Jan. 26, 1954 H. SCHEER 2,667,166

ANTRUM SPRAY

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Fig. 1

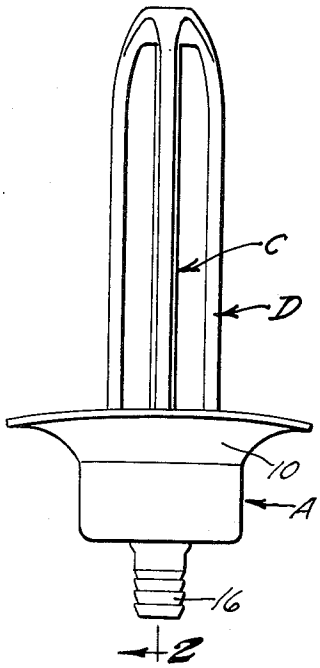


Fig. 2

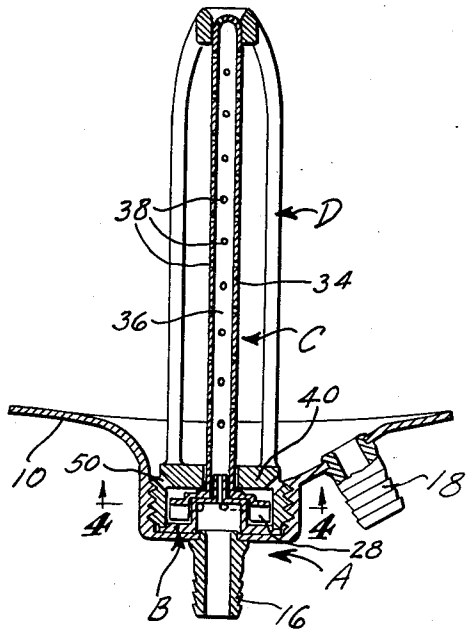


Fig. 4

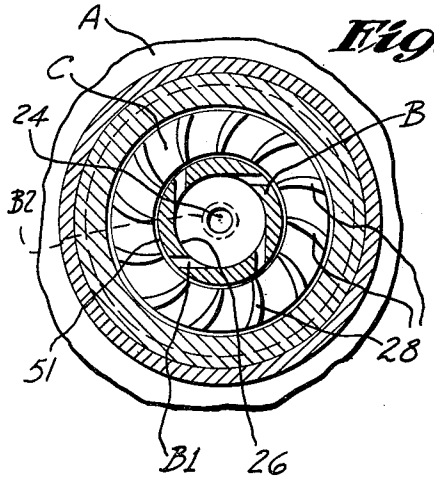
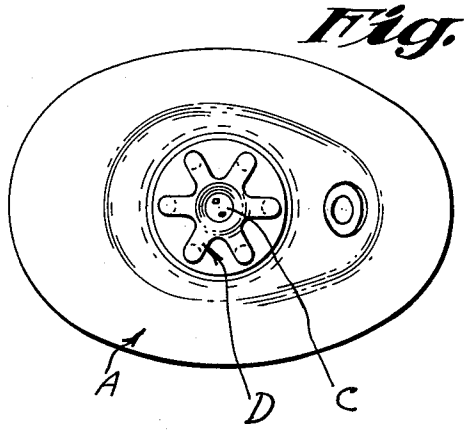


