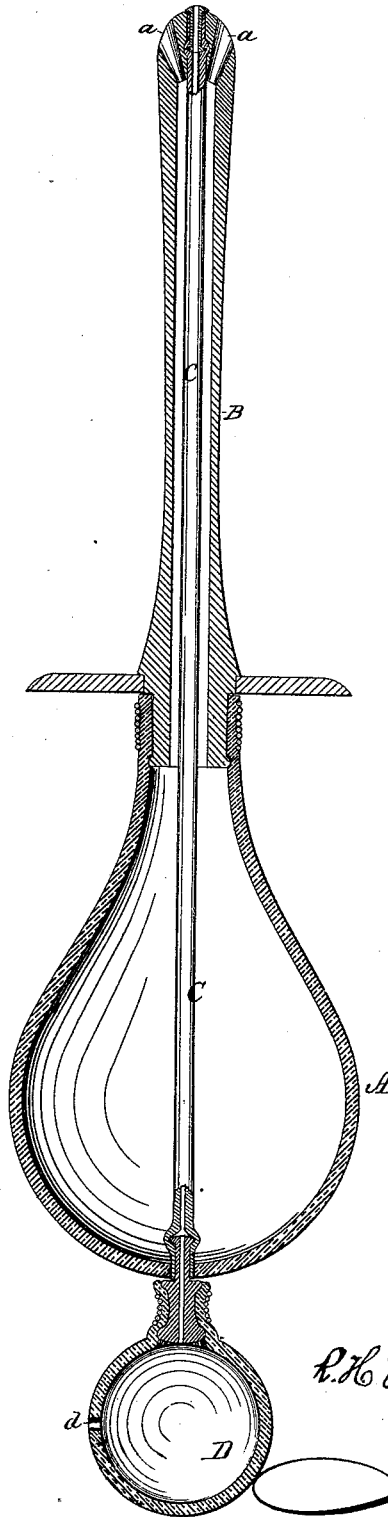


R. H. WOODWARD.
VAGINAL-SYRINGES.

No. 195,868.

Patented Oct. 2, 1877



WITNESSES:

W. W. Hollingsworth
Amos W. Hart

INVENTOR:

R. H. Woodward

BY

Sum & Co

ATTORNEYS.

UNITED STATES PATENT OFFICE.

ROBERT H. WOODWARD, OF NEW YORK, N. Y.

IMPROVEMENT IN VAGINAL SYRINGES.

Specification forming part of Letters Patent No. **195,868**, dated October 2, 1877; application filed March 29, 1877.

To all whom it may concern:

Be it known that I, ROBERT H. WOODWARD, of the city, county, and State of New York, have invented a new and Improved Vaginal Syringe; and I do hereby declare that the following is a full, clear, and exact description of the same.

This invention is an improvement in the class of vaginal syringes formed of a rigid tube or nozzle and an elastic bulb, the latter being attached directly to the nozzle without an intervening or connecting flexible tube. In some cases the nozzle or tube of such syringes has been constructed with its outer end fully open, to facilitate the withdrawal of liquid that has been injected—as, for instance, in the local treatment (by astringents, &c.) of menorrhagia or *prolapsus uteri*, where it is essential that the patient shall be kept in a recumbent position. Syringes of this sub-class have proven defective or inefficient in operation, mainly because no means have been provided for supplying air to take the place, to a greater or less extent, of the liquid, when being removed from the vagina.

The object of my invention is to remedy this defect; and to this end I provide an air-tube attachment, in the manner represented in the accompanying drawing, forming part of this specification, which shows a longitudinal central section of a vaginal bulb-syringe having such attachment.

The elastic compressible bulb A has the ordinary shape; but I prefer to make its walls thicker than usual heretofore, in order that it may have increased strength and power of expansion.

The bulb is attached directly to a nozzle or vaginal tube, B, having a series of divergent but concentrically-arranged holes, *a*, in its outer end, through which the liquid used in treatment is alternately ejected and withdrawn.

An elastic air-supply tube, C, extends from the outer end of the vaginal tube B to the larger end of the bulb A, to each of which its ends are respectively secured in suitable manner.

In using the syringe the bulb A is first compressed in the hand, and the end of the tube

B inserted in the liquid to be injected, and being relieved of compression, the bulb at once expands and becomes filled with the liquid. The tube B being then inserted in the vagina, the bulb is compressed to expel the liquid and cause its injection through the holes *a*, in contact with the os and walls of the vagina. Upon releasing the bulb from compression, the liquid will be forced back into it by the action of atmospheric pressure, the air passing through the small tube C and entering the vagina, so that the withdrawal of the liquid is effected rapidly and completely—a result hitherto unattainable with the previously-known forms of bulb-syringes.

It is usually desirable the liquid shall remain for a few moments in contact with the parts to be treated, and in such case a few drops may escape from the outer or bulb end of the air-tube C. The same result may also take place when the liquid is reinjected and withdrawn one or more times, which it is sometimes desirable to do. To prevent the liquid which thus escapes from tube C falling upon and thereby soiling the bed or other clothing, I provide a small drip bulb or holder, D, which is of spherical shape and attached to the bulb A, so as to form practically both a continuation of said air-tube and the enlarged end or termination thereof. That portion of the liquid which would therefore drip from the air-tube C is received by holder D, and retained until the instrument can be removed and its contents conveniently discharged. To facilitate discharge of the liquid from the drip-bulb D, I provide it with a small aperture on the upper side, at *d*, as shown.

What I claim is—

1. The combination of an air-conducting tube with the tube B and the compressible bulb of a vaginal syringe, substantially as and for the purpose specified.

2. The combination of the drip-bulb D with the air-tube C, bulb A, and vaginal tube B, substantially as and for the purpose specified.

ROBERT H. WOODWARD.

Witnesses:

AMOS W. HART,
SOLON C. KEMON.