June 19, 1934. P. G. HÖRNELL 1,963,329

VAGINAL AND ANAL IRRIGATOR

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Fig. 1

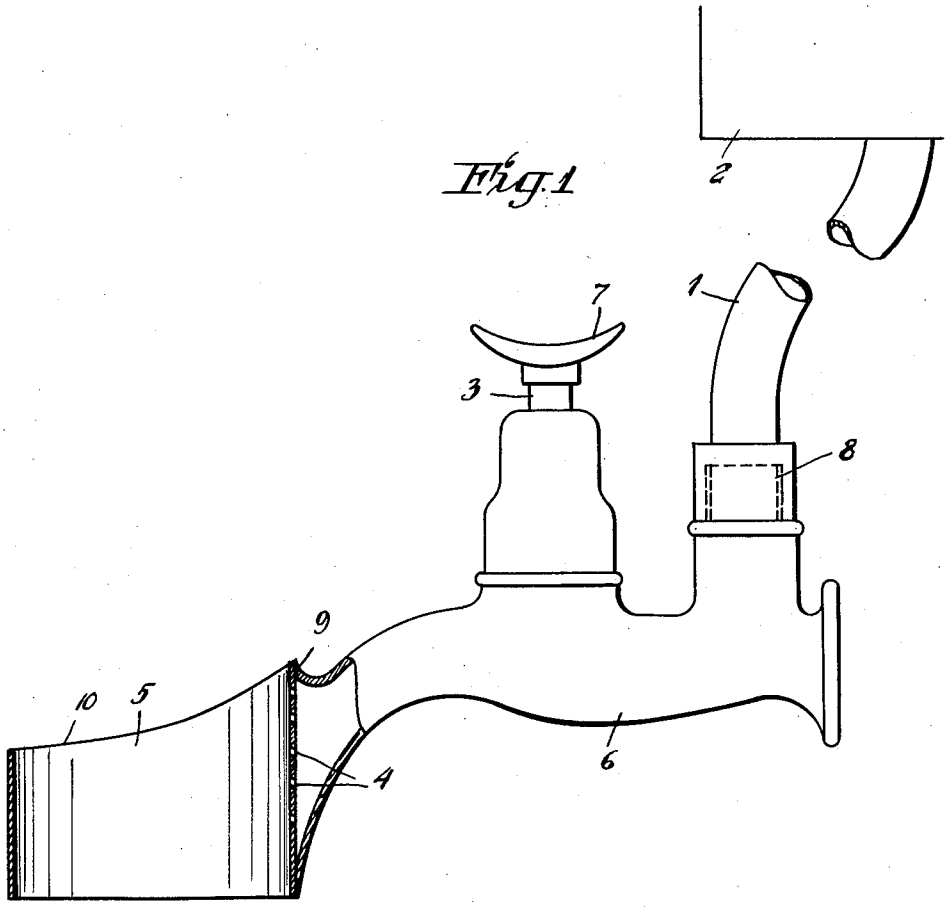
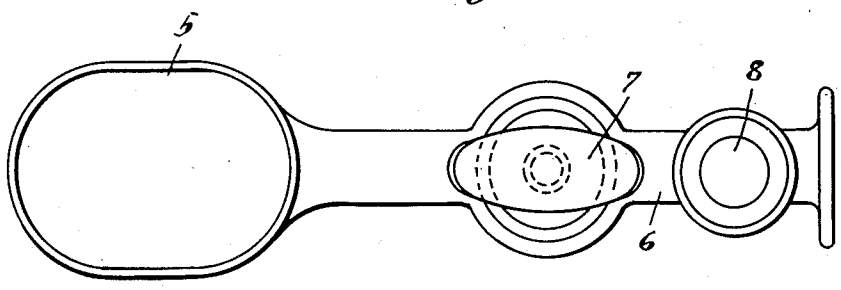