Fig. 3



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Fig. 5

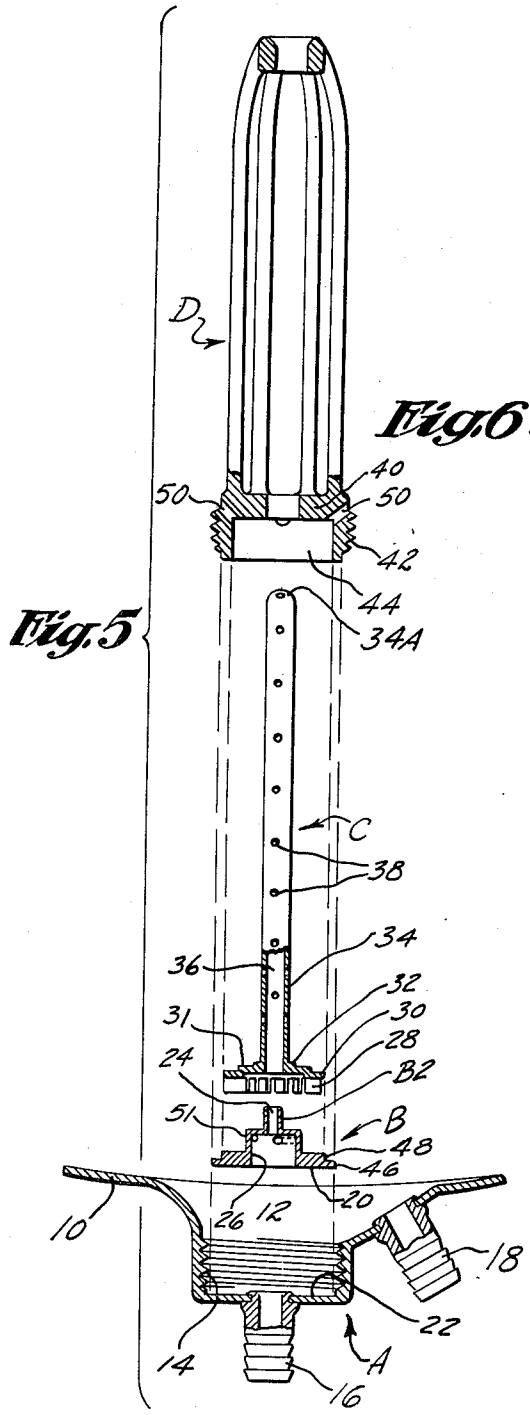
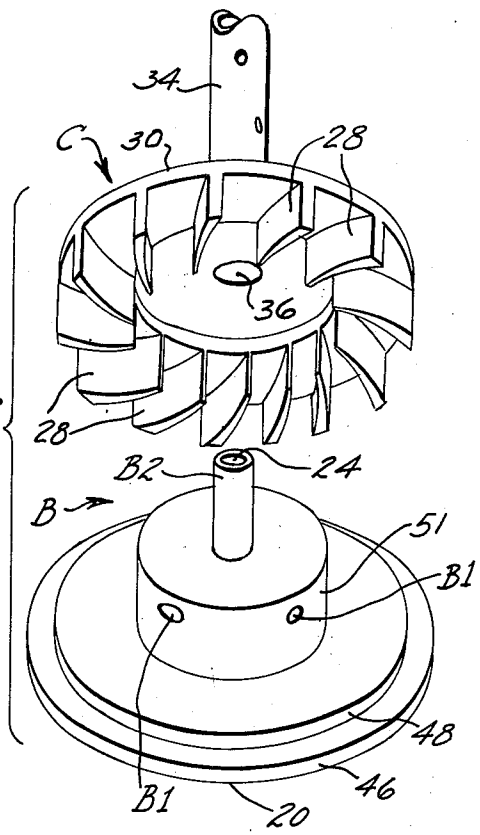


Fig. 6



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Patented Jan. 26, 1954

2,667,166

UNITED STATES PATENT OFFICE

2,667,166

ANTRUM SPRAY

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Application November 29, 1951, Serial No. 258,903

2 Claims. (Cl. 128—242)

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My invention relates to a syringe and particularly relates to a vaginal syringe of the type adapted for use in irrigating and distending the vagina for treating irritated and diseased tissue therein.

In the prior art patent to Eugene M. Caruso, Patent No. 2,052,868 patented September 1, 1936, is shown an antrum spray of the type herein disclosed. The advantages of the present invention over the prior art are that the present invention is relatively low in cost, it may be easily assembled or disassembled, and it may be easily and rapidly cleaned for sanitary purposes.

Another object of my invention is to provide an antrum spray which will not be affected by the acids of the body reacting with the metal of the elements of the spray.

Another object of my invention is to provide a syringe that is light in weight and sturdy in construction.

Another object of my invention is to provide an antrum spray wherein the fluid utilized for irrigating purposes also may provide a turning moment upon a rotatable nozzle of the spray.

Another object of my invention is to provide an antrum spray whereby the irrigating fluid may be applied for a relatively long period of time because of the elimination of irritation to a sensitive or irritated membrane.

Another object of my invention is to provide a guard made of material for preventing the sensitive portion of the organ being sprayed from contacting the rotatable nozzle of the syringe.

Other objects of my invention are to provide an improved device of the character described, that is easily and economically produced on a manufacturing basis, that is sturdy in construction and the effectiveness of which is very high.

With the above and related objects in view my invention consists in the details of construction and combination of parts as will be more readily understood when the description is read in conjunction with the accompanying drawings in which:

Fig. 1 is a side view of all of the elements embodied in my antrum spray.

Fig. 2 is a sectional view taken along the line 2—2 of Fig. 1.

Fig. 3 is a perspective view of the rotatable portion of the nozzle particularly showing the vanes.

Fig. 4 is a fragmentary assembled view of the antrum spray.

Fig. 5 is an exploded view of the members comprising the antrum spray.

Fig. 6 is a fragmentary view of the rotatable nozzle and its complementary disc.

