

C. J. DAVOL.
SYRINGE.

APPLICATION FILED MAR. 18, 1905.

Fig. 1.

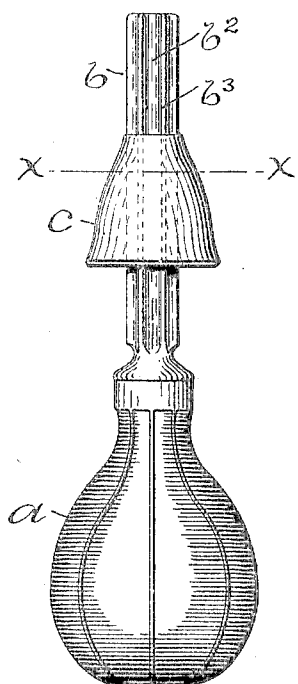


Fig. 2.

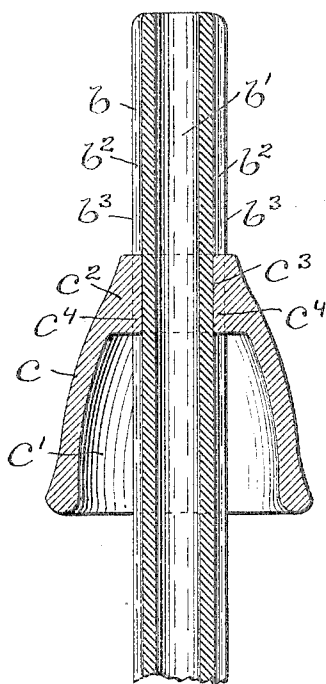
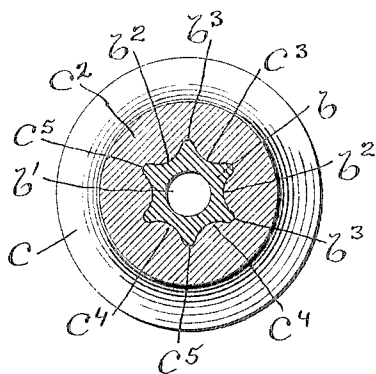


Fig. 3.



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SYRINGE.

No. 804,584.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, CHARLES J. DAVOL, a citizen of the United States, residing at Providence, in the county of Providence and State of Rhode Island, have invented a new and useful Improvement in Syringes, of which the following is a specification.

This invention has reference to an improvement in syringes, and more particularly to an improvement in that class of syringes known as "vaginal douche-syringes."

In vaginal syringes it is desirable that the operations of injection and suction performed by the syringe should be accomplished without loss by leakage of the fluid used in the syringe to douche or flush the interior of the vagina. To accomplish this purpose, a shield shaped to fit the mouth of the vagina and having a sliding fit on the nozzle of the syringe is used. As heretofore constructed this shield has a smooth central hole shaped to fit the smooth cylindrical nozzle of the syringe. It has been found in use that the shield would revolve on the nozzle, creating wear on the shield, which would in time cause leakage between the shield and the nozzle of the syringe.

The object of my invention is to prevent the turning or revolving of the shield on the nozzle of the syringe, thereby preventing wear and leakage between the shield and the nozzle, and I accomplish this object by fluting the nozzle and forming the hole in the shield to fit the fluted nozzle of the syringe.

My invention consists in the peculiar and novel construction of the shield and nozzle of a vaginal syringe, whereby the nozzle is fluted and the hole in the shield formed to fit the grooves in the fluted nozzle, as will be more fully set forth hereinafter.

Figure 1 is a side view of my improved vaginal syringe, showing the cone-shaped shield on the fluted nozzle. Fig. 2 is an enlarged detail sectional view taken lengthwise through the nozzle and shield; and Fig. 3 is an enlarged transverse sectional view taken on line X X of Fig. 1, showing the hole in the shield shaped to fit the grooves in the fluted nozzle.

In the drawings, *a* indicates the bulb, *b* the nozzle, and *c* the cone-shaped shield of my improved vaginal syringe. The bulb *a* is

formed of soft rubber. It has the usual hollow construction and is secured to the hard-rubber nozzle *b* in any well-known way.

The nozzle *b* has the usual bore *b'* connecting with the interior of the hollow bulb *a*. The exterior of the nozzle is fluted by forming the series of semicircular grooves *b² b²*, which merge into the ribs *b³ b³*, as shown in Fig. 3.

The cone-shaped shield *c* is constructed of soft rubber and shaped to have the hollow portion *c'* and the thickened portion *c²* at the apex of the cone, as shown in Fig. 2. The thickened portion *c²* has the central hole *c³* shaped to fit the fluted nozzle *b* by forming the convex ribs *c⁴ c⁴*, merging into the grooves *c⁵ c⁵* in the wall of the hole *c³*, as shown in Fig. 3. The ribs *c⁴ c⁴* fit the grooves *b² b²* in the nozzle, and the ribs *b³ b³* on the nozzle fit the grooves *c⁵ c⁵* in the shield, thus preventing the shield from turning on the nozzle.

In the use of my improved vaginal syringe the shield *c* may be adjusted lengthwise on the nozzle *b*, but is prevented from being turned on the nozzle, thereby reducing the wear between the nozzle and the shield to a minimum and preventing leakage between the shield and the nozzle.

It is evident that the nozzle *b* and the coinciding hole *c³* in the shield *c* could be of any shape (in cross-section) that would prevent the shield from turning on the nozzle without materially affecting the spirit of my invention.

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

1. In a syringe, a fluted nozzle constructed of hard rubber, an adjustable cone-shaped shield constructed of soft rubber and having a central hole shaped to fit the fluted nozzle, whereby the shield is prevented from turning on the nozzle, as described.

2. In a vaginal syringe, a soft-rubber bulb, a hard-rubber fluted nozzle secured to the bulb, a soft-rubber cone-shaped shield having a thickened portion in which is a central hole shaped to fit the fluted nozzle, whereby the shield is adjustable lengthwise on the nozzle, and is prevented from turning on the nozzle, as described.

3. In a vaginal syringe, the combination of a soft-rubber bulb *a*, a hard-rubber fluted nozzle *b* constructed to have the bore *b'* and the series of semicircular grooves *b*² *b*² merging
5 into the ribs *b*³ *b*³, and a soft-rubber cone-shaped shield *c* having the hollow portion *c'*, the thickened portion *c*² in which is the central hole *c*³ shaped to have the series of convex ribs *c*⁴ *c*⁴ merging into the grooves *c*⁵ *c*⁵,

whereby the shield is prevented from turning on the nozzle, as described. 10

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

CHARLES J. DAVOL.

Witnesses:

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