower longitudinal channel 3 having a branch which extends transversely through a depending portion 4 at the rear of the pistol. A straight hollow spray pipe 5 extends centrally through the larger channel 2 and is secured to the inside of the pistol by soldering or otherwise so that it registers with the narrow channel 3. A suction control valve 6 extends transversely through the channel 2 with its upper end open at 7 and its lower end opening into a nipple 8 to which a flexible suction hose 9 may be attached.

A spray bottle 10 is threaded or otherwise secured to the depending portion 4 of the pistol, and is adapted to contain any suitable spray solution 11. A tube 12 is also threaded or otherwise secured to the depending portion 4 of the pistol so that its upper end registers with the branch channel 3 and its lower end reaches into the spray solution 11 inside the bottle. It will thus be seen that there is a continuous passage for the spray solution when drawn upwardly through tube 12 and channel 3 and discharged through the open end of pipe 5.

The tube 13 is made of glass or other suitable material and has its mouth 14 flared or bell-shaped to fit over the affected part. In the form shown in the drawing, the mouth of the tonsil tube 13 is bent and flared so as to readily engage the tonsil when the tube is inserted into the mouth of the patient. The other end of the tonsil tube has a metal collar 15 which fits over the open end of the pistol 1, making a tight-fitting friction joint which allows the tube to be rotated to engage either the right or left tonsil. When the device is assembled the spray pipe 5 extends through the tube 13, out of contact therewith, and has its open end spaced from the mouth of the tube as shown in the drawing. The tube itself registers with the channel 2 in the pistol.

Any suitable means may be employed to create a suction in the flexible hose 9, but if the opening 7 at the top of the valve 6 is uncovered the effect will simply be to draw air through the valve and hose without creating appreciable suction in the tonsil tube 13. The valve opening 7, however, is conveniently located so that the operator may easily close it with one finger of the hand which holds the device. Consequently, when the valve

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opening 7 is closed as shown in Fig. 1 of the drawing, suction is created in the tube 13, and if the mouth 14 of the tube is closed by the tonsil the suction will draw the solution 11 through the tube 12, channel 3 and pipe 5, and eject it in the form of a spray through the open end of the pipe 5.

The operation of the device is best shown in Fig. 2 in which the mouth 14 of the tonsil tube 13 is shown engaging a tonsil. The suction created in the tube 13 pulls the tonsil into the tube, causing the crypts and crevices to open, and allowing the spray to penetrate deeply into each crypt as the secretion is carried out. The suction draws out plugs of secretion and pus, while the spray dissolves and softens harder particles and thoroughly cleanses the walls and fundus of each crypt. The suction likewise draws the waste solution out through the tube 13 and hose 9 where it may be collected or disposed of in any suitable manner. If desired, a small hole 16, about one-sixteenth inch in diameter, may be drilled through the depending portion 4 of the pistol to admit air as the solution is being withdrawn from the bottle.

The particular device disclosed here for purposes of illustration has been used in the treatment of acute follicular tonsilitis, subacute and chronic tonsilitis. It will be evident, however, that the invention is capable of various modifications and adaptations not specifically referred to but included within the scope of the appended claims.

The invention claimed is:

1. A medical douche comprising a body portion having a longitudinal channel and a suction valve extending transversely through said channel, a removable hollow tube rotatably mounted on said body portion in communication with said channel and having its outer end bent and formed to engage the surface to be treated, and a straight spray pipe extending through said tube and said channel and having its end adjacent the bend in the tube.

2. A medical douche comprising a pistol-like body portion adapted to be held in the hand, having a longitudinal channel in the front and a narrower aligned channel in the rear for connection to a source of treating fluid, a suction valve extending transversely through said front channel having an upper opening in position to be closed by the finger and a lower opening terminating in a nipple for connection to a suction hose, a spray pipe extending through said front channel and connected to the body portion in alignment with said rear channel, and a hollow tube rotatably mounted on the front of the body portion in alignment with said front channel and having its outer end bent and flared to engage the surface to be treated.

3. A medical douche comprising a tube having its end shaped to engage the part to be treated, a body portion supporting said tube and having a suction opening communicating with said tube and adapted to be closed by the finger of the operator to control the suction, and a spray pipe in said tube adapted to be connected to a source of treating fluid and having an opening spaced from the end of said tube.

4. A medical douche, comprising a body portion having an interior channel and an opening connecting said channel to the outside of the body portion, said opening being adapted to be closed by the operator's finger so as to control the pressure in said channel when suction is applied thereto, a hollow tube rotatably mounted on said body portion in communication with said channel, a spray pipe extending through said tube and said channel having an opening spaced from the mouth of said tube, and means for connecting said spray pipe to a source of treating fluid.

Signed at Long Island City, in the county of Queens and State of New York, this 27th day of February A. D. 1931.

GEORGE L. SORENSEN.