(No Model.)

J. M. LAMB & J. C. HARDESTY.

VAGINAL SYRINGE.

No. 526,353. Patented Sept. 18, 1894.

Fig. 1.

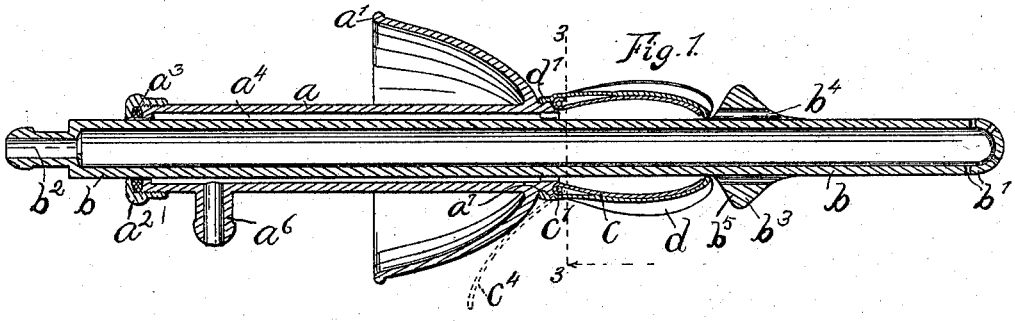


Fig. 2.

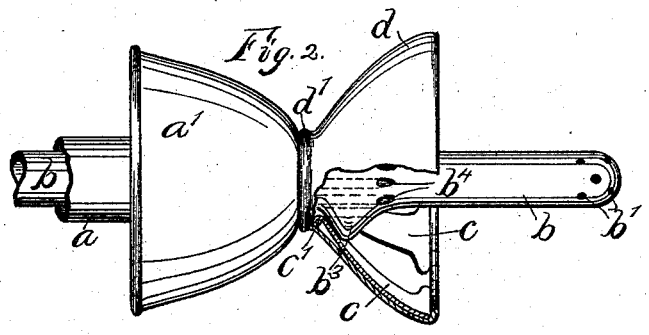


Fig. 4.

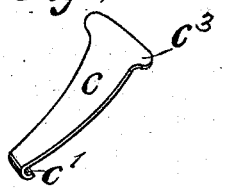


Fig. 3.

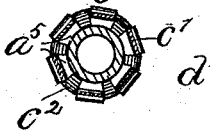


Fig. 5.

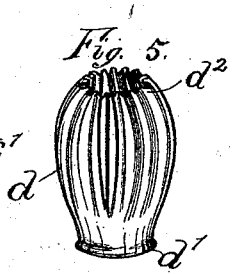
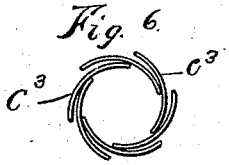


Fig. 6.



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UNITED STATES PATENT OFFICE.

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VAGINAL SYRINGE.

SPECIFICATION forming part of Letters Patent No. 526,353, dated September 18, 1894.

Application filed January 19, 1894. Serial No. 497,462. (No model.)

To all whom it may concern:

Be it known that we, JESSE M. LAMB, residing at Mooreland, and JONATHAN C. HARDESTY, residing at Millville, in the county of Henry and State of Indiana, have invented certain new and useful Improvements in Vaginal Syringes; and we hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

Our invention relates to an improvement in vaginal syringes the object of the invention being to provide means for the introduction of medicinal or washing liquids into the vagina.

A further object is to construct a device that is self retaining.

A further object is to produce a syringe of this class that will prevent all overflow or leakage so that it may be used without danger of soiling the clothes of the patient or the bed.

A further object is to provide a device that can be applied without causing any injury to the parts being treated or inconvenience or discomfort to the patient.

A further object is to produce a liquid retaining instrument.

A further object is to provide a device that may be quickly and easily taken apart to be cleansed and conveniently reassembled.

With these objects in view the invention consists in certain new and novel features of construction and arrangement of parts as shown by the drawings, accompanying the following specification, and pointed out in the claims.

