

No. 662,340.

Patented Nov. 20, 1900.

J. A. BELL.

VAGINAL SYRINGE.

(Application filed Dec. 15, 1899.)

(No Model.)

Fig. 1.

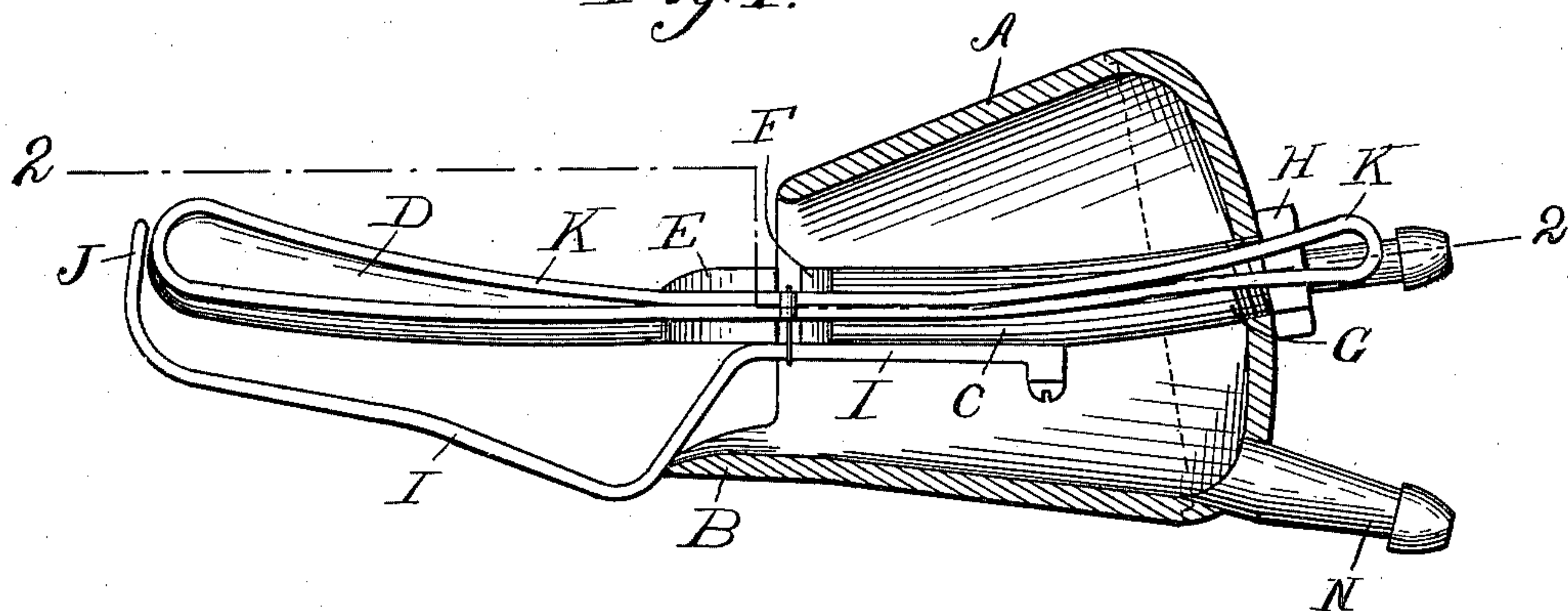


Fig. 2.