Fig. 2



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Fig. 7

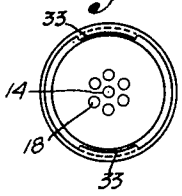


Fig. 5

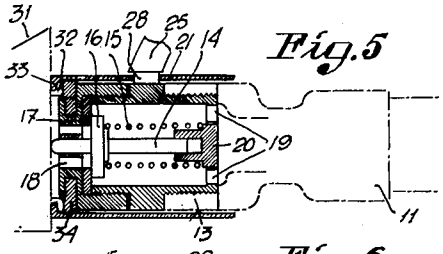


Fig. 6

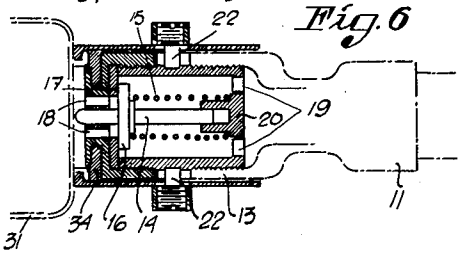


Fig. 8

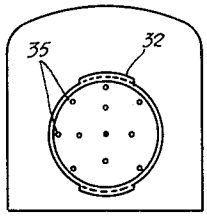


Fig. 3

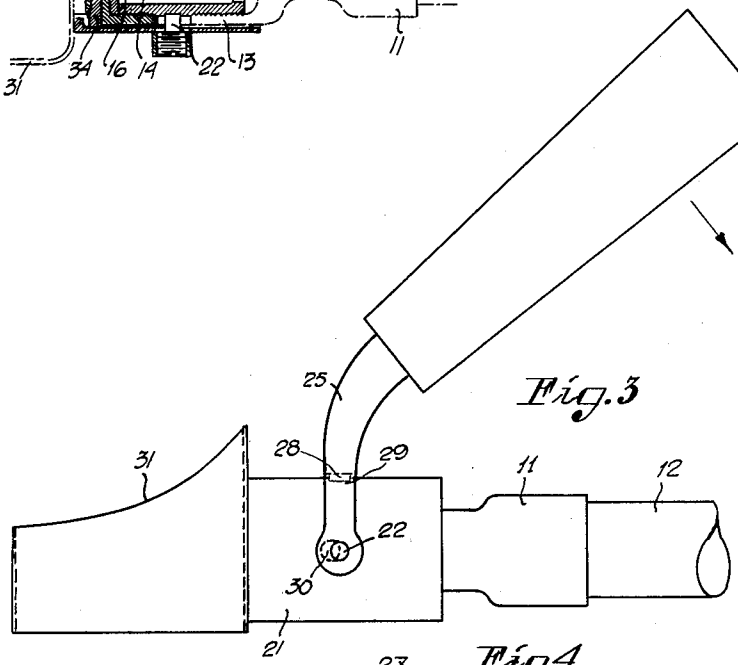
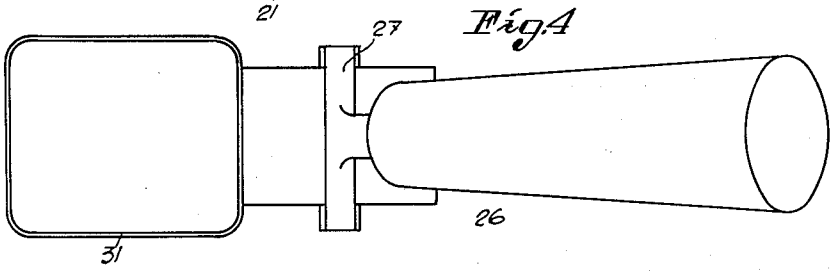


