D. L. ABER.

VAGINAL SYRINGE.

APPLICATION FILED JULY 27, 1910.

989,550.

Patented Apr. 18, 1911.

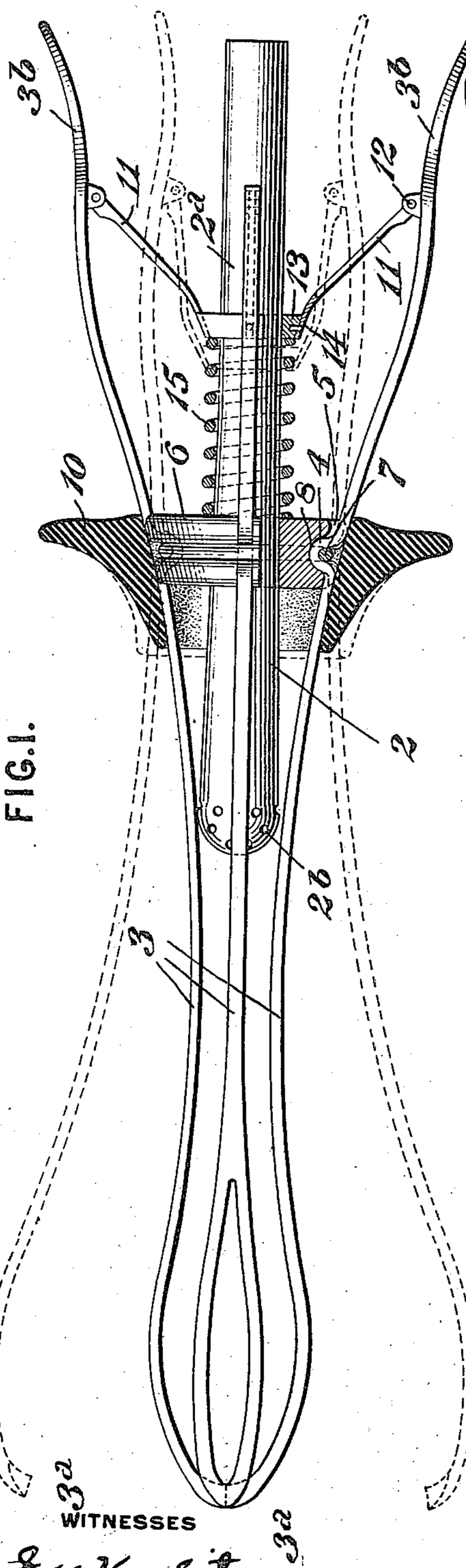

FIG. 1.

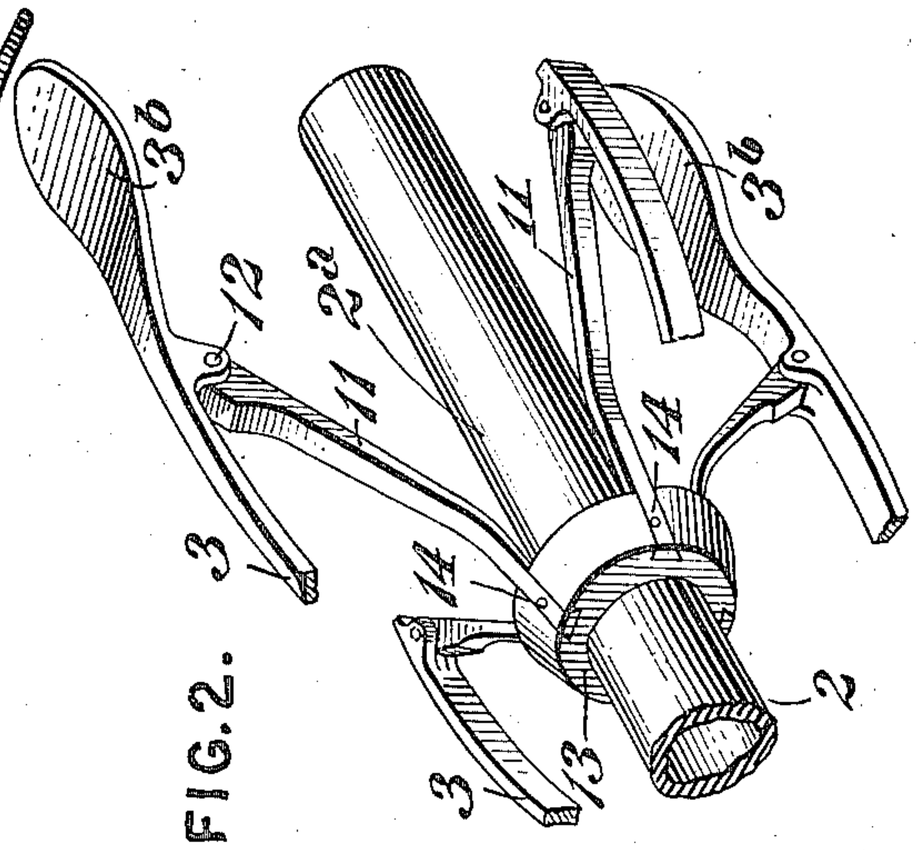

FIG. 2.