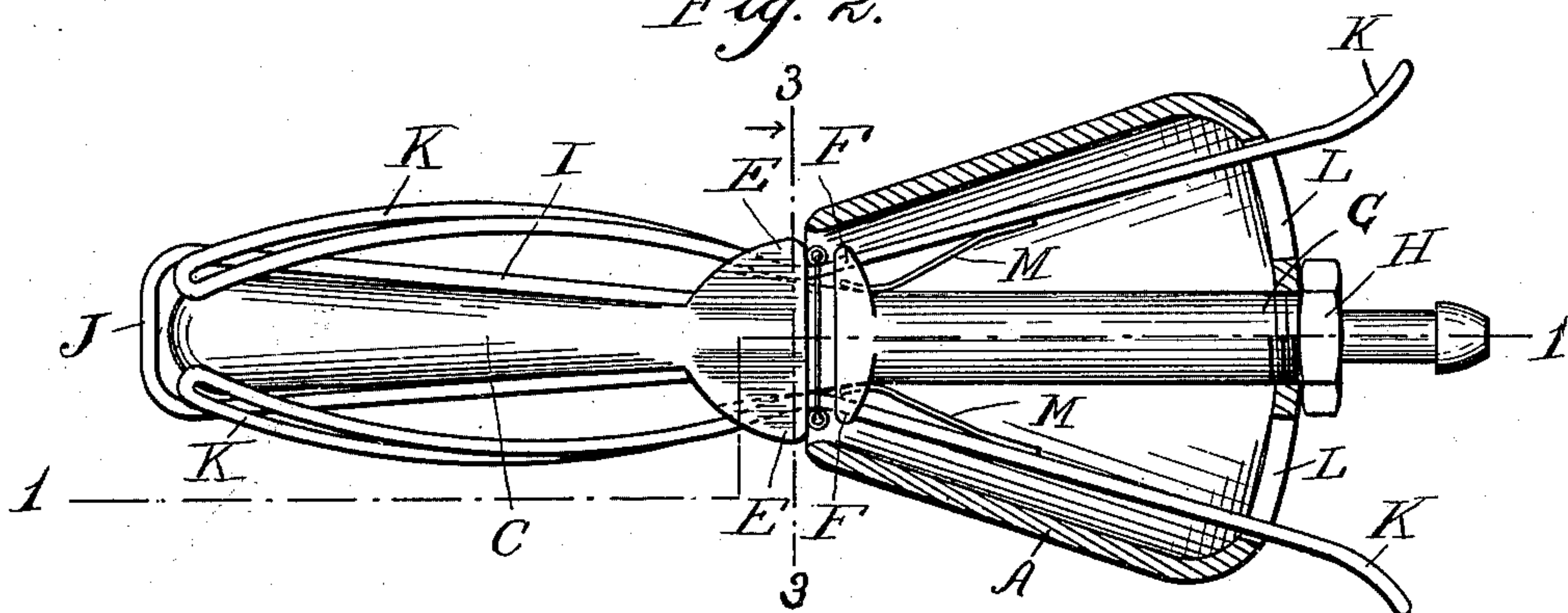
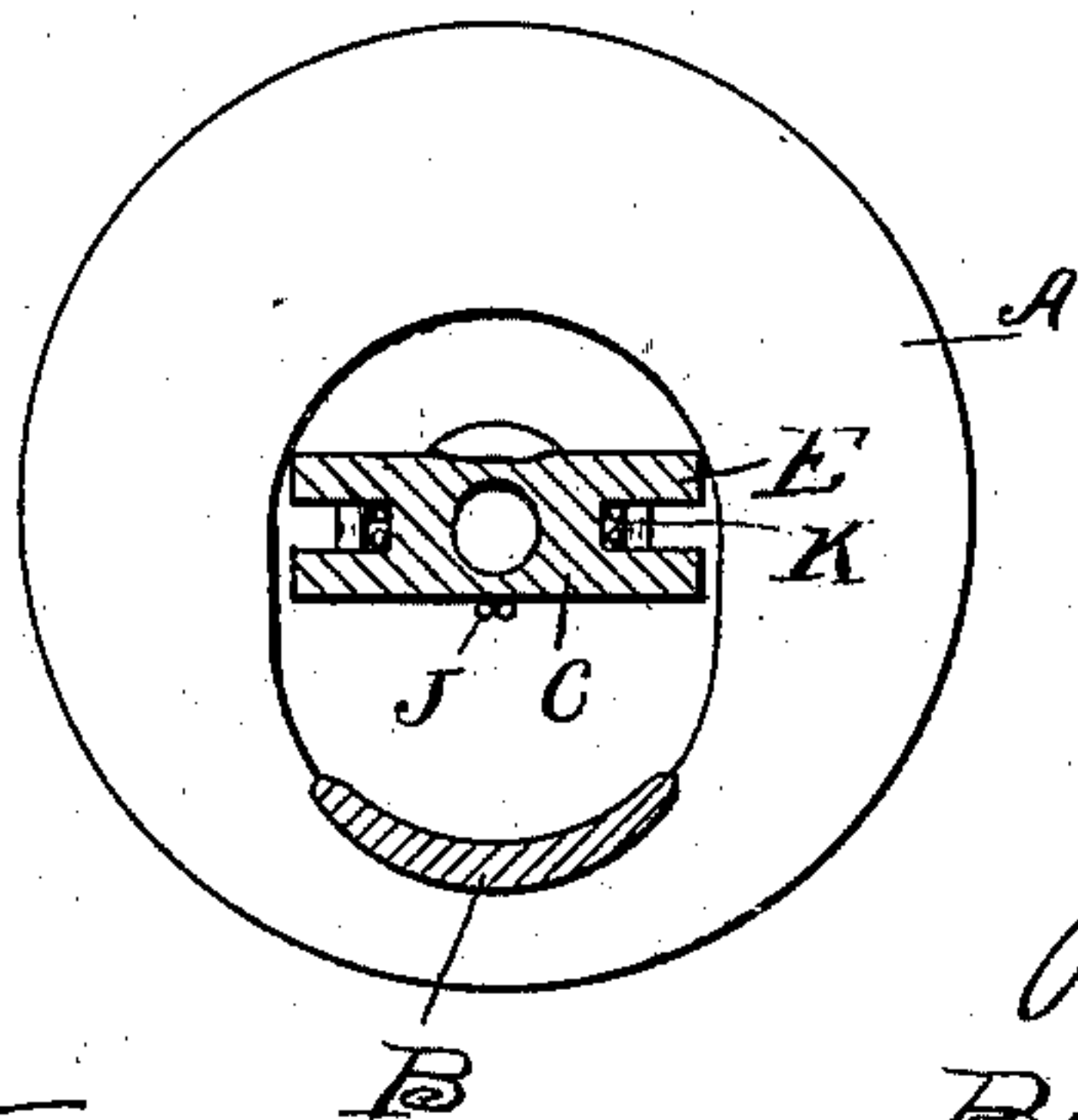


