

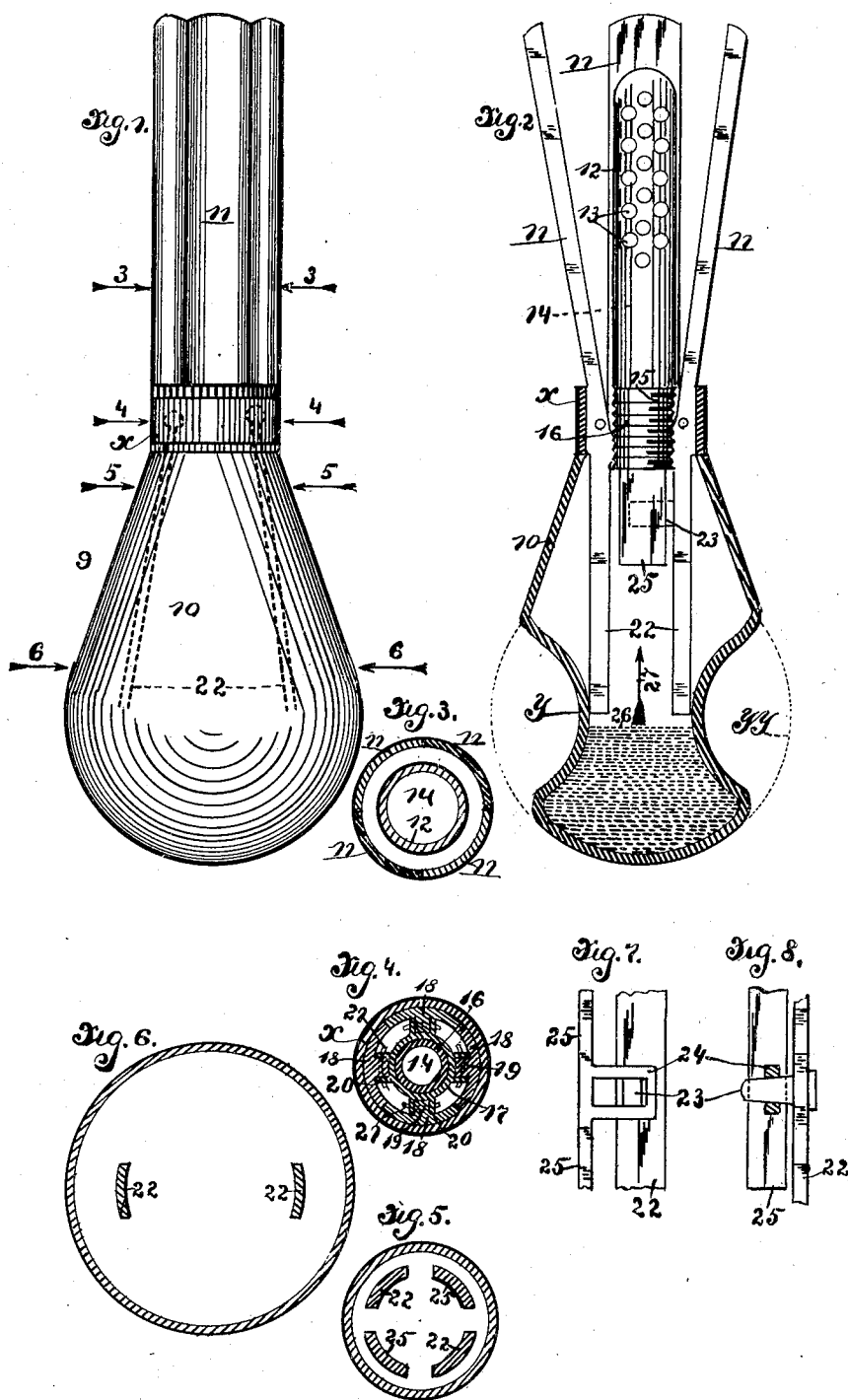
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MANUAL SYRINGE

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MANUAL SYRINGE

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This invention relates to bulb syringes of the type which are used manually for hygienically irrigating the vaginal canal.