Fig. 4



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VAGINAL AND ANAL IRRIGATOR

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Fig. 10

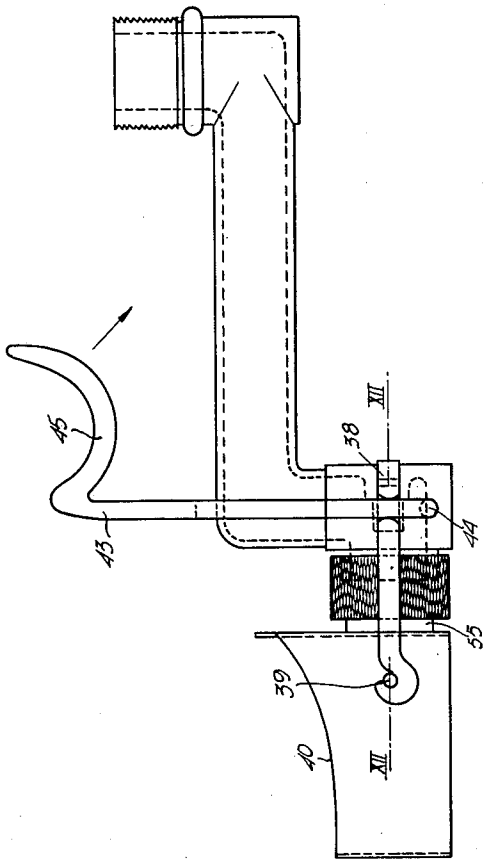


Fig. 11

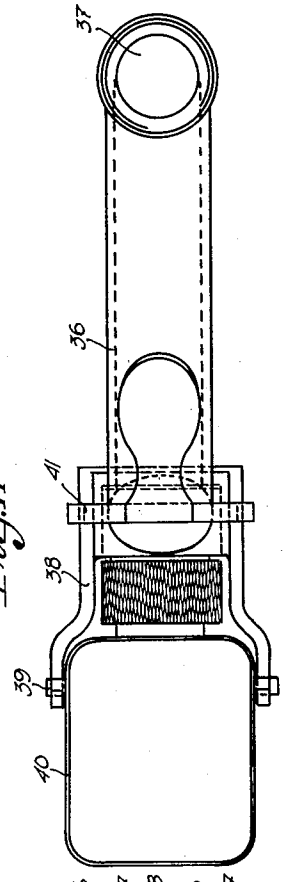


Fig. 9

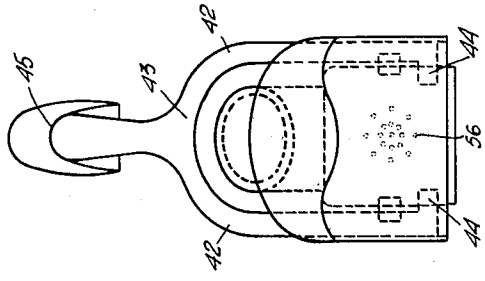
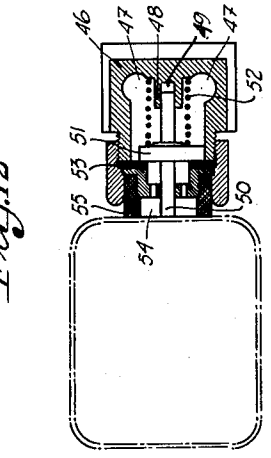


Fig. 12



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UNITED STATES PATENT OFFICE

1,963,329

VAGINAL AND ANAL IRRIGATOR

Per Gustaf Hörnell, Stockholm, Sweden

Application January 22, 1931, Serial No. 510,523
In Sweden January 22, 1930

9 Claims. (Cl. 4—7)

Apparatus designed to be used for cleansing cavities of the human abdomen by flushing with water jets have already been proposed. In certain of these apparatus there is provided a jacket adapted to be pressed against the portions to be cleansed and surrounding the jet so as to prevent the water from spreading over too large a surface of the body. In such devices the water is supplied from a discharge nozzle or rose located co-axially with the jacket wall. This arrangement suffers from several drawbacks inasmuch as the last drops of the soiled water used for a previous flushing will always fall back and remain upon the nozzle or rose and will be ejected together with new quantities of flush water against the next individual who uses the apparatus. The risks of infection for instance in cases of intestinal and venereal diseases is evident.

My invention has for its object an apparatus designed to obviate these defects, its construction being such that any contamination of the discharge nozzle from previous flushings is rendered impossible. My invention relates to an anal and vaginal irrigating apparatus for cleansing cavities of the human abdomen by flushing with at least one jet of water or other suitable liquid, said jet being surrounded by a jacket open at both ends, the upper border of which jacket is adapted to be brought into engagement with the portion of the human body to be cleaned. The feature by which the above mentioned defects are eliminated consists therein that the flush water is supplied through a nozzle which is disposed laterally of the geometrical axis of the jacket, preferably in the wall thereof. Other objects of my invention will be described in the following.

The accompanying drawings show by way of example some modes of construction of an apparatus designed to act as an anal and vaginal shower-bath according to the present invention.

Fig. 1 is a partially sectioned elevation of a device according to one embodiment.

Fig. 2 is a plan view of the device according to this embodiment.

Fig. 3 is an elevation of a second embodiment.

Fig. 4 is a corresponding plan view.

Fig. 5 shows a partial longitudinal section of the valve portion of the apparatus as shown in Fig. 3, part of the jacket and associated parts of the apparatus proper being represented by dotted lines.

Fig. 6 is a partial longitudinal section of the same valve portion seen at an angle of 90 degrees with respect to Fig. 5.

Fig. 7 is an end view of the extremity of the apparatus (the left one as seen in Fig. 5) with which the jacket engages.

Fig. 8 is an end view of the jacket showing the portion (the right one in Fig. 5) which engages the water outlet of the apparatus.

Fig. 9 is an end view of a third modification.

Fig. 10 is an elevation of the apparatus shown in Fig. 9.

Fig. 11 is a corresponding plan view.

Fig. 12 shows a sectional plan view on the line XII—XII in Fig. 10.

In Figs. 1 and 2, 1 designates a tubing serving as a connection between a vessel 2 containing water under pressure and the flushing device proper. This flushing device consists of a suitably formed, metallic member having a channel extending therethrough which channel leads from the tube socket 8 onto the jacket wall 9. This wall is provided with a plurality of apertures 4 through which water jets may be directed upwardly against the area limited by the jacket border 10. The jacket may be rigidly or detachably connected with the handle portion. 6 is the handle portion of the whole arrangement.