In the accompanying drawings Figure 1 is a longitudinal sectional view through the entire device showing the dilatable shield section closed. Fig. 2 is partial side view of our device having certain portions of the flexible shield broken away to show the arrangement of inner parts. Fig. 3 is a transverse sectional view through line 3. 3. Fig. 4 is a perspective view of one of a set of dilators. Fig. 5 is a perspective view of an elastic or flexible, dilatable shield. Fig. 6 is a plan view showing ends c^3 of dilators c folded.

a is the main body of our device embracing the enlarged bell-shaped section at a' which in use forms the external shield. The section a is provided with a gland a^2 threading on the main body a and is adapted to compress the packing a^3 upon an inner movable tube.

b is the inner movable induction and distributing tube adapted to conduct the medicinal or washing liquid to be injected to the parts to be treated. This tube is provided with induction openings diverging in different directions as seen at b'. At b^3 on this tube is formed an enlarged annular section sloping in both directions and adapted on side b^5 to engage with dilators.

c, Fig. 4, is one of a set of dilators, there being six in this case, which are each hinged at c' to main body a. These dilators are preferably made wider at outer end c^3 so as to form more nearly a full circle when all are dilated as seen in Fig. 2, and are shaped so as to fold by each other one lapping over the next as seen in Fig. 6.

d is a dilatable self-contracting shield adapted to entirely envelop the series of dilating arms c. Said shield is preferably made of soft rubber adapted at d' to draw down firmly over the hinged ends of dilators c and into an annular depression a^7 in section a. This shield is preferably made having folds or corrugations extending from the outer end d^2 to within a short distance of inner end d^7 so that it will be more easily distended.

When it is desired to take the instrument down for cleaning which is necessary each time a syringe is used, the shield d can be easily taken off as it is held on by the contracting force of the neck d' being at this point made some smaller than the circumference of the annular depression a^7 where it rests when in position. When this shield is removed the dilators c may be removed one by one when thrown back into the position shown by dotted line c^4. Thus it is seen that all parts may be quickly separated from each other and as readily replaced in proper position ready for operation.

In operation the tube of an ordinary syringe bulb, or that of a fountain syringe having a fountain head, may be attached to tube b at b^2 and another tube to the discharge nipple a^6 to carry off the liquid when discharged.

The instrument with tubes attached as

above directed the shield d being collapsed or folded as in Fig. 1 is ready for application. In its application it is introduced with flexible shield first until shield a' presses firmly against the outer vaginal walls when tube b is slightly drawn back until the section b^3 presses against the inner surface of the dilators c causing them all to be thrown outwardly simultaneously so as to dilate the shield d into the form shown in Fig. 2. By this means said shield is caused to press firmly against the inner walls of the vagina and thus in combination with exterior shield a' preventing the flowing by of any of the injected liquids. The liquids injected after serving their purpose pass off through openings a^5 into the annular eduction chamber a^4 and out through discharge a^6.

When it is desired to retain the charge for a greater length of time this may be done by compressing the tube leading from nipple a^6 with any simple clamp. The packing a^3 prevents all leaking at this place. Hence it is seen that there is no possibility of a leak or overflow occurring in the use of our instrument, at any point.

Having fully described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. The combination of a fixed outer bell-shaped shield, an annular depression around the neck of said bell-shaped shield an inner dilatable elastic shield adapted at its smaller end to contract into said annular depression at neck of fixed shield as set forth.

2. The combination of a fixed outer shield an annular depression at small end of said outer shield, an inner dilatable elastic shield adapted at small end to contract into said annular depression securing the two shields together, a system of dilating arms hinged to smaller end of said outer fixed shield, said dilating arms being entirely enveloped by said dilatable elastic shield all as set forth.

3. The combination embracing an outer fixed shield a series of dilating arms hinged to smaller end of said outer fixed shield an inner dilatable elastic shield adapted to contract into said annular depression thus securing the two shields together, said dilatable shield entirely enveloping said dilating arms, a movable induction tube, an enlarged section on said movable induction tube adapted to be moved back against inside of said dilating arms to throw them out against inner wall of said dilatable shield dilating said latter shield to any desired extent as set forth.

4. The combination of a movable induction tube, an enlarged section on said induction tube and eduction openings longitudinally through said enlarged section as set forth.

5. The combination in a vaginal syringe embracing a main body, a fixed shield on one end of said main body, and a detachable and dilatable elastic reversed shield all as set forth.

That we claim the foregoing we have hereto subscribed our names.

JESSE M. LAMB.
JONATHAN C. HARDESTY.

Witnesses:
JOHN BRUNNER,
HIRAM ESHELMAN.