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VAGINAL INJECTION APPLIANCE

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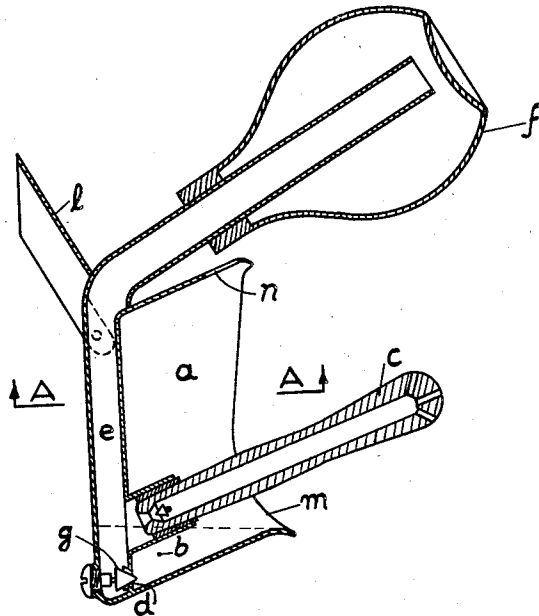


FIG. 1

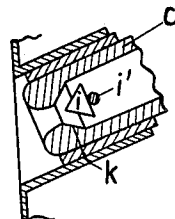


FIG. 4

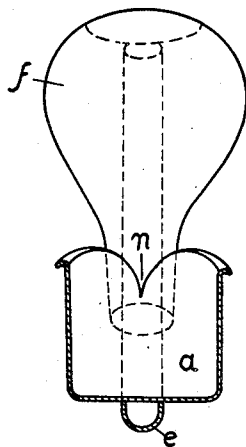


FIG. 2

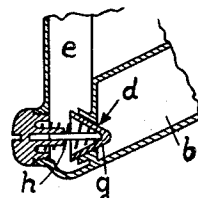


FIG. 3

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VAGINAL INJECTION APPLIANCE

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8 Claims. (Cl. 128—251)

This invention relates to a vaginal injection appliance, commonly known as douches.

One object of this invention is to provide an appliance which can be used in the supine position without spilling any of the liquid. The appliance according to the invention comprises a tip adapted to be inserted into the vagina, a suction pipe, a pump and a liquid container with the suction pipe secured to its front portion, the said suction pipe extending above the said liquid container and carrying a rubber bulb, the said suction pipe being provided with a connecting piece for the said tip.

With the above mentioned and other objects in view, the invention consists in the novel construction and combination of parts hereinafter described, illustrated in the accompanying drawing, and set forth in the claims hereto appended, it being understood that various changes in the form, proportion, size and minor details of construction within the scope of the claims may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

In the accompanying drawing,

Fig. 1 is a vertical sectional view of the appliance,

Fig. 2 is a horizontal section along the line A—A of Fig. 1.

Figs. 3 and 4 show sectional views on a larger scale.

As illustrated in the drawing my appliance consists of a narrow, cup shaped container *a* of any suitable material, e. g. porcelain, artificial resins, die cast material or enameled sheet iron. The container *a* is of such material and of such shape that it can be easily cleaned. The lower part *b* of container *a* slopes from front to rear and is provided with a port *d* communicating with tube *e* bent over at its upper part and bearing at its free end a rubber bulb *f* adapted to be squeezed and then allowed to expand to produce injection or suction. Port *d* is arranged in the lowermost part of container *a* and can be closed by a nonreturn valve consisting of a conical valve body *g* being pressed on its seat by a spring *h*. This valve is opened when bulb *f* is allowed to expand and is closed when the said rubber bulb is squeezed. The said valve therefore allows liquid contained in the lower part *b* of container *a* to be sucked into the rubber bulb through port *d* and tube *e*. When the rubber bulb *f* is squeezed the liquid is ejected from the said bulb and is pressed in the stem of tip *c*, arranged at an angle to the lower part of tube

e but substantially parallel to the upper part thereof and provided at its forward end, adapted to enter the vagina, with several small openings. Tip *c* is closed towards tube *e* by a non-return valve consisting of valve body *i* and valve seat *k*. (See Fig. 4). The way or stroke of valve body *i* is limited by a cross stay *i'*. The end of the tube *e* is very near the bottom of bulb *f*. This construction allows a considerable quantity of liquid to be stored in the bulb. The latter is arranged above the container *a* and therefore facilitates the handling of the apparatus. Bulb *f* is squeezed by pressing it against the abdomen with one hand whilst the person using the appliance presses with the other hand the container *a*, *b* on its body. Tip *c* is thereby introduced into the vagina from which the liquid ejected by tip *c* when the bulb is squeezed, flows back into the container *a*. From container *a* the liquid is again sucked back into bulb *f* by letting the bulb expand, through port *d* and tube *e*. A leg *l* pivotally mounted on tube *e* allows the appliance to be placed in horizontal position on a table or the like.