Another object of the invention is the provision of means with the syringe for introducing into the vaginal canal of medicinal substances for disinfecting the mucous membrane and allied parts thereof.

Another object of the invention is the provision of means having permanent embodiments for spraying a medicament into the vaginal canal and, at the impulse of manipulation of one part, other means therein instantly cause simultaneous dilation of the anatomical parts of the vagina for the necessary exposure of their physiological and pathological pockets or folds in order to facilitate the removal of undesirable substances therefrom.

To the attainment of the foregoing, the invention consists in the improvement as hereinafter described and definitely claimed.

In the accompanying drawings, forming part thereof: Fig. 1 is a side elevation of the bulb syringe, ready for use; Fig. 2 is a longitudinal section thereof showing the inner construction; Figures 3, 4, 5 and 6 are cross sections of Fig. 1 respectively taken on the line 3—3, 4—4, 5—5 and 6—6, as indicated by the arrows; while Figures 7 and 8 are views showing the interconnecting means of one part with another when they are in operation.

My novel manual syringe 9, comprising the elastic member 10 and the movable blades 11, is operative under the pressure of the bulb by manual compression thereon to influence the ends 22 of the blades 11 for pivotal action thereof, as hereinafter described, thereby simultaneously expelling the medicament deposited in the elastic member, through the openings 12 of the nozzle 13 having the canal 14, which forms a communication with the openings, and the lower portion 16 is threadedly engaging, as shown at 15, in connection with the member 17. The intermediate portion of the syringe comprises the outer ring X, the connecting portion 18 of each blade 11 having a pivotal member 19, the ring 17 having pivotal members 20, and the lower

threaded portion 16 of the nozzle 12 having the canal 14. Each portion 18, as shown in Fig. 4, is provided with a portion which is pivoted to the member 17, the lug 19 of one engaging with the recess 20 of the other and both connected by the pin 21, to form a permanent pivotal connection and an engagement therebetween. It will also be appreciated that the parts are air and water tight and not liable to be affected by a leak in the side, and that the syringe is applicable to all requirements for the designed purposes.

Among the other objects the syringe embodies the parts which are preferably conforming to the contour of the vaginal canal in order to provide a seviceable construction, one or two blades 11 being essentially shorter than the other for their practical application to the cervix uteri while the blades are carried away from the center of the normal contact, one with another, when not in operation, for dilation of the mucous membrane of the vaginal canal as to expose the folds or pockets therein and effect a thorough cleansing by the means of the disinfecting medicament 26 in the bulb 10, flowing through the canal 14 of the nozzle 12 and spraying through the openings 13 therein against the parts of the vaginal canal. Two of the blades are each provided with a portion 22 each extended into the chamber of the bulb, while the other blades are each provided with a portion 25. Each portion 22 is provided with the projecting portion or member 23 engaging with the member 24 of member 25 when the sides YY of the bulb 10 are compressed, as shown at Y, to force the medicament 26 in the direction to the nozzle 12, as shown at the arrow 27, and the portions 22 are likewise pressed together, thereby the blades 11, fulcruming, as hereinafter described and shown in Figures 2 and 4, are in operation so that the cervix uteri is then positioned therebetween, and the mucous membrane of the vaginal canal is dilated for the proper exposure of the folds or pockets therein and the flow of the medication is applied to the parts. Upon withdrawal of the blades from the vaginal canal,

the sides of the bulb assume their normal contour and the blades are in closed position, one in adjacency with another, as shown in Fig. 1.

5 As the physiological or pathological existence of folds or pockets in and about the mucous membrane of the vaginal canal and cervix uteri, scientific application of medicament to the parts thereof meets with many adverse conditions whereby the diseased, or other, parts
10 are not therapeutically benefited for the lack of proper administration of medicament which, under the ordinary course of irrigation of the vaginal canal for treating its parts, cannot reach those parts because, for instance, of
15 prolapse of the parts or other inevitable conditions which form a detriment to proper application of a medicament. Excluding the pathological conditions, there exists a physiological or periodical condition which requires
20 therapeutical irrigation of the parts, hereinbefore described, and in this case proper introduction into the vaginal canal of hygienic medicament is likewise met with disappointments for the same obvious reasons,
25 hereinbefore described.

