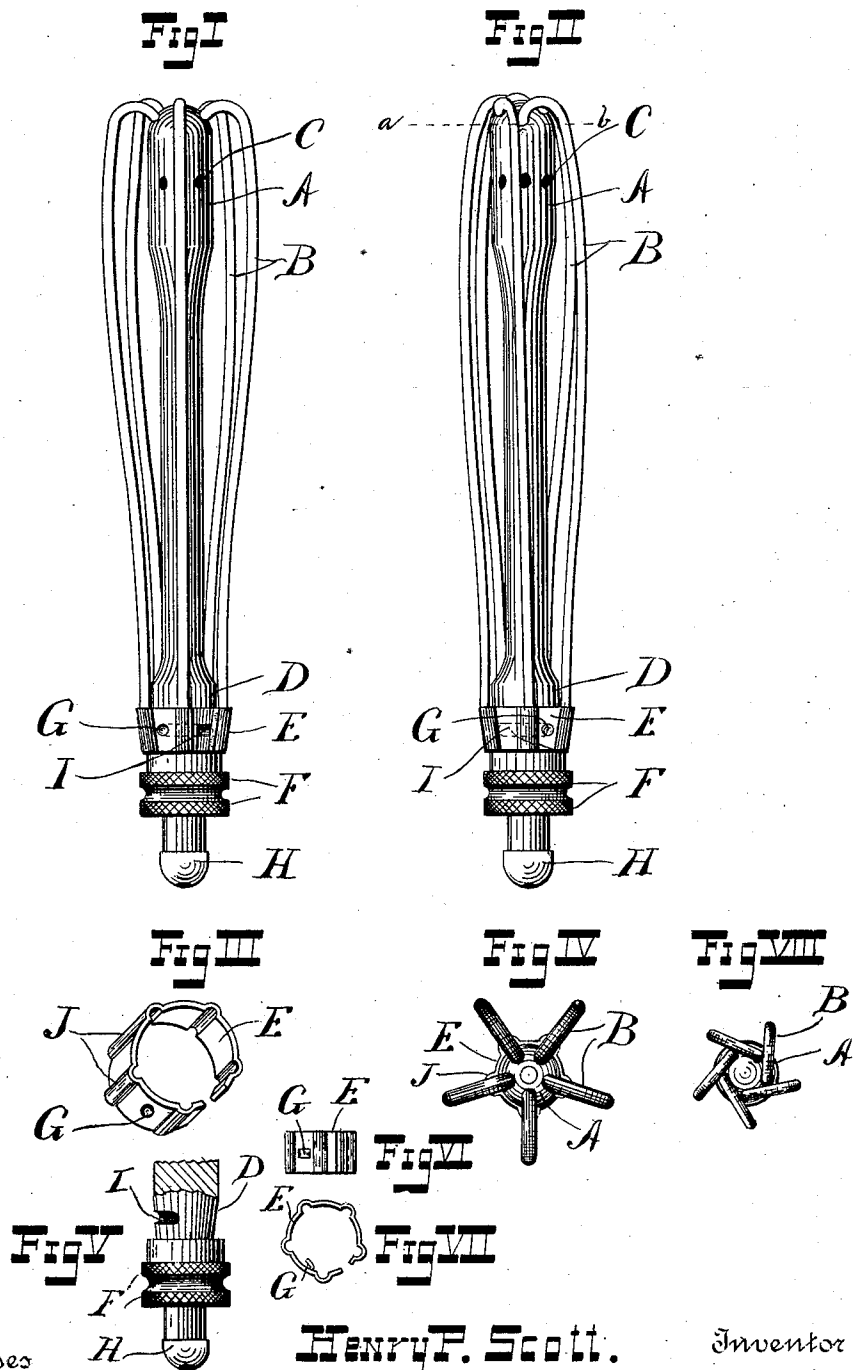


(No Model.)

H. P. SCOTT.
SYRINGE NOZZLE.

No. 565,928.

Patented Aug. 18, 1896.



Witnesses
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R. H. House.

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UNITED STATES PATENT OFFICE.

HENRY P. SCOTT, OF KANSAS CITY, MISSOURI.

SYRINGE-NOZZLE.

SPECIFICATION forming part of Letters Patent No. 565,928, dated August 18, 1896.

Application filed January 22, 1895. Serial No. 535,836. (No model.)

To all whom it may concern:

Be it known that I, HENRY P. SCOTT, a citizen of the United States, residing at Kansas City, in the county of Jackson and State of Missouri, have invented certain new and useful Improvements in Vaginal Syringes, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to improvements in vaginal syringes, particularly to the class of syringes in which the nozzle is provided with an inclosing frame adapted to distend the walls of the vaginal canal preparatory to the injection.

The object of my invention is to provide a syringe-nozzle with an expansible inclosing frame which may be folded upon the nozzle when inserting into or withdrawing from the vagina and expanded when in use, so as to distend the vagina during injection.

My invention consists, further, in certain peculiarities of construction fully described hereinafter.