When using the appliance the container *a* is so pressed with its aperture on the body that bulb *f* lies on the abdomen whilst the lower edge *m* which is curved to form a lip at an angle to the bottom of the container is tightly pressed on the perineum. The upper edges *n* (Fig. 2) may stand off from the body and it is by no means necessary that all edges of container *a* are tightly pressed against the body. Notch *n* is especially arranged in order to prevent any uncomfortable squeezing of the portio vaginalis. Container *a* of my appliance does therefore not completely enclose the labium majora and the parts around the portio. The liquid to be injected remains in the lower part *b* of container *a* where it may rise as far as indicated by the dashed line in Fig. 1, and always when bulb *f* is allowed to expand the entire quantity of liquid is sucked into the bulb. The function of container *a* is therefore only to collect the liquid but not to store the same. The container *a* is empty before the apparatus is applied to the body and before its removal therefrom, the whole of the liquid used being stored in the bulb *b*.

What I claim as new and desire to secure by Letters Patent is:

1. A vaginal injection appliance for use in supine position comprising a tip adapted to be inserted into the vagina, a suction pipe, a pump and a liquid container with the suction pipe secured to its front portion and communicating

with said container, the said suction pipe extending above the said liquid container and carrying a rubber bulb, the said suction pipe being provided with a connecting piece for connecting said pipe with said tip.

2. A vaginal injection appliance for use in supine position comprising in combination: a tip adapted to be inserted into the vagina; a suction pipe provided with a connecting piece for connecting said pipe with said tip; a narrow liquid container open along its longer vertical side which is adapted to be held against the body; and a pump adapted to empty said container before and after injection and to force liquid through said tip; said suction pipe being secured to the front portion of the container and communicating therewith and extending from the lowest point thereof above said container and carrying said pump at its upper end.

3. A vaginal injection appliance for use in supine position comprising in combination: a tip adapted to be inserted into the vagina; a suction pipe provided with a connecting piece for connecting said tip; a narrow liquid container having an outlet at its lower end and open along its longer vertical side which is adapted to be held against the body; and a pump adapted to empty said container before and after injection and to force liquid through said tip; said suction pipe being secured to the front portion of the container and communicating therewith and extending from the lowest point thereof above said container and carrying said pump at its upper end; said connecting piece communicating with the lower end of said suction pipe at a point immediately above the outlet of the container.

4. A vaginal injection appliance for use in supine position comprising in combination: a tip adapted to be inserted into the vagina; a suction pipe provided with a connecting piece for

connecting said pipe with said tip arranged at an acute angle to said pipe; a narrow liquid container open along its vertical side which is adapted to be held against the body and having an outlet at its bottom, said bottom being curved to form a lip at an acute angle with the bottom of the container and with the suction pipe and sloping from front to rear; and a pump adapted to empty said container before and after injection and to force liquid through said tip; said suction pipe being secured to the front portion of the container and communicating therewith and extending from the lowest point thereof above said container and carrying said pump at its upper end; said connecting piece communicating with the lower end of said suction pipe at a point immediately above the outlet of the container.

5. A vaginal injection appliance as claimed in claim 1 in which the ports of the tube communicating with the tip and the liquid container are closed by non-return valves.

6. A vaginal injection appliance according to claim 4 wherein the suction pipe communicates with the container and the tip connecting piece through non-return valves.

7. A vaginal injection appliance according to claim 4 wherein the container communicates with the suction pipe through a non-return valve, the upper part of said suction pipe being bent in a direction substantially parallel to the connecting piece.

8. A vaginal injection appliance according to claim 2 wherein the suction pipe is provided with a connecting piece for connecting said pipe with said tip arranged at an acute angle to said pipe, the upper part of said suction pipe being bent in a direction substantially parallel to the connecting piece.

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