

J. L. FISHER.
 SYRINGE.

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964,903.

Patented July 19, 1910.

Fig 1

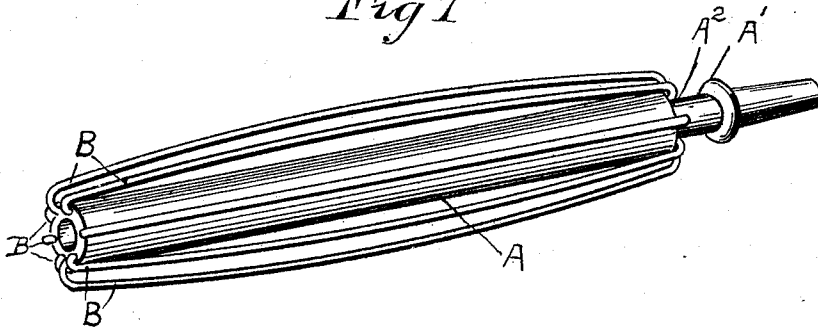


Fig. 2

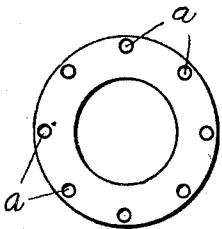
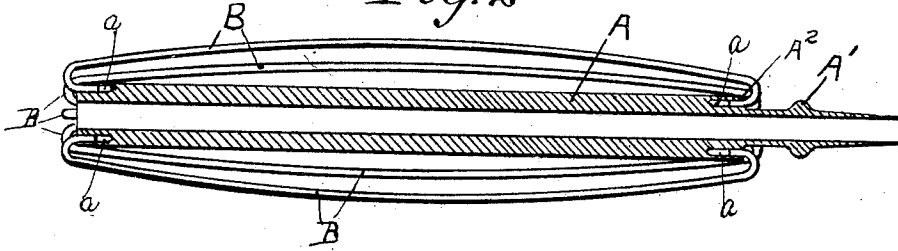


Fig. 3

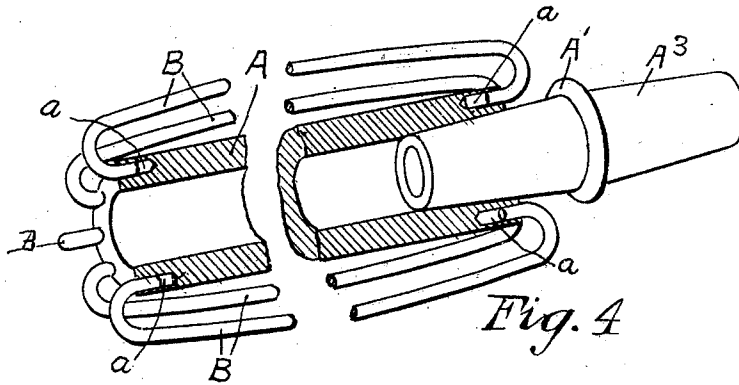


Fig. 4

Witnesses,

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SYRINGE.

964,903.

Specification of Letters Patent.

Patented July 19, 1910.

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To all whom it may concern:

Be it known that I, JOHN LEROY FISHER, a citizen of the United States, residing in the city and county of Providence, in the State of Rhode Island, have invented certain new and useful Improvements in Syringes, of which the following is a specification.

My invention relates more particularly to improvements in nozzles for vaginal syringes, and the purpose of my invention is to provide a vaginal syringe nozzle of simple construction, easily cleansed and sterilized and at all times aseptic.

To these ends my invention consists in the novel construction, combination and arrangement of parts hereinafter more fully described and shown in the accompanying drawings, in which,

Figure 1 is a perspective view of the nozzle. Fig. 2 is a longitudinal central section. Fig. 3 is an end view. Fig. 4 is a perspective part sectional view showing a modification of my invention.

Similar letters of reference refer to like parts throughout the drawings.

A represents the discharge-tube of the nozzle which has, as shown, a longitudinal bore of uniform diameter open at both ends. The rearward end being hereinafter termed the intake, and the forward end being termed the discharge end. In the faces of each end I drill or otherwise form a series of concentrically arranged longitudinally extending holes, *a, a*, around and parallel with the bore of the tube, as shown.

B, B, represent longitudinal wires concentrically arranged around said tube A and rigidly secured thereto by each of their ends, which are, as shown, reversed or turned inwardly toward each other and inserted in the holes *a, a*, and therein immovably secured. These wires B, B, are slightly curved outwardly so that when secured in position around the tube A to form the nozzle the whole will practically be of the form of the middle frustum of a circular spindle, whereby the nozzle may be more easily introduced into the vagina and the walls of the latter more effectually distended thereby insuring a more thorough washing and cleansing of the same. Said wires B, B, are, as shown, longer than said tube A, and when their ends are secured in the holes *a, a*, as shown and described, the bent portion of the wires form bows at each

end of the tube, which enable me to dispense with the collar at the rear end of the tube, common to many forms of nozzle, and said bent ends are thereby adapted to serve as protective guards at the forward end of the tube, while at both ends of the tube they serve as preventives of the lodgment of extraneous matter.

It will be noted that in the construction shown and described herein there are no corners or places for extraneous matter to lodge in and that consequently the syringe nozzle is at all times aseptic, and that it can readily and easily be sterilized and cleansed. Furthermore the nozzle being integral there are no parts to become disarranged or detached; the nozzle is at all times ready for use.

In Fig. 4 I have shown a form of my invention in which the intake-end or coupling to which the tube from the injector is to be attached is separable from the nozzle. This coupling *A³* is provided with means, as *A¹*, for the securing of the connecting tube thereon. The collar or rib *A¹* may, in either form of the nozzle, be dispensed with and the end of the discharge tube may be tapered or otherwise fitted to engage with and hold the connecting-tube end. In the form shown in Fig. 4 the wires B, B, are secured in the opposite ends of the discharge tube, in the holes *a, a*, the coupling *A³* taking the place of the rear extension of the tube A.

I claim:

1. A syringe nozzle consisting of a discharge tube having a longitudinal bore of uniform diameter extending therethrough from end to end, said tube provided in each of its ends with an annular series of longitudinally extending holes, the respective holes in one of said ends alined with the corresponding hole in the opposite end of said tube, in combination with a plurality of convexly curved wires, each longer than said tube, arranged in a concentric series in longitudinal parallelism with the body of said tube, and each provided with inwardly bent ends arranged and adapted to be rigidly secured in the holes in said tube ends to thereby form an integral nozzle of the form of the middle frustum of a circular spindle.

2. In a syringe-nozzle, the combination with a discharge-tube having in each of its ends a series of longitudinally extending holes arranged concentrically with the bore of said tube, of a plurality of longitudinally

extending wires convexly curved and arranged in parallelism with the exterior of said tube, and each said wires provided at its opposite ends with an inwardly bent end
5 arranged and adapted to be rigidly secured in said holes in the tube ends to thereby form an integral nozzle of the form of the

middle frustum of a circular spindle, and means for connecting said tube to an injector.

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Witnesses.

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