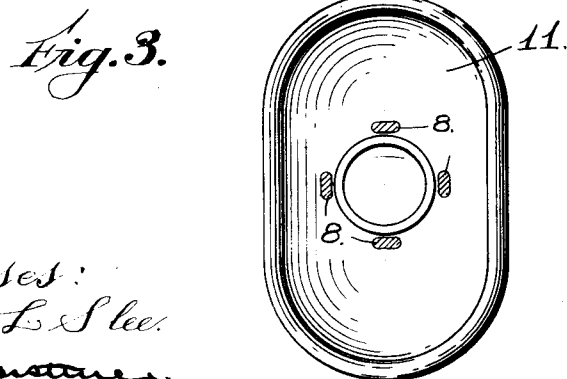
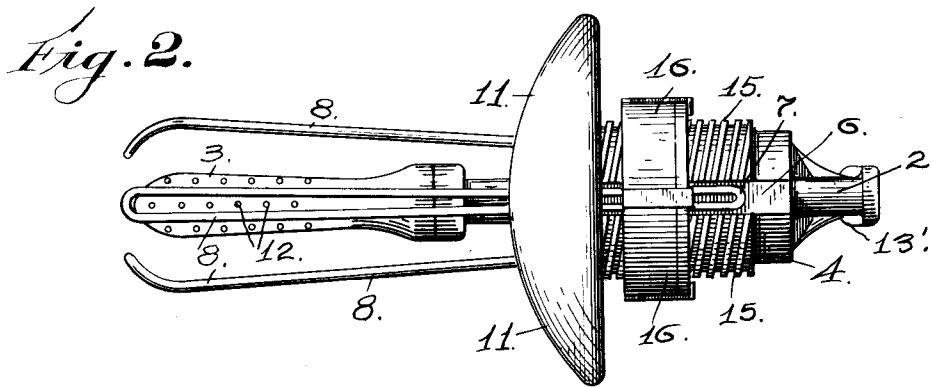
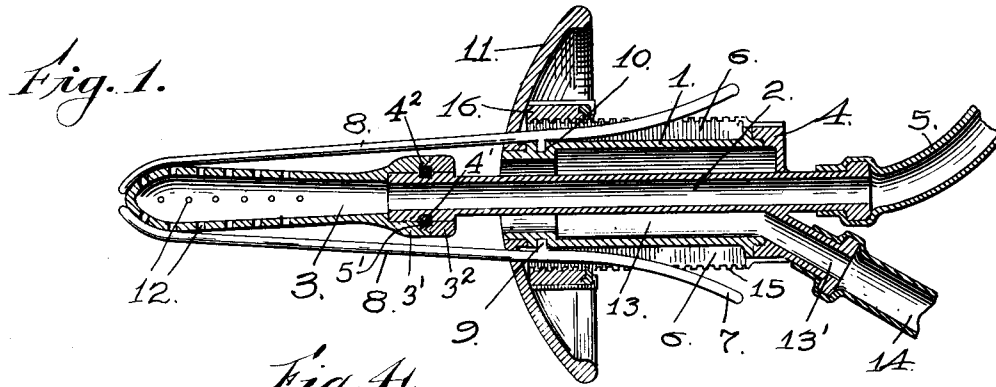


F. B. MULGREW.
VAGINAL SYRINGE.
APPLICATION FILED JUNE 27, 1910.

1,034,818.

Patented Aug. 6, 1912.



Witnesses:
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UNITED STATES PATENT OFFICE.

FELIX B. MULGREW, OF SAN FRANCISCO, CALIFORNIA.

VAGINAL SYRINGE.

1,034,818.

Specification of Letters Patent.

Patented Aug. 6, 1912.

Application filed June 27, 1910. Serial No. 569,127.

To all whom it may concern:

Be it known that I, FELIX B. MULGREW, a citizen of the United States, residing in the city and county of San Francisco and State of California, have invented certain new and useful Improvements in Vaginal Syringes, of which the following is a specification.

The hereinafter described invention relates to that type of vaginal syringes employing a rotatable member for ejecting the medicated fluid to the parts to be treated with a whirling action, as more fully outlined in United States Letters Patent #750,276, granted unto Francis J. Gruss on the 26th day of January, 1904, and the object of the invention is to dispose of the outer slotted shell or casing which surrounds said rotatable member and tends to prevent the free discharge of the fluid stream.

To comprehend the invention reference should be had to the accompanying sheet of drawings, wherein—

Figure 1 is a longitudinal sectional view of the syringe with its parts closed or in normal position. Fig. 2 is a side elevation of the syringe with its dilator expanded. Fig. 3 is a rear elevation of the shield detached from the syringe. Fig. 4 is a cross sectional view of the nozzle, showing the arrangement of the discharge ports for causing the rotation of the nozzle when in use.