When flushing is to be effected, the jacket 5 is pressed with its upper border 10 against the portion of the human body in question, whereupon the stream of flush water is released for instance by depressing the button 7 of the valve spindle 3. The flushing operation having been completed the water stream is interrupted whereupon the device may be hung up in its place.

Figs. 3 to 8 represent a modification with detachable jacket. 11 designates the body of the apparatus, said body having a channel extending therethrough which is connected with a water supply pipe or tubing 12 leading to an ordinary water pipe system or to a vessel containing water under pressure. The member 11 comprises a valve portion 13. The valve proper comprises a valve spindle 14 which is actuated by a pressure spring 15 tending to force the spindle with its disk 16 into fluid-tight engagement with a washer or packing 17. In this position the valve disk 16 closes the ports 18 leading to the outlet end of the device. The spindle 14 is slidable in a bore provided in the projection 20. The cavity of the valve socket communicates through ports 19 with the water supply channel in the part 11 and tubing 12. The valve portion 13 is cylindrical with respect to its outward appearance and is surrounded by a sleeve 21 which is adapted to slide on the cylindrical portion 13. On pins 22 secured to the screw-threaded element 24 there are pivotally journalled shanks 25 of a forked

member 27 which is connected with a handle 26. At the point where the shanks of said fork converge there is provided an abutment or the like 28 which engages a depression or notch 29 in the sleeve 21. Said sleeve has an elongated notch or slit 30 in which the pins 22 engage. The jacket 31 is detachably secured to the sleeve 21 as by means of a bayonet-clutch 32, 33 so that it may be changed for individual needs. In the left extremity of the valve portion as seen in Figs. 5 and 6 is provided an elastic packing 34 such as of rubber.

If the jacket 31 is applied with its border engaging the portion of the human body to be cleansed and the handle 26 is subsequently bent downwards in the direction as indicated by the arrow in Fig. 3, the shanks 25 will rotate in a clock-wise direction on the pins 22. The shanks 25 being operatively connected with the sleeve 21 by means of abutment 28 and notch 29 this turning movement will result in a pull on the sleeve 21 towards the right as seen in the figures. The pull exerted by the relative movement of the handle with regard to the jacket serves to press the right-hand wall of the jacket into fluid-tight engagement with the packing 34, and the jacket wall will push the valve spindle to the right thus releasing a flush water stream which is ejected obliquely upwards against the surface to be flushed through minute apertures 35 in the wall of the jacket adjacent the outlet. After completed irrigation the pressure on the handle 17 is discontinued and the shower-bath interrupted, the valve parts returning to their original position under the action of the spring 15 and the resilient packing 34. The slit 30 in the sleeve 21 has a sufficient length or clearance with regard to pins 22 to permit of the movements described. It is obvious that this construction decreases the chances of infection as the quantity of water remaining after each flushing is very small and soon disappears through the apertures in the walls.

In Figs. 9 to 12, 36 designates the body of the apparatus which is L-shaped and has a channel extending therethrough. At one end there is provided a screw-threaded portion 37 adapted to be connected with an armoured tubing leading to a vessel, which contains water under pressure, or to a common water supply pipe. In a groove passing around the lower part of the one knee of the body 36 is placed a U-shaped member 38 which carries at its ends the jacket 40 which is detachably journalled on pins 39. The said member is provided with two notches 41 located on each shank one opposite the other. In these notches the shanks 42 of another U-shaped member 43 engage, the shanks 42 being rotatably journalled in the body 36 somewhat below the notches 41 by means of pins 44 entering suitable holes. The latter shanks 42 on both sides of the lower knee of the body 36 converge in an upward direction to a handle portion 45 adapted to be operated manually.

The water supply controlling part of the apparatus is shown in Fig. 12. The valve box is provided with an annular compartment 47 which communicates with the water supply channel within the body of the apparatus. The annular compartment surrounds the projecting central portion 48, which has a centrical longitudinal bore 49 in which the valve spindle 50 may slide. The valve disk 51 is rigidly secured on the spindle 50. This disk is always actuated by the pressure spring 52 which tends to force the disk 51 against a seat 53 consisting of a suitable packing, thus closing the water outlet port 54. This port is surrounded by a hollow cylinder 55 of some suitable material, such as rubber. The valve spindle 50 preferably projects a small distance beyond the end plane of the valve but not so far as the elastic cylinder 55 when the jacket is removed.