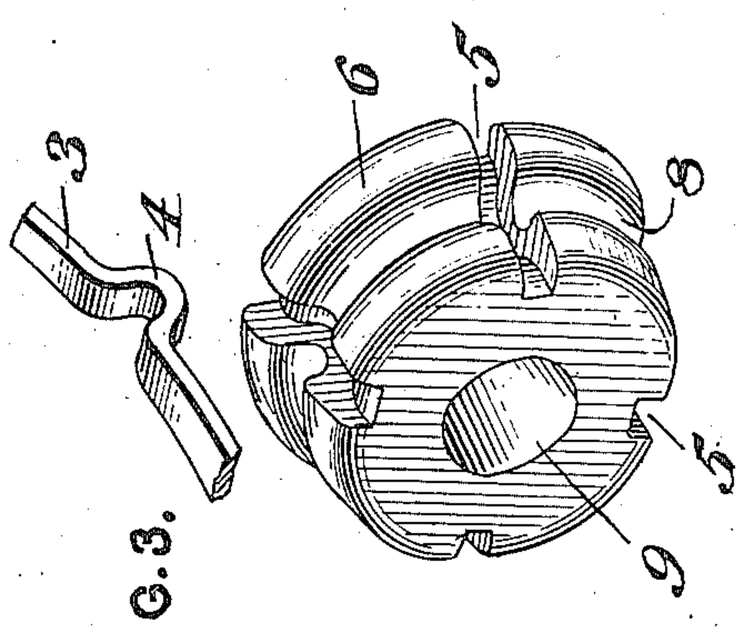

FIG. 3.

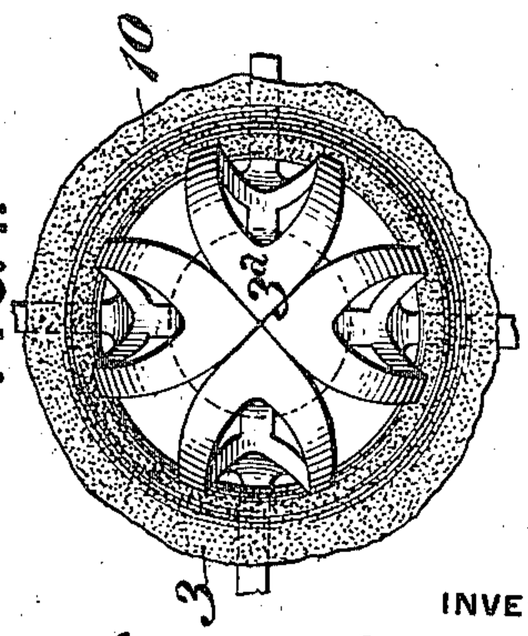

FIG. 4.

WITNESSES

INVENTOR

David L. Aber

by F. E. Gaither

attorney.

UNITED STATES PATENT OFFICE.

DAVID L. ABER, OF PITTSBURG, PENNSYLVANIA.

VAGINAL SYRINGE.

989,550. Specification of Letters Patent. Patented Apr. 18, 1911.

Application filed July 27, 1910. Serial No. 574,117.

To all whom it may concern:

Be it known that I, DAVID L. ABER, a citizen of the United States, residing at Pittsburg, county of Allegheny, and State of Pennsylvania, have invented certain new and useful Improvements in Vaginal Syringes, of which the following is a specification.

The primary object of this invention is to provide a simple, efficient and easily operated device for dilating the vagina, so that every portion of the cavity will be exposed to the action of the douche, and it is characteristic of my device that it will permit of any desired amount of dilation and is equally effective whether expanded slightly or to its fullest extent.

The invention includes dilating blades of an improved construction so shaped as to permit the device to be safely and easily introduced and withdrawn from the vagina when the blades are brought together at their forward ends; also improved means for maintaining the blades in fixed relation upon a syringe nozzle, and means for automatically bringing the forward ends of all of the blades together and causing them to open simultaneously when desired.

The invention consists in certain novel features of construction, and in the assemblage and combination of parts, hereinafter fully described and claimed and illustrated by the accompanying drawings wherein:—

Figure 1, is a side elevation of a syringe nozzle having my improvements applied thereto, the latter being shown partly in section with the open position of the blades indicated by dotted lines; Fig. 2, a perspective detail on an enlarged scale illustrating the mechanism employed for operating the blades simultaneously; Fig. 3, a similar view of the blade carrying member and a portion of one of the blades; and Fig. 4, a front elevation of the blades, illustrating the manner in which they fit together to form a smooth and unbroken surface.