In the drawings, the numeral 1 is used to indicate the head or tubular body portion of the syringe, through which extends the guide tube 2 for conducting the medicated fluid to the nozzle 3 loosely mounted for rotation on the outer end of the said tube. The nozzle 3 is formed with a separable hub, the section 3' thereof screwing onto the section 3², and the nozzle with its united hub is held to the outer end of the guide tube 2 by means of the bearing balls 4', which work within an annular groove 4² in the face of the tube 2 and an annular groove 5' in the hub section 3' of the nozzle. In fitting the nozzle 3 to the tube 2 for rotation, hub section 3² is slipped onto the outer end of the tube 2 beyond the annular groove 4² and the bearing balls 4' then seated within the said groove, after which the hub section 3' is screwed onto the reduced screw threaded end of the hub section 3². In this manner the nozzle 3 is held securely to the outer end of the tube 2, while free to rotate thereon. The said guide tube 2 forms an

extension of the end plug 4, which screws into and closes one end of the tubular member 1, and to the inner end of said tube 2 is connected the supply pipe 5, which leads from a suitable source of supply, as for instance a suspended water bag containing the fluid to be delivered to the parts to be treated.

The head, tubular body or shell 1 is formed with a series of longitudinal grooves 6, circumferentially disposed, into which seat the lever extensions 7 of the dilator blades 8, which blades surround the rotatable nozzle 3. The lever extension 7 of each of the said blades project at a slight inclination to the horizontal, when the blades are closed upon the nozzle 3, Fig. 1 of the drawings. Each dilator blade, at the point from which the extension lever springs, is formed with a depending lug 9, which rests within a circumferential groove 10 cut in the supporting head, body or shell 1, and acts as a fulcrum point for the blades as expanded and contracted relative to the rotatable nozzle 3.

There is fitted onto the outer end of the head, body or shell 1 a flexible shield 11, of suitable shape, through which are extended the dilator blades 8. This shield is preferably composed of rubber, and, while acting to normally hold the blades 8 in a closed position, serves as a guard to prevent the too rapid outflow of the medicated liquid from the parts being treated, in fact acts as a retaining shield for the liquid after being discharged from the rotatable nozzle 3.

The liquid after its discharge from the outlet openings 12 of the nozzle, makes its escape through the tubular head, body or shell 1, which is of larger diameter than the guide tube 2 so as to provide an annular outlet passage-way 13 for the escaping fluid, which fluid flows out from the said shell through the discharge extension 13', to which is attached a drain tube 14 for leading the escaping fluid into a suitable vessel situated to receive the same.

The exterior surface of the head, body or shell is formed with the screw threads 15, on which works the adjusting nut 16. This nut works over the lever extensions 7 of the dilator blades 8, and as the same travels or is screwed toward the inner end of the head, body or shell 1 it depresses the said lever extensions and in doing so expands the dilator blades 8 so as to dilate

the parts being treated. This dilation takes place after the syringe has been inserted, the degree of dilation being regulated by the user of the syringe. The dilating blades are preferably covered with rubber, so as to provide an elastic surface thereto for preventing injury to the parts against which they bear when expanded during the use of the syringe.

By the use of the described syringe the medicated fluid is confined and retained after its discharge from the nozzle against too rapid an outflow, thereby obtaining a prolonged action of the fluid and by so doing obtaining the full effect of the fluid solution relative to the parts being treated.

Inasmuch as the nozzle is not confined within an inclosing shell or casing, access may be readily had thereto for cleansing purposes, for such purpose it merely being required to expand the dilating blades relative to the said nozzle and place the syringe within a bath of any well known antiseptic solution.

The described syringe is simple of construction, permits of ready detachment of its working parts, is adapted for use generally in connection with the washing of diseased parts to which it is desired to direct streams of medicated fluid, and is easily cleansed after use; in fact, the syringe complies with all the requirements demanded by physicians, and by so doing recommends itself to hospital work.

Having thus described the invention what is claimed as new and desired to be secured by Letters Patent is—

1. A vaginal syringe comprising a tubular shell, a guide tube for medicated fluid ex-

tended through the said shell, a discharge nozzle mounted on the outer end of said tube, a supply pipe connected to the inner end thereof, a retaining shield mounted on the outer shell, a series of dilator blades encompassing the nozzle, the said blades being normally held closed by the retaining shield through the walls of which they extend, a lever extension projecting at an inclination from each of the said blades, and means mounted on the outer shell for actuating the said lever extensions for expanding the dilator blades.

2. A vaginal syringe comprising a tubular shell, a plug closing the inner end thereof, a guide tube for medicated fluid carried by said plug and projected through the outer shell, a nozzle rotatably mounted on the outer end of said tube, a supply pipe connected to the inner end thereof, a discharge extension projecting from the end plug closing the outer shell, an elastic retaining shield mounted on the outer shell, a series of dilator blades encompassing the rotatable nozzle, the said blades being held normally closed by the retaining shield through the walls of which they extend, a lever extension projecting at an inclination from each of the dilator blades, and means mounted on the outer shell for actuating the said lever extensions for expanding the dilator blades.

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

FELIX B. MULGREW.

Witnesses:

A. J. HENRY,
F. D. FROST.