Fig. 3.



Witnesses:

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UNITED STATES PATENT OFFICE.

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VAGINAL SYRINGE.

SPECIFICATION forming part of Letters Patent No. 662,340, dated November 20, 1900.

Application filed December 15, 1899. Serial No. 740,443. (No model.)

To all whom it may concern:

Be it known that I, JOHN A. BELL, a citizen of the United States, residing at Naperville, in the county of Du Page and State of Illinois, have invented certain new and useful Improvements in Vaginal Syringes; and I do 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.

My invention relates to a novel construction in a vaginal syringe, the object being to provide a device of this kind which can be easily inserted and operated by the patient herself and which is provided with a return-flow to drain the liquid off and prevent the bed from being wetted; and it consists in the features of construction and combinations of parts hereinafter fully described and claimed.

In the accompanying drawings, illustrating my invention, Figure 1 is a vertical longitudinal section through a syringe constructed in accordance with my invention, taken on the line 1 1 of Fig. 2, showing the liquid-nozzle and vagina-expanders in elevation. Fig. 2 is a similar horizontal section on the line 2 2 of Fig. 1. Fig. 3 is a transverse section on the line 3 3 of Fig. 2.

My device consists of a hollow conical shell A, closed at its larger end and open at its smaller end, the edge of the latter being extended at one end to form a lip B, the object of which will be hereinafter more fully described. Passing centrally through said shell A is a tube C, terminating at one end in a nozzle D, projecting from the open smaller end of said shell A. About midway between the ends of the tube flanges E and F are formed, which project outwardly at diametrically opposite points, said flanges E being of greater extent than said flanges F and engaging the edge of said shell A to prevent said nozzle D from being drawn into said shell. The inner end G of said tube C is screw-threaded and passes through a central opening in the end wall of said shell A and receives a nut H, which bears against said end wall and serves to draw said flanges E in contact with the other end of said shell, thus holding said parts firmly in their relative positions. Beyond said screw-threaded portion said tube C is reduced in the usual manner to receive and retain the

