No. 806,188. PATENTED DEC. 5, 1905.

D. W. REES.

MEDICAL POWDER APPLICATOR.

APPLICATION FILED JAN. 4, 1904.

Fig. 1.

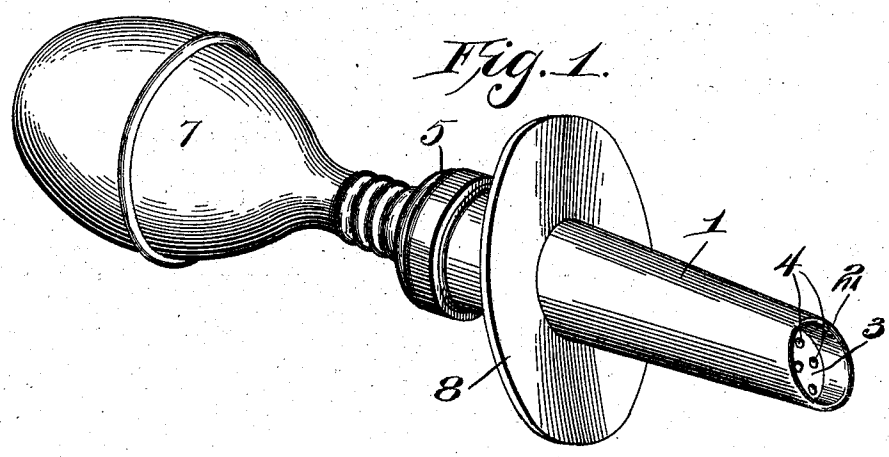
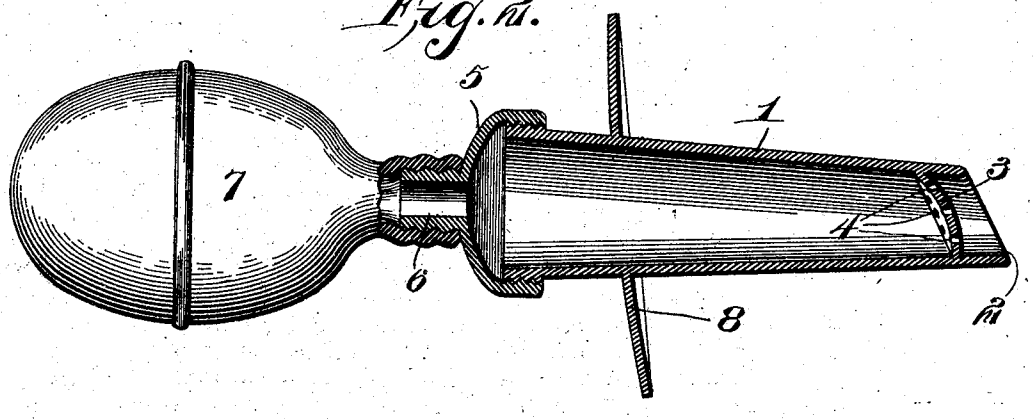


Fig. 2.



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DAVID WILLIAM REES, OF NEEDLES, CALIFORNIA.

MEDICAL-POWDER APPLICATOR.

No. 806,188. Specification of Letters Patent. Patented Dec. 5, 1905.

Application filed January 4, 1904. Serial No. 187,750.

To all whom it may concern:

Be it known that I, DAVID WILLIAM REES, a citizen of the United States, residing at Needles, in the county of San Bernardino and State of California, have invented a new and useful Medical-Powder Applicator, of which the following is a specification.

This invention relates to devices for applying medicaments to the vagina and uterus, and has for its object to provide an instrument of simple design which may be successfully employed to apply medical agents in powdered form to the vaginal membrane and the os uteri.

Owing to the difficulty of applying other forms of medicaments in the vagina, the local treatment of vaginal and uterine diseases is usually restricted to the application of washes of various kinds by means of syringes, douches, and the like. These methods are not wholly satisfactory, partly on account of the inconvenience attending their practice and partly because the washes flow out of the vagina at once, and consequently do not have a lasting effect. This invention is designed to overcome these difficulties by providing a simple and easily-manipulated device by means of which medicinal powders may be applied to all parts of the vagina and os uteri. The powders so applied adhere to the moist membranes for a long time, so insuring greater effects than are obtainable from washes, and the danger of soiling the wearing-apparel is practically eliminated.

