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2,610,626

SYRINGE

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Fig. 1.

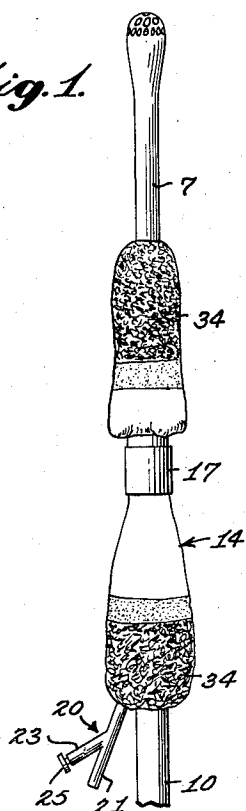


Fig. 2.

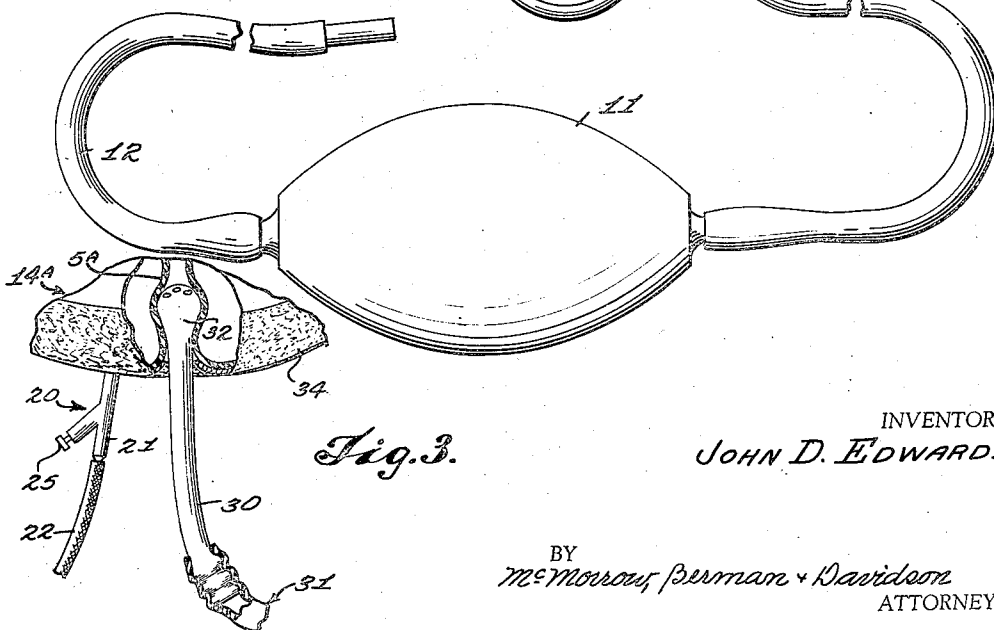
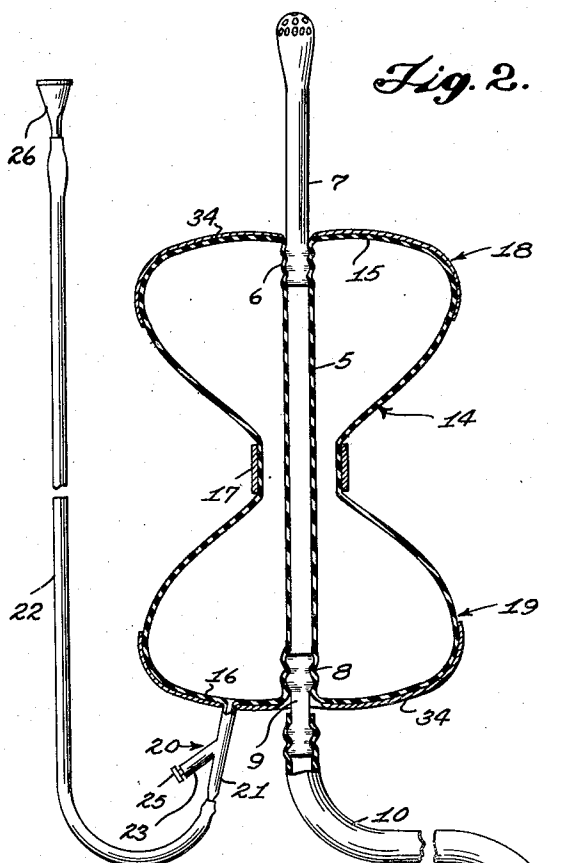


Fig. 3.

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3 Claims. (Cl. 128-231)

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This invention relates to an improved vaginal douche syringe of the type having an inflatable body portion adapted to be expanded to seal the vaginal opening during douching and afterwards, the primary object of the invention being to provide a more practical and efficient device of this kind which renders the douching operation easier, more effective, more sanitary, and less likely to involve soiling or wetting of surrounding objects.

Another important object of the invention is to provide a device of the character indicated above which can be made either in the form of a complete syringe or in the form of an attachment for the nozzle of an ordinary vaginal syringe, the device in either form being simple and rugged in construction and capable of being made serviceable and attractive at relatively low cost.

Other important objects and advantageous features of the invention will be apparent from the following description and the accompanying drawings, wherein, merely for purposes of illustration, specific embodiments of the invention are set forth in detail.

