No. 703,615. Patented July 1, 1902.

N. C. E. SCHWARTZ.

VAGINAL SYRINGE.

(Application filed Feb. 23, 1901.)

(No Model.)

Fig. 1.

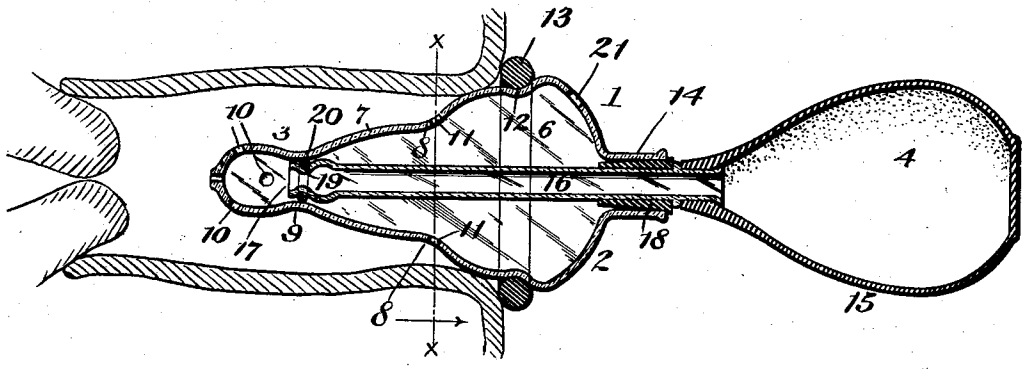
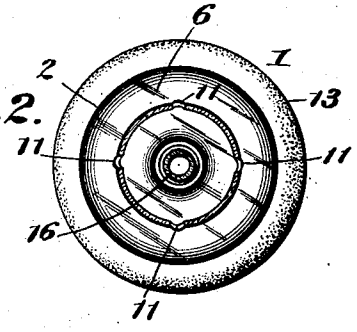


Fig. 2.



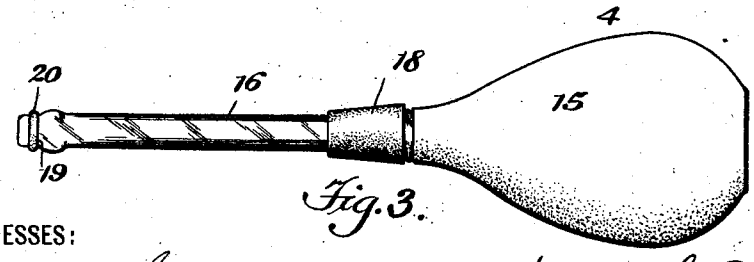


Fig. 3.

WITNESSES:

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VAGINAL SYRINGE.

SPECIFICATION forming part of Letters Patent No. 703,615, dated July 1, 1902.

Application filed February 23, 1901. Serial No. 48,384. (No model.)

To all whom it may concern:

Be it known that I, NICOLAUS CHARLES EMIL SCHWARTZ, a citizen of the United States, residing at New York, in the county and State of New York, have invented certain new and useful Improvements in Vaginal Syringes, of which the following is a specification.

This invention relates to vaginal syringes; and it has for its object to provide a simple and improved syringe of this class which shall possess advantages in point of convenience, positiveness of operation, effectiveness, and general efficiency.

In the drawings, Figure 1 is a central longitudinal sectional view of a syringe embodying my improvements and in operative position. Fig. 2 is a detail transverse sectional view of the same, taken on the line *x x*, Fig. 1. Fig. 3 is a detail side view of one member of the syringe in detached position.

Corresponding parts in all the figures are denoted by the same reference characters.

Referring to the drawings, 1 designates my improved syringe, which is provided with an enlarged or bulbous body portion 2, which is pear-shaped in general contour and from one end of which projects a nozzle portion 3. From the other end of the body portion projects a filling device 4.

The body portion 2 is hollow, as shown, and in the preferred form of construction consists of a main bulbous portion 6 and a supplemental bulbous portion 7, which latter is interposed between the main bulbous portion and the nozzle portion 3. Both of the bulbous portions 6 and 7 are of curved exterior contour and are merged together in a contracted portion 8. The bulbous portion 7 and the nozzle portion 3 are merged together in a contracted portion 9. The body portion 2 tapers in size from the main bulbous portion 6 to the nozzle portion 3, the supplemental bulbous portion 7 being intermediate in size between the main bulbous portion 6 and the nozzle portion 3.

The nozzle portion 3 is provided with a plurality of perforations 10, and a series of perforations 11 are formed about the body portion in the line of contraction 8 between the bulbous portions 6 and 7.

The main bulbous portion 6 is provided in its periphery and in a plane at right angles with the longitudinal axis of the syringe with a continuous groove or seat 12, which is formed to receive an elastic ring 13, of rubber or other tight-joint material, the purpose of which is hereinafter described. The groove 12 is arranged forwardly of the filling device 4, the nozzle portion of the syringe being considered as constituting the forward end of the device. The extreme end of the body portion or of the main bulbous portion 6 is formed into a rearwardly-extending neck or flange 14, with which the filling device 4 is connected.