In attaining the objects above mentioned I make use of an instrument of the type hereinafter described, illustrated in preferred form in the accompanying drawings, and having the novel features specifically pointed out in the appended claim.

In the drawings, Figure 1 is a perspective view of the instrument. Fig. 2 is a view in longitudinal section through the entire instrument.

Referring to the drawings, in which corresponding parts are designated by similar characters of reference, 1 designates the barrel of the instrument, which tapers from the rear to the forward end, where it is cut off in a plane oblique to the axis thereof, as shown at 2. At a short distance behind the forward end the barrel is partially closed by a screen in the form of the perforated plate 3, preferably presenting a convex surface in front and a concave surface behind. The holes 4 of the plate diverge outwardly so as to separate materials forced through the openings. At the rear the barrel is externally threaded, and a cap 5, having a hollow stem 6 centrally attached thereto, is screwed on the threaded surface. The stem 6 is fitted into the neck of an ordinary bulb 7, of soft rubber, of suitable size and strength to furnish when compressed with the hand a blast of air sufficient to force a charge of powdered material through the openings in the perforated plate 3 and into contact with the surfaces adjacent to the forward end of the barrel.

To prevent the expulsion of secretions or other matters from the vagina when the instrument is used, I prefer to have it provided with a shield 8 of substantially elliptical outline and concave anterior surface. The shield 8 is mounted upon the barrel 1 at a suitable distance from the forward end and is disposed at oblique angles to the axis of the barrel, as shown.

In the construction of the instrument soft rubber must of course be used for the bulb; but any material that can be thoroughly sterilized may be used for the other parts of the instrument. The preferred materials, however, are glass and hard rubber, either of which is admirably adapted for the purpose.

In using the instrument a charge of powder of suitable character is introduced into the barrel from the rear, the cap being first unscrewed for that purpose. The cap is then replaced and the charged instrument is introduced to sufficient depth to reach the innermost affected portion of the canal. Then sudden pressure is applied to the bulb. The puff of air produced by a sharp compression of the bulb forces a quantity of powder through the opening in the curved plate 3 and causes it to be distributed over the diseased surface. The instrument is then withdrawn by degrees, and by a succession of pressures upon the bulb the powdered medicament is distributed over the entire surface of the vagina.

Among the special features of construction in the instrument by which it is peculiarly adapted for the purpose for which it is designed attention is directed to the form of the barrel at the forward end and to the position and character of the plate 3. It will be observed that the forward end of the barrel is beveled, so that the barrel is considerably longer on one side than on the opposite side. The longer side of the barrel is intended to

correspond to the posterior vaginal wall, and the beveled forward end of the barrel adapts it to enter the folds of the vaginal membrane, where it is attached to the uterus, so insuring distribution of the medical agent in these folds.

The plate 3 is curved in order to effect better distribution of the powder upon the sides of the vaginal canal, and it is placed about half an inch from the end of the barrel to prevent clogging of the openings 4 by secretions in the canal, as well as to permit the entrance of the end of the barrel into the folds of the vaginal membrane surrounding the os uteri.

While the instrument has been described in its preferred form and the drawings show the average proportions of the parts, it will be obvious that both the proportions of the parts and some details of construction may be varied without departure from the spirit of the invention or sacrifice of its advantages. I do not limit myself, therefore, to the exact construction shown, but reserve the right to make changes within the scope of the claim.

I claim as my invention—

An instrument of the class described comprising a tapered barrel having its forward or smaller end beveled, a concavo-convex plate secured adjacent to the forward end and disposed at an angle to the length of the barrel and provided with outward-discharging diverging openings, the barrel from its larger end to the plate forming an unobstructed passage, and means discharging in the direction of the length of the barrel for forcing the powdered material through the plate.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

DAVID WILLIAM REES.

Witnesses:
JAMES CARROLL,
R. D. OWEN.