Referring to the drawings, 2 is the nozzle, around which are arranged the spoon shaped dilating blades 3, provided with inwardly curved and slightly beveled forward end portions 3^a, adapted to fit together to form a smooth unbroken tapering surface, which will permit of the safe and easy introduction and withdrawal of the device when the blades are in their normal or closed position as shown in full lines in Figs. 1 and 4. While I prefer a form of construction embodying four dilating blades, it will be obvious that any number of blades may be used without departing from the nature of my invention, and any preferred form of nozzle may be used in connection therewith. A very simple form of nozzle and one well adapted for the purpose is shown in Figs. 1 and 2, consisting of a rear tube portion 2^a gradually expanding toward its forward end and provided at that point with a series of spray perforations 2^b. Blades 3, are provided at a point intermediate their length with inwardly curved bearing portions 4, fitted to rock in correspondingly curved longitudinal slots 5, formed in the periphery of supporting member 6 and held therein through the medium of a surrounding ring 7, fitted in an annular groove 8, also formed in the periphery of member 6 but of a less depth than the curved portions of slots 5, which construction while permitting the blades to open and close freely will effectually prevent any longitudinal movement of the same relatively to each other and two of the blades, oppositely located, are further provided with rearwardly extending portions to form operating handles 3^b. Supporting member 6 is also provided with a tapered central opening 9 fitted to receive the corresponding portion of nozzle 2, and together with the adjacent portions of the blades is inclosed in a forwardly tapering pad or shield 10, of soft rubber or some other suitable material. Said shield is preferably formed to completely inclose member 6 and project a short distance beyond its forward face around the blades, as shown in Fig. 1.

Forwardly and inwardly extending spring arms 11 are attached to blades 3, by means of pivotal connections 12 at or near their outer ends, and have their inner ends firmly secured to a ring 13 by means of a dovetail and pin connection 14, as shown, or in any other suitable manner. The ring 13 slides freely upon the parallel portion 2^a of the nozzle 2, and a spiral spring 15 interposed between it and supporting member 6 acts in conjunction with arms 11 to normally hold said ring in its rear position with the blades closed as indicated in full lines in Fig. 1.

In the operation of my device, after it has been inserted the handles 3^b are compressed and through the medium of arms 11 and ring 13 all of the blades will be caused to

open simultaneously and to the same extent, and will be instantly returned to closed position by the reflex action of spring 15 and arms 11, as soon as pressure is removed from the handles.

It will be noted that in my device the amount of dilation can be regulated to a nicety by the pressure on the handles, and by reason of the shape, and arrangement of the blades with reference to the nozzle each and every part of the cavity will be thoroughly exposed to the action of the douche.

If desired the spring 15 may be dispensed with, and the arms 11 made of sufficient resiliency to return the parts to normal position when pressure is removed from the handles.

I claim:

1. A vaginal syringe comprising a plurality of dilating blades adapted to meet at their forward ends to form an unbroken surface, a nozzle inclosed by said blades, means for pivotally mounting the blades at a point intermediate their length upon the nozzle in fixed relation to each other, two of the blades oppositely disposed, provided with rearwardly extending portions to form operating handles, and means pivotally connected to all of the blades to cause them to operate simultaneously.

2. A vaginal syringe comprising a plurality of dilating blades, a supporting member therefor adapted to receive a nozzle and pivotally connected to the blades intermediate their length, a shield completely inclosing said supporting member and projecting beyond its forward face around the blades together with means pivotally connected to the blades adjacent their rear ends to hold them normally in closed position.

3. A vaginal syringe comprising a plurality of dilating blades, a nozzle inclosed by said blades, a supporting member mounted upon the nozzle and pivotally connected to the blades, intermediate their length, two of said blades, oppositely disposed, provided with rearwardly extending portions to form operating handles, a ring fitted to slide upon the nozzle, connections between the ring and blades, a resilient member interposed between said supporting member and ring, and adapted to hold them normally apart.

4. A vaginal syringe comprising a plurality of dilating blades, a nozzle inclosed by said blades, a supporting member mounted upon the nozzle and pivotally connected to the blades intermediate their length, two of said blades, oppositely disposed, provided with rearwardly extending portions to form operating handles, a ring fitted to slide upon the nozzle, resilient connections between the ring and blades pivotally connected to the latter and a resilient member interposed between said ring and supporting member.

5. A vaginal syringe comprising a plurality of dilating blades, two of said blades oppositely disposed, provided with rearwardly extending portions to form operating handles, a supporting member pivotally connected to the blades, resilient arms pivotally connected to all the blades adjacent their rear ends and means connecting the forward ends of said arms.

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

DAVID L. ABER.

Witnesses:
F. E. GAITHER,
CLARENCE A. WILLIAMS.