With the above conditions in view, I have provided the syringe with the dilatable blades, which pivotally fulcrum when their
30 lower portions are forced inwardly by means of compressing the sides of the bulb, so that a circular space is formed between the inner side of the collective blades for engaging the cervix of the uterus and the folds or pockets of the mucous membrane of the vaginal canal are
35 treated, with the nozzle 12 projecting medially for carrying the medicament to the surrounding parts, thus the flow of the medicament washing and removing the extraneous substances therefrom and the canal with its
40 appendages becomes clean of the obnoxious matter which might have been in existence prior to the operation. Further, it is obvious that with the novel arrangement of the parts, the
45 operation does not appear to be tedious, for the compression of the bulb to force the medicament to the parts desired to be treated, causes simultaneously the blades to dilate the anatomical part for a full view of exposure to
50 the discharged medicament from the nozzle. Under the self-irrigation with a syringe, the effective administration of medicament becomes a factor, whether in normal or abnormal cases, to the exclusion of intricate means
55 of improper introduction of a medicament to the parts which are desired to be treated and be free from contamination with foreign matter.

From the description and the disclosure of my invention I desire it to be understood that
60 modifications, changes and variations may be made, as the principle of the invention resides in novel combination of means for syringing an anatomical part while dilating and keeping
65 the parts dilated under the influence of

the means, without any additional effort on the part of the operator.

Having described my invention, what I claim and desire to secure by Letters Patent, is:

1. A syringe comprising an elastic liquid
70 container open at one end and enclosing members, said members exteriorly extending from the said open end of the container to form laterally dilating means, a nozzle medially positioned in relation to said members and projecting exteriorly to be enclosed
75 by said members, the said liquid container being adapted to carry a liquid for discharging through said nozzle by compression on the container. 80

2. A syringe comprising an elastic liquid
85 container open at one end and pivoted members enclosed thereby pivotally engaged with a centrally located member in the open end of the container, said members exteriorly extending to form dilating means and enclosing
90 a nozzle projecting from the container. 95

3. A syringe comprising an elastic liquid
95 container open at one end and dilating members enclosed thereby engaged one with another for a pivotal articulation with a member located in the open end of the container, said members projecting through said open
100 end to provide means for pivotally, laterally moving upon compression on said elastic container, and a nozzle secured medially in relation to said members. 105

4. A syringe comprising an elastic liquid
100 container open at one end, members pivotally secured in said open end and projecting interiorly into and exteriorly from said member to form means adapted for lateral movement from the center, and a nozzle secured
105 medially in said open end in relation to said members, the nozzle being adapted to pass a liquid from the container.

5. A syringe comprising an elastic liquid
110 container open at one end, dilating means pivotally secured in said open end and projecting interiorly into and exteriorly from the elastic container, a nozzle secured medially in said open end and projecting between the said dilating means, and means with the interiorly projecting portions of said dilating means
115 adapted for fulcruming the pivoted parts thereof in relation to said open end to laterally move the exterior portions of said dilating means.

6. A syringe comprising an elastic liquid
120 container open at one end, a plurality of members pivotally secured in said open end and enclosing a nozzle, the said members projecting interiorly into and exteriorly out of the elastic container, the interiorly projecting
125 portion of each of the members interengaging one with another, the elastic container on compression being adapted to open the outwardly extending portion of the members by contact with the interiorly projecting por- 130

tion and to force a liquid in the container through the nozzle.

7. A syringe comprising an elastic liquid container open at one end, a plurality of members pivotally secured in the said open end and medially enclosing a nozzle having suitable openings, said members projecting interiorly into and exteriorly out of the elastic container, integral members with the interiorly projecting portion of the members pivotally interengaging one with another, the elastic container on compression being adapted to open the outwardly extending portion of the members by contact with the interiorly projecting portion and to force a medicament in the container through the nozzle.