In the accompanying drawings, illustrative of my invention, Figure 1 represents an elevation view of the nozzle and frame with the frame expanded. Fig. 2 represents an elevation view of nozzle and frame with the frame contracted. Fig. 3 represents a modified form, in perspective, of the clamping-collar. Fig. 4 represents a top view of the nozzle and frame, showing the frame expanded. Fig. 5 represents an elevation view of the lower end of the nozzle. Fig. 6 represents in elevation a modified form of collar. Fig. 7 represents a plan view of the form shown in Fig. 6. Fig. 8 represents a top view showing the frame closed.

Similar letters of reference indicate similar parts.

Referring to the drawings, A indicates the nozzle, of the ordinary pattern and made, preferably, of hard rubber. The nozzle is provided with a longitudinal central opening extending from the lower end to the openings (indicated by C) near the upper end. These openings are circumferentially disposed and preferably open downward, so that the injected fluid will tend to carry any foreign or injurious matter downward toward the vaginal orifice. The frame B is preferably made

of wire arms, vertically disposed around the nozzle, each lying in a vertical plane radially disposed with reference to the nozzle when the frame is expanded, as illustrated in Figs. 1 and 4, and when closed, as shown in Fig. 8, the arms of the frame each lie in a vertical plane obliquely disposed with reference to each other. The upper ends of the wire arms of the frame B are curved inwardly and then downwardly, each one entering and revoluble in a vertical opening in the top of the nozzle, the said openings being radially arranged near the periphery of the nozzle. The lower ends of the arms of the frame B are secured each in a vertical recess J, Fig. 3, of a split ring or collar E. The ring or collar E is made of resilient material, such as brass, and of a size such that it may be sprung upon the hub D of the nozzle, the lower end of the hub being preferably tapering inwardly and downwardly, as indicated by E. It is desirable to have the collar tapered to correspond to the taper of the hub E. It is not essential to the invention to taper the collar and hub, as the resilience of the collar will ordinarily hold the collar well secured to the nozzle. A small depression is made on the inner side of the collar E, as indicated by G, which is adapted to a circumferential groove I in the periphery of the hub E. This groove in the hub is so arranged that when the collar E is turned to a position that the wires of the frame B lie in radial planes the depression G strikes against the end of the groove at the left.

Ordinarily the depression G is simply a circular depression in the metal, but it may be varied in form, as indicated in Figs. 6 and 7, in which form the depression is rectangular, one end and the sides being cut through the metal. The lower end of the nozzle is provided with a milled flange F.

H indicates the part to which the rubber tube of the syringe fastens.

In using my invention the portion H is secured in the ordinary manner to a syringe. The collar E is then turned to the right, carrying with it the lower ends of the wires of the frame B, until the frame assumes the shape shown in Figs. 2 and 8. The nozzle is then inserted in the vagina, after which the collar E is turned to the left until the depression G comes in contact with the end of the

groove I, at which time the frame is expanded into the shape shown in Figs. 1 and 4. The vaginal walls are now distended, so that the washing may be thoroughly performed. In withdrawing the nozzle the collar E is turned to the right, closing the frame and permitting its easy withdrawal from the vaginal canal. Variations may be made from the construction shown without departing from the spirit of my invention, as, for instance, in using a complete ring of the proper resiliency instead of a split ring.

Other means than those shown for folding and opening the frame may be used. It may be expedient also to obtain an opening and closing effect of the frame by revolving the collar E in a direction opposite to the one shown. The same opening and closing effect may be obtained by revolving the nozzle A in the proper direction instead of the collar E. For a better washing effect it is sometimes desirable to have alternate openings C, opening upward instead of downward. The invention may also be operated without using the opening and closing features in some instances, in which event it may be used in either the open or closed position.

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

1. In a syringe, the combination with a nozzle, of a series of longitudinal arms arranged around the nozzle, an expansible collar encircling the nozzle and revoluble thereon and having secured to it the lower ends of the

said arms the upper ends of which are curved inwardly and are pivotally connected with the upper end of the nozzle, and means for preventing longitudinal movement of the collar upon the nozzle during use, substantially as described.

2. In a syringe, the combination with a nozzle having two shoulders near its lower end, of a series of longitudinal arms arranged around the nozzle, and pivotally connected to the nozzle at its upper end, a divided spring-collar encircling the nozzle between the two shoulders and revoluble thereon and having secured to it the lower ends of the said arms, substantially as described.

3. In a syringe, the combination with a nozzle having a series of openings in its upper end near its periphery, of a series of longitudinal arms arranged around the nozzle and having their upper ends pivoted in the said openings, a divided spring-collar encircling the nozzle and to which the lower ends of the arms are secured, and having an inwardly-extending projection engaged with a groove in the nozzle, whereby circumferential movement of the collar upon the nozzle is permitted but longitudinal movement thereon prevented unless the collar is expanded, substantially as described.

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

HENRY P. SCOTT.

Witnesses:

WARREN D. HOUSE,
JAMES F. HADLEY.