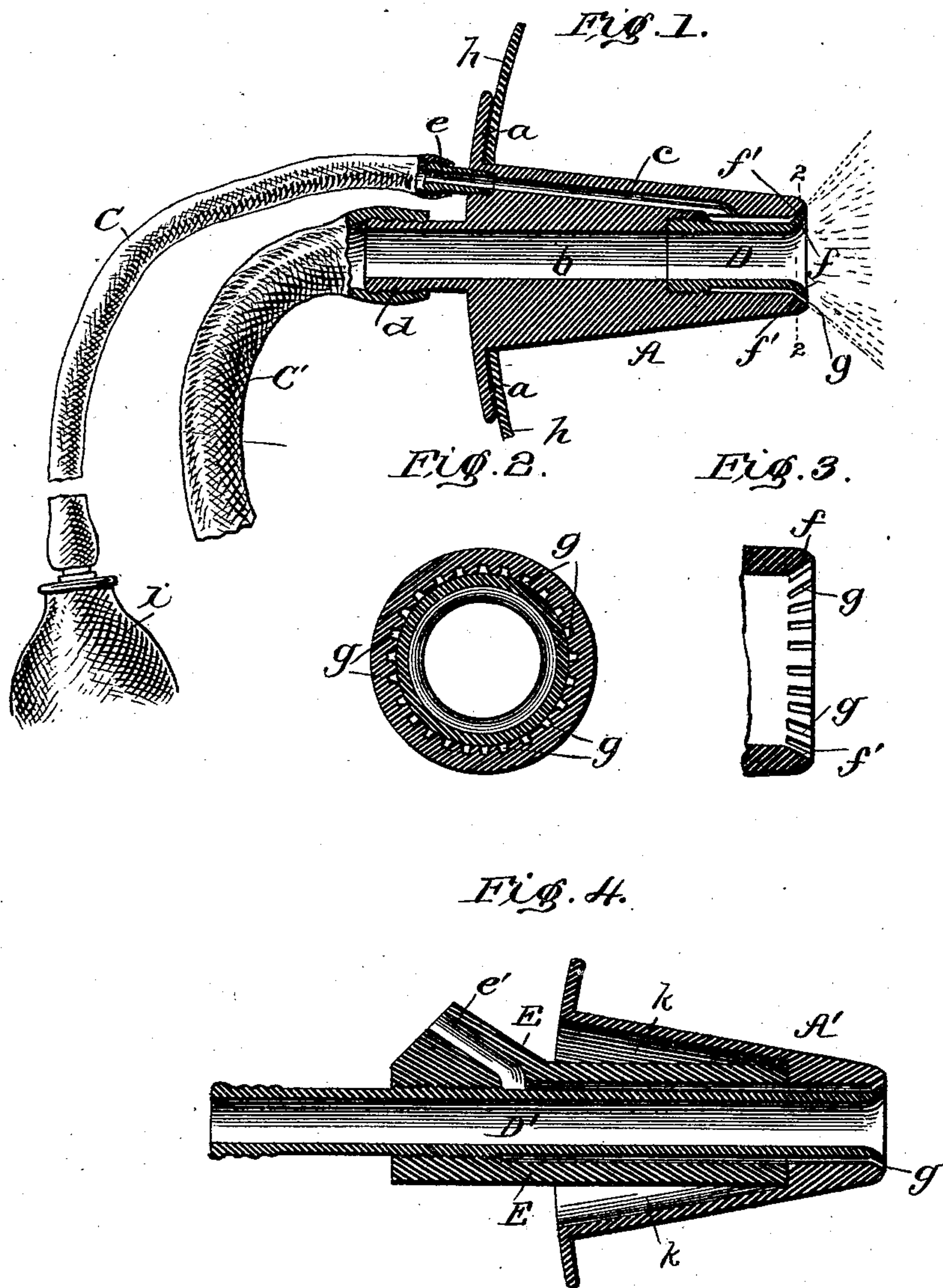


(No Model.)

J. M. WARDELL.
SYRINGE.

No. 494,048.

Patented Mar. 21, 1893.



WITNESSES:
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JOSHUA MEARUE WARDELL, OF CADILLAC, MICHIGAN.

SYRINGE.

SPECIFICATION forming part of Letters Patent No. 494,048, dated March 21, 1893.

Application filed December 9, 1892. Serial No. 454,684. (No model.)