The filling device 4 in the preferred form of construction consists of a compressible bulb 15, which is provided with a projecting injection-tube 16, designed for introduction through the neck 14 and the body portion 2 into position to bring its outer end portion 17 within the nozzle portion 3, whence it may discharge the contents of the bulb 15 through the perforations 10. The injection-tube 16 carries at its inner end a tubular packing 18, which when the injection-tube is in operative position fits tightly within the neck or flange 14 and forms a tight joint between the same and the injection-tube. At its outer end the injection-tube is provided with an annular peripheral groove or seat 19, which is formed to receive an elastic packing-ring 20, and when the injection-tube is in operative position this packing-ring forms a tight joint between the injection-tube and the contracted portion at 9 between the nozzle portion 3 and the bulbous portion 7. In this position the packing-ring 19 obstructs all communication between the nozzle portion 3 and the body portion 2.

The bulbous portion 6 is provided at a point rearwardly of the elastic ring 13 with an air-vent 21.

The operation and advantages of my improved vaginal syringe will be readily understood.

The nozzle portion 3 and the supplemental bulbous portion 7 are forced into the vagina until a degree of insertion has been reached at which the nozzle portion is in position to spray the parts and until the larger main bulbous portion closes the mouth of the vagina against ingress or egress of water. The effective closing of the mouth of the vagina is

accomplished by the elastic packing-ring 13. With the parts in this position the only portion of the device projecting exteriorly of the vagina will be the outer end portion of the bulbous portion 6, including the air-vent 21, together with the compressible bulb 15. The body portion in its position of full insertion operates to fully distend and open up the walls of the vagina and expose the whole surface of the same to the cleansing flow of the water which is introduced into the same from the bulb 15 and through the injection-tube 16 and nozzle portion 3. This distention of the walls of the vagina is effectually maintained by the bulbous formation of the body portion. The body portion is so held that the air-vent 21 is at the top of the bulbous portion 6.

Before using the syringe the bulb 15 is filled with water through the injection-tube 16, which latter is then inserted through the neck 14 until the forward end 17 projects within the nozzle portion 3, and the packing-ring 19 obstructs the passage between the nozzle portion and the body portion. After the operative insertion of the syringe, as above described, the bulb 15 is compressed, thus forcing the water it contains through the injection-tube and out of the nozzle portion into the vagina. The pressure of the outflowing water causes it to circulate freely over the distended walls of the vagina and to thoroughly cleanse the same. As the water passes into the vagina the air in the latter is forced out through the perforations 11 and the air-vent 21. After the cleansing flow of the water the pressure upon the bulb is removed and air rushes into the vagina through the air-vent 21 and perforations 11 in the body portion and forces the water back into the expanding bulb through the nozzle portion and the injection-tube. The arrangement of the openings 11 within the contracted portion 8, between the bulbous portions 6 and 7, is particularly advantageous from the fact that the air is permitted to pass freely through the same without the direct obstruction of the walls of the vagina.

Any water which enters the body portion 2 through the openings 11 is forcibly expelled from the same through said openings by the pressure of the air which enters the body portion through the vent when the water passes out of the vagina through the injection-tube. The body portion may thus serve as a temporary reservoir for water which might otherwise pass outwardly through the vent 21.

The packing-ring 13 maintains a water-tight condition at the mouth of the vagina and prevents the escape of air or water at that point, which enhances the effectiveness of operation of the syringe.

The maintenance of the distended condition of the vagina by the elongated bulbous formation of my improved syringe constitutes an important feature of the present invention, as all the surface of the inner walls of the vagina is subjected to the cleansing flow of the water, a result which is impossible when the membraneous surface of the vagina is in normal contracted or partly-distended condition. The tubular packing 18 also forms a water-tight joint between the neck 14 and the inner end of the injection-tube and prevents the escape of air or water at that point.

The body portion and nozzle portion may be formed integrally of glass, hard rubber, or other suitable material, and the injection-tube may be similarly formed. The detachability of the injection-tube permits of ready cleansing of the parts and filling of the bulb 15.

It will be noted that by means of my improved syringe it is possible to force a large quantity of water into the vagina and to withdraw the water from the same through the same injection device without the escape of the water at the mouth of the vagina and that the formation of an air-cushion within the vagina in opposition to the introduction of water into the latter is entirely prevented. Also it will be noted that this air-cushion is dissipated without the escape of the water at the mouth of the vagina. The results obtained are an easy cleansing operation, free from all shock to the parts, and cleanly and effective.

Having thus described my invention, I claim and desire to secure by Letters Patent—

The herein-described vaginal syringe, comprising a hollow pear-shaped body portion having a contracted portion intermediate its ends and a series of perforations adjacent to the line of contraction, the smaller end of said body portion terminating in a perforated bulbous nozzle portion and the larger end in a neck, said body portion being provided in the plane of its substantially greatest diameter with a groove, a packing-ring seated in said groove and adapted to close the vulva, a detachable inlet-tube adapted for insertion through said body portion and provided at its outer end with a groove and a packing-ring seated in the last-named groove and adapted to form a tight joint between the tube and the contracted portion between the nozzle portion and the body portion.

In testimony whereof I have signed my name in the presence of the subscribing witnesses.

NICOLAUS C. E. SCHWARTZ.

Witnesses:
J. R. LITTELL,
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