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Referring now in detail to the drawings wherein similar reference characters refer to similar parts I show an antrum spray comprised of cast aluminum, gold, or non-metallic substance such as synthetic plastic that will not rust or corrode, or which will react with the acids of the human body to adversely affect the human body, and which renders the completed device light in weight; the rotatable nozzle is preferably composed of non-corroding metal.

The antrum spray embodying my invention comprises a base or retaining member, generally designated as A, having a separable disc-like member, generally designated as B, a rotatable nozzle, generally designated as C, and a combined dilator and guard, generally designated as D.

The base or retaining member A comprises a main body portion 10 of elliptical configuration with a central hollow bore, chamber, or cavity 12 therein which is internally threaded at 14. Extending outwardly from the bottom of the bore or cavity 12 is an ingress passageway 16 where a water or fluid supply rubber tube (not shown) may be attached. A second or egress or discharge passageway 18 extends outwardly from the bore 12 and it is located close to the main body portion 10 and the egress passageway is adapted to have a rubber hose (not shown) attached thereto for the carrying away of the irrigating fluid.

Inserted within the bottom of the bore 12 is the disc B which has a flat lower surface 20 which is adapted to rest against the bottom 22 of the bore 12. The disc B has a central passageway 24 whereby irrigating fluid may pass therethrough to the rotatable nozzle C.

The disc B serves as a bearing for the rotatable nozzle C and it has a vertically extending circular wall 26 in which a pair of non-radially extending horizontal orifices B1, B1 are located therethrough. The orifices B1 direct the incoming flow of irrigating fluid to impinge upon vanes 28 which are an integral part of the rotatable nozzle C.

The nozzle C is an integral unit adapted to rotate by virtue of the irrigating fluid impinging on the vanes 28 and the vanes are a part of the circular base 30, which has stepped portions 31 and 32. An extended hollow stem 34 having a central passageway 36 is rigidly affixed to the base 30 and it is so affixed that irrigating fluid passes the base 30 and the stepped portions 31 and 32. A plurality of small openings 38 extend through the curved bounding surface of the stem 34 as well as through the tip 34A. The small

openings 38 permit the discharge of the hygienic fluid.

The openings 38 are not located in the same horizontal plane—the openings being located so that the stream of fluid will not be concentrated at one point, thereby overcoming the irritation or pricking of the surface under treatment. By the above arrangement of staggering the openings, the spray may be used upon the patient for a longer period of time thereby greatly benefiting the patient under treatment and resulting in quicker relief. If the openings were not staggered then irritation and shock would result.

The combined dilator and guard D composed of gold, or gold plated metal, has a base 40 which is externally threaded at 42 to threadedly engage the internal threads 14; and within the base is a hollow annular chamber 44 which chamber receives the disc B and the base 30 as well as the vanes 28 of the rotatable nozzle C. The disc B serves as a cover and as a journal bearing for the rotatable nozzle C. The disc B has a bottom wall 46 which abuts against the bottom edge 44A of the base 40 and a smaller diameter wall 48 of the base B abuts against a portion of the bore 44 to close it. A circular outer surface 51 of the wall 26 serves as the innermost journal for the vanes 28 and the bore 44 serves as the outer journal for the vanes 28. A plurality of openings 50 permit the upward passage of spent irrigating fluid so that it may flow outside of the dilator to the discharge passageway.

A recapitulation of the operation of my invention is as follows:

When the antrum spray is assembled and connected to a source of irrigating fluid under pressure, the fluid passes through the inlet passageway 16, the openings B1 and impinges upon the vanes 28 of the nozzle C thereby rotating the nozzle. A portion of the fluid passes into the opening 36 and through the small openings 38,

where the velocity of the fluid is increased. The dilator D distends the organ and the fluid impinges on the sensitive membrane and effects an analgesic action upon the patient. The spent fluid finds an egress passageway through the discharge passageway 18.

The four parts of my invention provide a relatively simple device to assemble, to disassemble, to clean, to ship and pack, and to use.

Although the invention has been described in considerable detail, the description is intended as being illustrative rather than limiting, as the invention may be variously embodied, and the scope of the invention is to be determined as claimed.

I claim as my invention:

1. A vaginal spray comprising a base having a threaded chamber therein, an inlet passageway leading into said chamber, a combined dilator and guard having a base, with an internal bore, a combined rotatable nozzle with small openings therein having vanes affixed adjacent its end, said nozzle surrounded by said dilator and guard, and said vanes being located within said dilator base bore, and a disc having a bore with small openings therein being located within said vanes, and wherein liquid pouring through said disc openings will rotate said vanes.

2. The invention of claim 1 wherein said base contains a body portion of elliptical configuration and an egress passageway in said body portion.

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References Cited in the file of this patent

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Number	Name	Date
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826,091	Dorman	July 17, 1906
2,052,868	Caruso	Sept. 1, 1936