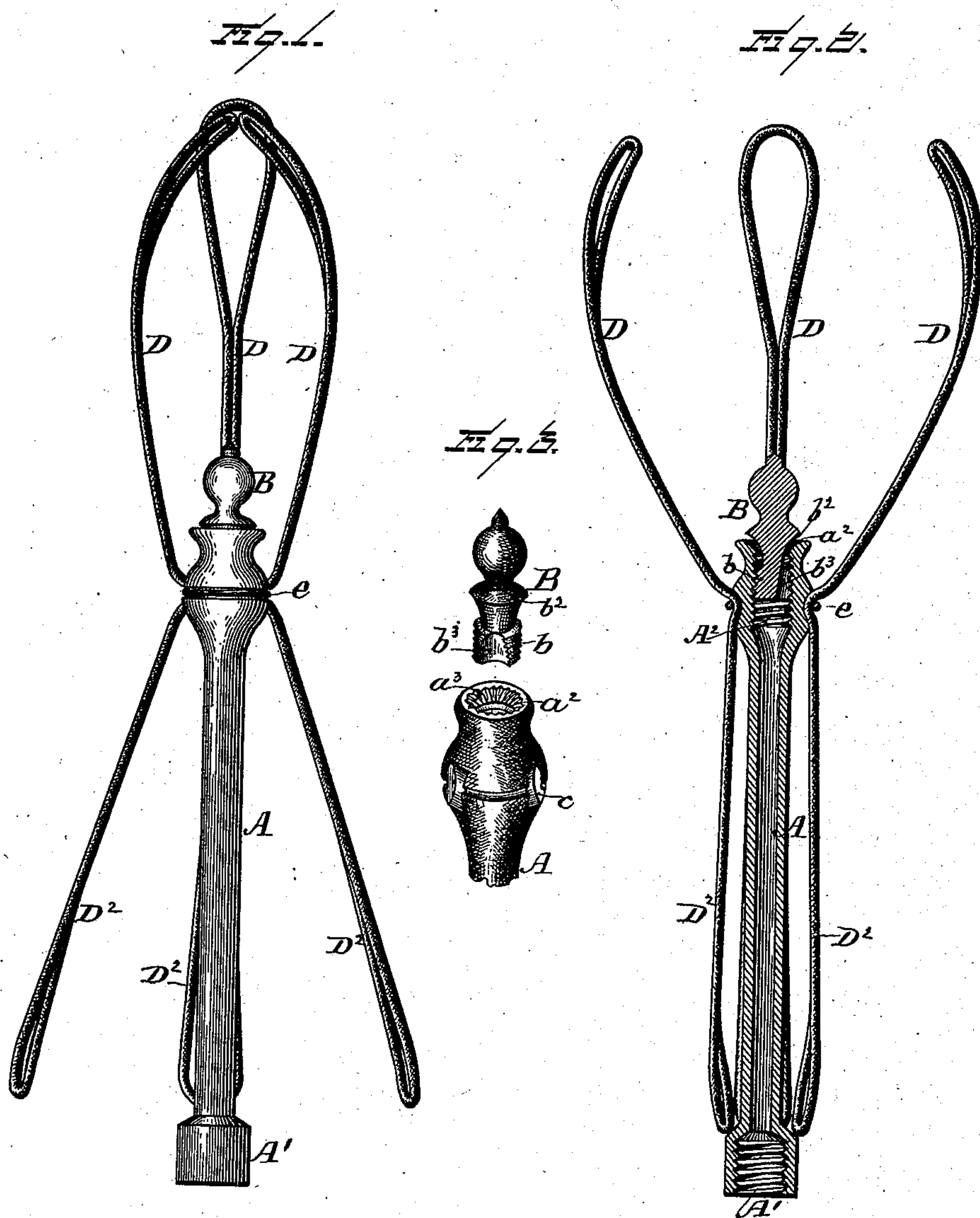


(No Model.)

S. W. BEALL.  
VAGINAL SYRINGE.

No. 376,727.

Patented Jan. 24, 1888.