8. A syringe comprising an elastic liquid container open at one end, operating means pivotally secured in said open end and projecting interiorly into and exteriorly out of the container, a nozzle medially positioned within said operating means, the elastic container on compression being adapted to open the outwardly extending portion of the operating means by contact with the interiorly projecting portion and to force a medicament in the container through the nozzle.

9. A syringe comprising an elastic liquid container open at one end and dilating means in the open end and projecting into and exteriorly out of the elastic container, and enclosing the nozzle, medially positioned in the open end of the container, the container on compression being adapted to open the outwardly extending portion of the dilating means by contact with the interiorly projecting portion for forcing a medicament in the container through the nozzle to anatomical human parts and for simultaneously dilating the said parts apart.

10. A syringe comprising an elastic liquid container open at one end, dilating means in the open end and projecting interiorly into and exteriorly out of the container and enclosing the nozzle, the exteriorly projecting portion of the means including the nozzle being adapted for introduction into a human canal, the elastic container on compression being adapted to open the outwardly extending portion of the said means by contact with the interiorly projecting portion and to force a medicament in the container through the nozzle to anatomical parts of the human canal and for simultaneously dilating the said parts apart.

11. A syringe comprising an elastic liquid container open at one end, dilating means in the open end of the container projecting into the interior thereof, a nozzle medially secured in said means, the nozzle having a central passage in direct communication with the interior of the container, the dilating means and nozzle being secured in the open end of the container in such manner that application of pressure to

the elastic liquid container tends to force a liquid through the canal of the nozzle to anatomical parts of a human canal for simultaneously dilating the said parts.

12. A syringe comprising an elastic liquid container open at one end, dilating means extended from the end of the container including a nozzle medially enclosed by said means, a through central canal in the nozzle adapted to have a communication with the interior of the container, the dilating means and the nozzle being projected from the liquid container in such manner that application of pressure to the container tends to force a liquid through the canal of the nozzle to a human orifice for dilating and irrigating the anatomical parts of the human canal.

13. A syringe comprising an elastic liquid container open at one end, dilating means including a nozzle medially enclosed by the dilating means, the dilating means and the nozzle projecting from the container through the open end thereof, the nozzle having a central communication with the interior of the container, the dilating means and the nozzle being adapted to be inserted into a human orifice and extending to the canal connected therewith, the dilating means being adapted for stretching the anatomical parts thereof, the said dilating means and the nozzle being projected from the liquid container in such manner that application of pressure to the container tends to force a liquid therein through the communication in the nozzle to the human canal to be retained therein for irrigation of the anatomical parts thereof.

14. A syringe comprising an elastic liquid container open at one end, dilating means including a nozzle medially enclosed by the said dilating means, the dilating means and the nozzle projecting from the interior of the container, the nozzle having a communication with the interior of the container, the dilating means and nozzle being adapted to be inserted into a human orifice and extended into the canal connected therewith for stretching the anatomical parts thereof by application of pressure to the container for forcing a liquid therein through the communication of the nozzle and depositing the liquid in the human canal.

15. A syringe comprising an elastic liquid container open at one end, dilating means and a nozzle medially enclosed by said means and having a communication with the interior of the container, the dilating means and the nozzle projecting from the container and being adapted to be inserted into a human orifice for stretching the anatomical part thereof, the container and the dilating means including the nozzle being formed in such manner that appli-

cation of pressure to the container tends to stretch the anatomical part of the human orifice whereinto said dilating means is inserted and a liquid in the container forced through the nozzle to be deposited in the
5 human orifice, the liquid being suctioned into the container upon removal of pressure thereupon.

16. A syringe comprising an elastic liquid container open at one end, dilating
10 means and a nozzle enclosed by the said means projecting from the container, the nozzle having a communication with the interior of the container, the dilating means being adapted to be inserted into a human canal
15 thereby dilating the anatomical part thereof, the dilating means and the nozzle being interconnected with the container in such manner that application of pressure to the container tends to force a liquid therein through the
20 nozzle into the human canal for depositing therein and for dilating the anatomical part thereof by said means, the liquid being forced to return from the canal by the said
25 part thereof upon the removal of the syringe.

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