To all whom it may concern:

Be it known that I, JOSHUA MEARUE WARDELL, of Cadillac, in the county of Wexford and State of Michigan, have invented a new and Improved Syringe, of which the following is a specification.

My invention consists in certain features of construction of the nozzle and body of a syringe which is particularly adapted and intended for vaginal use.

In the accompanying drawings—Figures 1 is a central, longitudinal section of the preferred form of my improved syringe, the same being provided with flexible, water-conducting tubes. Fig. 2 is an end view of the same. Fig. 3 is an enlarged longitudinal section of the nozzle, or delivery end, of the syringe. Fig. 4 is a central longitudinal section of a modified form of my invention.

I will first describe the preferred form of syringe shown in Figs. 1 to 3 inclusive. I preferably make the syringe of hard rubber. The body, A, is tapered and provided with a circumferential integral flange, *a*, at its larger end. The said body, A, has a central longitudinal passage, *b*, and another but smaller longitudinal passage, *c*, which is arranged at a slight angle to the other (*b*), but joins or communicates with it at a point near the smaller end of the syringe. The smaller passage, *b*, serves, in practical use, for inlet of water, while the larger central one, *b*, serves for outlet of the same.

To provide for attachment of a flexible discharge tube B, to the syringe proper, I construct the body A with a nipple *d*, which is preferably formed integrally with it, while the flexible inlet tube C, is attached to a detachable nipple *e*. The central outlet passage *b*, in the body A, is enlarged at the smaller end of the latter, to adapt it to receive the short tube D, which screws into a threaded socket. There is an annular space surrounding the body of this tube into which water is received from the inclined passage *c* and from which it is discharged through the nozzle. The latter is constructed in this wise. The outer end of the aforesaid tube, D, is flared or provided with a lateral flange *f*, having an angle of about forty-five degrees. The portion of the body A, which is adjacent

and opposite to this flange *f*, has a corresponding bevel or angle, and is also provided with a series of radial grooves, or kerfs, *g*, which serve as so many separate and independent water educts. It will be understood, that the said flange, *f*, of the tube, D, fits closely upon the corresponding bevel, *f'*, in which the grooves, *g*, are formed, so that it constitutes the inner side of the water passages. The water being forced through these passages is discharged as independent jets or streams, at an obtuse angle. The most important advantage of this construction of nozzle, is the adaptation of the tube D, for convenient detachment, so that the grooves may be quickly and easily cleaned, (with a brush or other device) in case they become clogged by foreign matter. Another advantage is the facility with which the grooves may be molded in the process of manufacturing the syringe. A rubber washer or pad *h*, is used adjacent to the permanent flange *a*, in order to prevent escape of water from the vagina, at any point surrounding the syringe.

In using the instrument, when properly adjusted in the vagina, water of the required temperature is forced in by means of the compressible bulb *i*, and discharged in a circle of jets, or streams, from the nozzle. It has free exit from the vagina through the rigid tube D and flexible outlet tube C.

The syringe shown in Fig. 4 differs from that above described in the following particulars. First, the body A' of the instrument is made hollow to provide an air chamber *k k*. Second, the outlet passage is formed by a long tube, D', which extends entirely through the tapered body. Third, the flexible water-inlet tube B', is attached to a cylindrical piece E, which has not only a central longitudinal bore, but also a short inclined water-inlet passage *c'*. The inner end of this cylindrical piece E, abuts a shoulder formed within the body of the syringe. The long tube, D', is connected with the cylindrical piece, by a screw joint, at its rear end, and the annular water passage formed between the two necessarily extends forward between the tube and the front end of the body. The chief object of this construction is to provide the afore-

said air chamber *k*, whose function is to prevent access of an undue degree of heat to the vaginal walls, in case hot water is used, as now often practiced, for treatment of certain uterine diseases. It is apparent that the grooves *g*, may be formed in the flange of the tube D, instead of the body of the syringe as before stated.

What I claim is—

10 In a syringe, the combination of the tapered body, having a water-inlet passage, and a central passage which is screw-threaded at

its rear end, enlarged in its middle portion, and flared at its front end, and also provided with a series of parallel grooves *g* as shown, 15 and the detachable outlet tube having its front end flared and provided with a screw-thread adapted to engage the thread of said passage, all as shown and described.

JOSHUA MEARUE WARDELL.

Witnesses:

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ARISTA M. WARDELL.