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# UNITED STATES PATENT OFFICE.

SYLVESTER W. BEALL, OF COLUMBUS, OHIO.

## VAGINAL SYRINGE.

SPECIFICATION forming part of Letters Patent No. 376,727, dated January 24, 1888.

Application filed August 29, 1887. Serial No. 248,184. (No model.)

*To all whom it may concern:*

Be it known that I, SYLVESTER W. BEALL, a citizen of the United States, residing at Columbus, in the county of Franklin, State of Ohio, 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 surgery, and is an improvement on the class of vaginal syringes having a series of fingers connected with a nozzle and the latter with an elastic bulb; and the objects of my improvement are to produce with pivoted fingers a nozzle having in its delivery end a screw-threaded regulable stopper, whereby the flow from said nozzle may be either a fine spray or a circular stream tangentially issuing therefrom.

The invention will first be described in connection with the drawings, and then be pointed out in the claims.

In the drawings, Figure 1 is a side view of the combined vaginal sprayer and dilator constructed in accordance with my invention, showing the fingers closed. Fig. 2 is a longitudinal section of the same, showing the fingers open. Fig. 3 is a perspective view of the upper portion of the nozzle with its adjustable stopper-plug removed.

In said drawings, A represents the nozzle, consisting of a tube having its rear end enlarged and screw-threaded internally at A' to receive the coupling of a rubber (or other) tube to connect it to an elastic bulb or to other fluid-forcing device. The front end of the nozzle is also enlarged and screw-threaded internally at A<sup>2</sup> to receive the screw-threaded end b of a current controlling and deflecting plug, B. Said plug has above its screw-thread a conical and outwardly-flaring portion, b<sup>2</sup>, adapted to fit the outwardly-flaring opening a<sup>2</sup> in the front end of the nozzle, so that a fluid current issuing from the nozzle will assume a bell-shaped form and will be of more or less amount, according to the distance between flaring portions a<sup>2</sup> b<sup>2</sup>. When these parts a<sup>2</sup> b<sup>2</sup> are brought in contact, the fluid will, when under pressure, still issue in the form of spray, as the flaring portion a<sup>2</sup> of the front end of the nozzle has a series of fine radial grooves or notches, a<sup>3</sup>, as shown in Fig.

3. To permit the fluid to reach the flaring portion b<sup>2</sup> of the plug, the latter has two or more large longitudinal grooves, b<sup>3</sup>, cut in its screw-thread. The nozzle can thus be used to spray liquids or to insufflate powders or gases in currents of any desired size.

To complete the device as a vaginal dilator, a series of looped wires or fingers, D, are suitably bent and pivoted, at about the middle of their length, to the sides of the nozzle adjacent to its front end, small cavities c being made therein for that purpose. The nozzle is circumferentially grooved at that point to form a seat for a wire, e, that is passed around the nozzle and the fingers and retains the latter pivotally secured in the small cavities c. By this simple construction, if the operator grasps the nozzle with the handles D<sup>2</sup> of the fingers bearing against the exterior of his hand, the front end of the fingers become collected together to a point shown in Fig. 1, and are easily introduced into a patient. If the operator then brings the handles D within his grasp, the fingers become spread apart, and can be thus retained to any desired degree, as shown in Fig. 2.

Although I prefer to use a single wire e to unite the fingers to the nozzle, the latter may be provided with perforated lugs on the sides of the bearings for said fingers, and an independent pin be used to retain each finger.

Having now fully described my invention, I claim—

1. The combination of an injector-nozzle, having its front end internally screw-threaded and the opening flaring, with a plug having its inner end screw-threaded, and longitudinal grooves in said screw-threaded portion, substantially as and for the purpose described.

2. The combination of a nozzle having upon its sides cavities c, and a circumferential groove with a series of fingers looped at both ends and bent in the middle between said ends, and a wire bearing upon the bent middle portion of said fingers and resting in said groove, substantially as and for the purpose described.

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

SYLVESTER W. BEALL.

Witnesses:

M. B. EARNHART,  
C. O. HUNTER.