Oct. 13, 1931. W. T. VARNEY 1,827,497

SPECULUM

Filed May 22, 1929

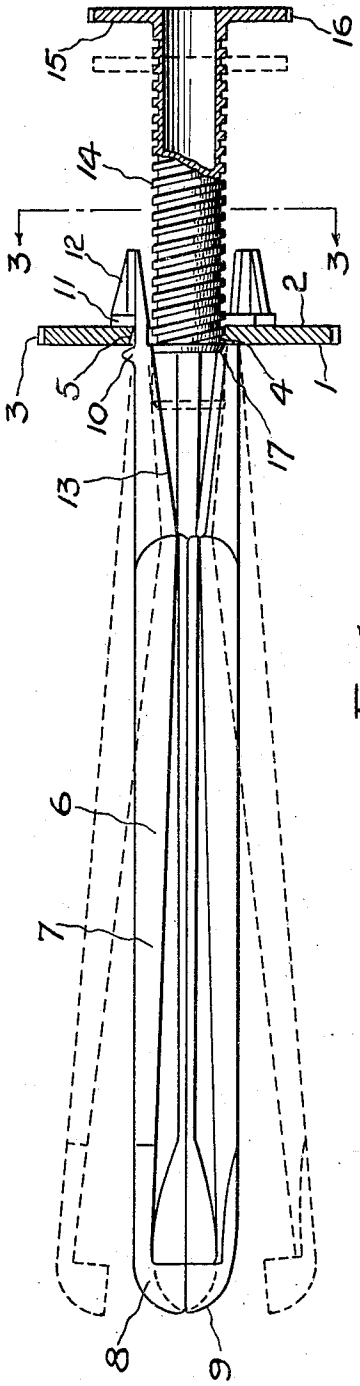

Fig. 1

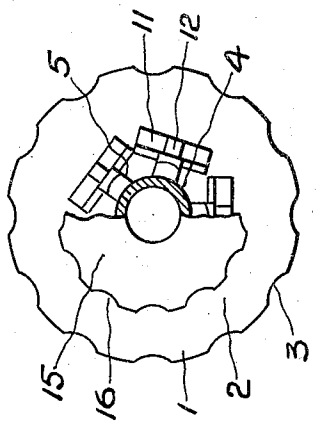

Fig. 3

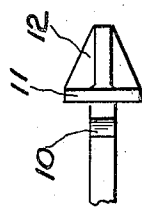

Fig. 4

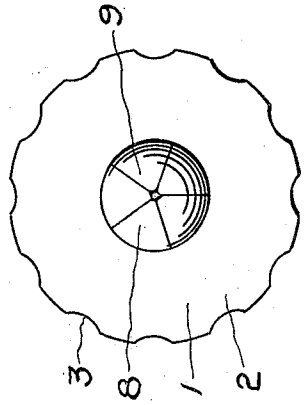

Fig. 2

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UNITED STATES PATENT OFFICE

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SPECULUM

Application filed May 22, 1929. Serial No. 365,133.

My invention relates to improvements in speculums which are adapted for use by the medical and veterinary professions for the examination, bathing and general treatment of vaginal cavities. The objects of the invention are to provide a speculum capable of being quickly dissembled that its several parts can be washed and sterilized; to provide means whereby the walls of the cavity can be dilated to any desired degree and so held for treatment, also to provide a structure where one or more of the dilator arms may be omitted so as to expose any inordinately large affected area situated on one side wall of the cavity.

The invention consists essentially of a plurality of dilator arms fulcrumed adjacent one end in a retaining ring and a sleeve extending between said arms which is adapted to spread the arms apart, as will be more fully described in the following specification and shown in the accompanying drawings, in which:—

Fig. 1 is a general view of the invention with the arms shown in retracted position.

Fig. 2 is an end elevational view taken from the inner end of the arms.

Fig. 3 is a part elevational and part cross sectional view, the section being taken on the line 3—3 of Figure 1.

Fig. 4 is a detail view of the outer end of a dilator arm.

In the drawings like characters of reference indicate corresponding parts in each figure.

The numeral 1 indicates generally a retainer ring which consists of a circular disc 2 having peripheral indentations 3 to provide a convenient grip for the instrument when setting in position.

The disc 2 is provided with a central threaded opening 4 about which a plurality of rectangular indentations 5 are formed, for the purpose of providing a fulcrum for a plurality of dilator arms generally indicated by the numeral 6. The dilator arms 6 consist of elongated members 7 having segmental inner ends 8 of convex exterior, which are so formed that when in retracted position the said inner ends form substantially a semi-sphere as at 9, see Figures 1 and 2, one segmental portion lying in close contact with that on opposite sides thereof so as to permit of the insertion of the arms into the cavity without discomfort to the patient. The outer end of each arm 6 is provided with a pair of transverse members numbered 10 and 11 respectively which are spaced apart a distance slightly in excess of the thickness of the disc 2 and extending from the member 11 is a prong 12. The connecting portion of the arm which extends between the transverse members 10 and 11 is of such cross sectional dimensions as to lie within one of the indentations 5 of the disc 2 and rock therein. The inner face of each of the arms is tapered from its outer end to a point intermediate its length as at 13, the intermediate end of such taper lying relatively close to the axis of the instrument when in closed position as shown in Figure 1.

A threaded sleeve 14 having a flange 15 at one end which is provided with indentations 16 to afford a grip, is engaged in the threaded opening 4, the end of the sleeve is tapered as at 17 and is adapted to slidably engage the tapered portions 13 of the arms 6 so that as the sleeve is screwed forwardly through the disc 2 the end of the sleeve forces the arms outwards towards the position shown in dotted line, see Fig. 1, and when this position is attained the prongs 12 lie in substantial contact with the periphery of the sleeve.

Having thus described the several parts of my invention I will now briefly explain its use.

As the sleeve 14 is screwed into the disc 2 the arms are swung outwardly in unison to dilate the walls of the cavity into which the instrument is inserted, such dilation being effected according to the needs of the case, the arms remaining in whatever position they may have been set.

If on examination of the cavity an affected area is disclosed which is somewhat greater than the space between two arms, the instrument can be collapsed and withdrawn when one of the arms can be removed and the instrument again be inserted and adjusted in such a position as to expose the entire af-

fected area for treatment. The sleeve 14 permits the insertion of any suitable douching device, the insertion of an electric light for examination and also the use of certain instruments for the treatment of affected organs in the cavity.

What I claim as my invention is:

A speculum comprising a retaining ring having centrally located threaded opening, a plurality of dilator arms mounted within said ring, one end of the arms being in the form of a segment of a sphere a pair of spaced transversely extending members formed on the other end of the arms, a prong formed on the last mentioned end of said arms to limit the dilation of the arms, said arms being mounted within the ring between said transversely extending members and a threaded sleeve in engagement with the threaded projection of the ring for dilating said arms.

Dated at Vancouver, B. C., this 14th day of May, 1929.

WILLIAM THOMAS VARNEY.