end of the rubber tube connecting said nozzle with the source of supply of liquid. Rigidly secured to the said tube C and extending underneath the nozzle D is a wire frame I, which lies close against the tube C to a point below the flanges E, where it is bent downwardly at an incline and is widened. This downwardly-extending portion of said frame rests upon the end of the lip B and extends slightly below the same. Thence said frame is bent to extend upwardly toward the end of the nozzle D at a slight incline, and at the end of said nozzle said frame is bent upwardly and widened to form a loop J, projecting just in front of said nozzle D. The said frame I serves to depress the lower wall of the vagina and to prevent the end of the nozzle from striking the mouth of the womb and injecting the liquid into the uterus. The said flanges E and F are recessed or bifurcated to receive dilating-levers K, pivotally secured to said nozzle between said flanges E and F. The said dilaters K consist of wires bent to form loops at their ends, the forward ends terminating flush with the end of the nozzle D and the rear ends projecting through slots L in said end wall of said shell A. The said forward ends of said levers K are also curved, so as to diverge between their ends, so that as said nozzle is inserted the vagina is partially dilated. The said levers K are normally held with their forward ends embracing said nozzle by means of springs M interposed between the tube C and the rear end portions of said levers.

In operation the nozzle is inserted into the vagina until the forward end of the shell A enters the mouth of same, thereby practically closing the mouth. The frame I serves to depress the lower wall of the vagina and said dilating-levers K to dilate or spread the side walls just inwardly of the mouth. When so inserted the rear projecting ends of the levers K are pressed toward each other, thereby farther dilating the vagina and permitting the liquid to reach all parts of the same, the dilaters covering only a minimum area. The liquid thus introduced will return to the shell A and is drained from same by the return-flow nozzle N, extending from the lower rear end of said shell A, said nozzle being adapted to be connected with a flexible tube, if so de-

sired. By means of the lip B, which extends farther inwardly than the remaining portions of the shell A, the escape of any of the liquid is absolutely prevented.

5 My device is simple and has the advantage that it can be readily operated by the patient, the shell A being adapted to be held between the thumb and little finger and the dilaters operated by the first and third fingers of the
10 same hand, thus leaving the other hand perfectly free to operate the valve controlling the supply of the liquid. Said shell A may be made of a single piece or of two pieces, as indicated in dotted lines, Fig. 1, and may be
15 readily taken apart to be cleaned.

I claim as my invention—

1. In a vaginal syringe, the combination with a conical shell closed at its larger end and open at its smaller end, of a tube passing
20 centrally through said shell and terminating in a nozzle projecting from the smaller open end of said shell, a frame rigidly secured to said nozzle and adapted to depress the lower wall of the vagina, dilating-levers pivotally
25 secured to said nozzle between their ends and adapted at their forward ends to engage the side walls of the vagina, and at their rear ends projecting through slots in the rear wall of said shell, means for connecting said nozzle
30 with a supply of liquid, and a return-flow nozzle mounted in the lower rear wall of said shell.

2. In a vaginal syringe, the combination with a hollow conical shell closed at its larger
35 end and open at its smaller end, and provided at its smaller end with a projecting lip of a nozzle passing centrally through said shell and projecting from the said open end thereof, a wire frame rigidly mounted upon said nozzle

and resting upon said lip, said frame being bent to form a loop projecting before the delivery end of said nozzle, dilating-levers pivotally mounted on said nozzle and projecting outwardly at each side of same, means
40 for connecting said nozzle with a source of supply of liquid, and a return-flow nozzle mounted in the rear wall of said shell in alignment with said lip.

3. In a vaginal syringe, the combination with a hollow conical shell closed at its larger
50 end and open at its smaller end, and provided at its smaller end with a projecting lip of a nozzle passing centrally through said shell and projecting from the said open end thereof, a wire frame rigidly mounted upon said nozzle
55 and resting upon said lip, said frame being bent to form a loop projecting before the delivery end of said nozzle, dilating-levers pivotally mounted on said nozzle and projecting outwardly at each side of same, the
60 forward end portions of said levers forming loops curved between their ends and the rear end portions diverging and passing through slots in the rear wall of said shell, springs interposed between the rear end portions of
65 said levers and said nozzle for holding the forward ends of said levers normally at the inner limits of their movement, means for connecting said nozzle with a source of supply of liquid, and a return-flow nozzle mounted
70 in said rear wall of said shell in alignment with said lip.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN A. BELL.

Witnesses:

E. F. WILSON,
ARTHUR CLOTZ.