When the apparatus is not in use the right wall (see Figs. 10 and 11) of the jacket engages the valve spindle without exerting any pressure on the same, or it lies within some distance of the end of said spindle. As the spindle is thus unactuated the water supply is kept shut off by the influence of the pressure spring 52.

When using the apparatus one grasps the same with one hand along the horizontal knee (see Fig. 10) of the body 36 and brings it into such a position that the upper border of the jacket will surround the portion of the human body to be flushed, whereafter the handle portion 45 is actuated for instance with the thumb in the direction as shown by the arrow in Fig. 10. The U-shaped member 43 will thus be rotated on the pins 44, whereby the member 38 will be pulled to the right as shown in Fig. 10. Accordingly also the jacket will be moved to the right, because it is connected with the member 38, and will be forced into fluid-tight engagement with the rubber packing 55 surrounding the water outlet. After fluid-tight engagement has been obtained, the valve spindle 50 with associate valve disk 51 is moved to the right against the action of the spring 52 (see Fig. 12) whereby the water supply to the port 54 is released. Because the jacket 40 at the place pressed against the port 54 is perforated by one or more apertures 56, the longitudinal axes of which are directed obliquely upwards against the surface limited by the upper border of the jacket, the body portion surrounded by the upper border of the jacket will be subjected to the action of a shower-bath. As soon as the pressure on the handle 45 ceases the movable parts of the apparatus return to their original position through the elasticity of the packing 55 and the pressure action of the spring 52, i. e. the flush water stream is shut off.

What I claim is:—

1. In apparatus of the type described, a flushing liquid supply member, a jacket open at both ends and detachably secured to said member, means for establishing a fluid-tight joint between said jacket and said member, and means actuated by the movement of said jacket relatively to said member for releasing a flushing liquid stream within the bounds of said jacket.

2. In apparatus of the type described, a flushing liquid supply member, a perforated jacket open at both ends detachably connected to said member, means for establishing a fluid-tight joint between said jacket and said member, and means actuated by the movement of said jacket relatively to said member for releasing a flushing liquid stream within the bounds of said jacket.

3. In apparatus of the type described, a jacket open at both ends, a flushing liquid supply member, a controlling device for the water supply comprising means to automatically release a stream of flushing liquid from said member within the bounds of said jacket on the jacket being pressed against a portion of the human body adjacent to the portion to be flushed, and automatically to interrupt said stream when the pressure ceases.

4. In apparatus for cleansing areas of the

human body by surface flushing with a shower of liquid, a jacket open at both ends and having an unobstructed interior wall, said wall being perforated for the introduction of the flushing liquid in jet form, and means arranged exteriorly of said jacket and communicating with the perforated wall thereof for supplying the flushing liquid thereto.

5. In apparatus for cleansing areas of the human body by surface flushing with a shower of liquid, a jacket open at both ends and having an unobstructed interior wall, said wall being perforated for the introduction of the flushing liquid in jet form, the axis of perforation of said wall being at an oblique angle thereto, and means arranged exteriorly of said jacket and communicating with the perforated wall thereof for supplying the flushing liquid thereto.

6. In apparatus for cleansing areas of the human body by surface flushing with a shower of liquid, a jacket open at both ends and having an unobstructed smooth interior wall, said wall being perforated for the introduction of the flushing liquid in jet form, and means arranged exteriorly of said jacket and detachably connected therewith and communicating with the perforated wall thereof for supplying the flushing liquid thereto.

7. In apparatus of the type described, a jacket open at both ends and having an unobstructed smooth interior wall to permit free flow of liquid through the jacket, said wall having an area provided with a plurality of perforations through which the flushing liquid may enter the jacket for impingement in jets upon the area to be flushed, and means arranged exteriorly of said jacket and encompassing the perforated area of the wall thereof for supplying the flushing liquid to said perforations.

8. In apparatus of the type described, a jacket open at both ends and having an unobstructed smooth interior wall to permit free flow of liquid through the jacket, said wall having an area provided with a plurality of perforations through which the flushing liquid may enter the jacket for impingement in jets upon the area to be flushed, and valve controlled means arranged exteriorly of said jacket and encompassing the perforated area of the wall thereof for supplying the flushing liquid to said perforations.

9. In apparatus of the type described, a jacket open at both ends and having an unobstructed smooth interior wall to permit free flow of liquid through the jacket, said wall having an area provided with a plurality of perforations through which the flushing liquid may enter the jacket for impingement in jets upon the area to be flushed, and valve controlled means including a hollow handle arranged exteriorly of said jacket and providing a conduit encompassing the perforated area of the wall thereof for supplying the flushing liquid to said perforations.

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