In the drawings, wherein like or similar members designate the same or like parts throughout the several views:

Figure 1 is a side elevation of one embodiment, showing the device in unexpanded condition;

Figure 2 is an enlarged longitudinal section showing the device of Figure 1 in expanded condition; and,

Figure 3 is a fragmentary longitudinal section taken through another embodiment designed for attachment to an ordinary vaginal syringe.

Referring in detail to the drawings, and first to Figures 1 and 2 thereof, the embodiment of the invention therein shown is a complete vaginal syringe, involving a straight, axial, relatively hard tube 5, in one end of which is crimped or otherwise secured, as indicated at 6, one end of a douche nozzle 7. In the other end of the tube 5 is similarly crimped or otherwise suitably secured, as indicated at 8, one end of a connector or coupling tube 9, on whose other end is secured a flexible tube 10, leading from one end of a compressible bulb 11 having its opposite end connected to a flexible tube 12 leading from a suitable source of douche fluid (not shown).

Fixed to and concentrically surrounding the hard tube 5 is a flexible, resilient, and stretchable body portion 14 which is longitudinally elongated and of circular or hollow cylindrical form, and has disk-like end portions 15

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and 16, respectively, secured to the opposite ends of the tube 5. The middle of the body 14 is surrounded by a relatively thicker or less stretchable band 17 which restricts expansion of this part of the body 14 when the body is inflated, and produces the hour-glass shape of the body 14 shown in Figure 2, when the body is inflated, thereby providing generally similar conical heads 18 and 19, respectively, at opposite ends of the body 14.

For inflating and deflating the body 14, the end portion 16 has connected thereto, at one side of the hard tube 5, a short tubular fitting 20, involving a part 21 leading from the end 16 and connected to one end of an inflating tube 22, and a part 23 extending from the side of the part 21 and provided with a suitable form of normally closed check valve (not shown) having an operating button 25. The other end of the inflating tube 22 includes a mouthpiece 26 for use in blowing air into the body 14 or some other form of inflating means may be connected thereto.

In its uninflated or collapsed condition, the body 14 is in the flexible small diameter condition shown in Figure 1, in which the device is easily and comfortably inserted in the vaginal opening. As the device is passed into the opening with the nozzle 7 foremost, about half the length of body 14 is inserted before inflating the body 14, so that upon inflation thereof the forward head 18 will be within the vagina and the rearward head 19 will be outside of the vagina. The soft, conformable inflated heads 18 and 19 thereby seal both the inner and outer surfaces adjacent to the vaginal opening and effectively prevent leakage of douche solution through the opening while the body 14 is in inflated condition. While the body 14 is in place and in inflated condition, the douche solution is applied through the nozzle 7 by means of the bulb 11. With the valve closed, the inflated body 14 will retain the douche fluid in the vaginal canal as long as desired. Opening of the valve by operation of the button 25 provides for rapid or slow deflation of the body 14 as may be desired, to enable withdrawal of the device.

In Figure 3 is shown a form of the device designed for attachment to the nozzle 30 of an ordinary vaginal syringe 31. The only difference between the device of Figure 1 and that of Figure 3 is that the axial tube 5a in Figure 3 is relatively soft and stretchable instead of being hard, so that the rear end of the tube 5a can be stretched over the head 32 of the syringe nozzle 30 and used as described above.

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In both embodiments of the invention, the ends 15, 16 are covered on their outer sides by thin circular sheets 34 of chamois or the like to aid in preserving the shape of and limiting the inflation expansion of the heads 18 and 19.

Having thus described this invention, what is claimed is:

1. In a vaginal douche syringe, an elongated tube, a nozzle projecting axially from one end of said tube, a douche fluid supply means connected to the other end of said tube, a generally cylindrical inflatable body surrounding said tube, said body having ends secured at opposite ends of said tube, said body being formed of resilient and stretchable material and having a relatively small diameter when uninflated, said body being formed to expand to a relatively large diameter when inflated, and a band surrounding an intermediate portion of said body, said band being substantially less stretchable than said body whereby upon inflation of said body the remainder of said body expands beyond the diameter of said band to define conical heads on the opposite ends of said body.

2. In a vaginal douche syringe, an elongated tube, a nozzle projecting axially from one end of said tube, a douche fluid supply means connected to the other end of said tube, a generally cylindrical inflatable body surrounding said tube, said body having ends secured at opposite ends of said tube, said body being formed of resilient and stretchable material and having a relatively small diameter when uninflated, said body being formed to expand to a relatively large diameter when inflated, a band surrounding an intermediate portion of said body, said band being substantially less stretchable than said body whereby upon inflation of said body the remainder of said body expands beyond the diameter of said band to define conical heads on the

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opposite ends of said body, said other end of the inflatable body having inflating means connected thereto including valve means operable to deflate said body, and flexible and non-stretching sheets secured on the opposite ends of said inflatable body for preserving the shape of said opposite ends and limiting the expansion thereof as the body is inflated.

3. In a vaginal douche syringe, an elongated tube, a nozzle projecting axially from one end of said tube, a douche fluid supply means connected to the other end of said tube, a generally cylindrical inflatable body surrounding said tube, said body having ends secured at opposite ends of said tube, said body being formed of resilient and stretchable material and having a relatively small diameter when uninflated, said body being formed to expand to a relatively large diameter when inflated, said other end of the inflatable body having inflating means connected thereto including valve means operable to deflate said body, said body having a band surrounding an intermediate portion thereof, said band being substantially less stretchable than said body whereby upon inflation of said body the remainder of said body expands beyond the diameter of said band to define conical heads on the opposite ends of said body.

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