May 19, 1931. E. L. BELLOWS 1,806,517

FOUNTAIN APPLICATOR

Filed Nov. 29, 1929

Fig. 1.

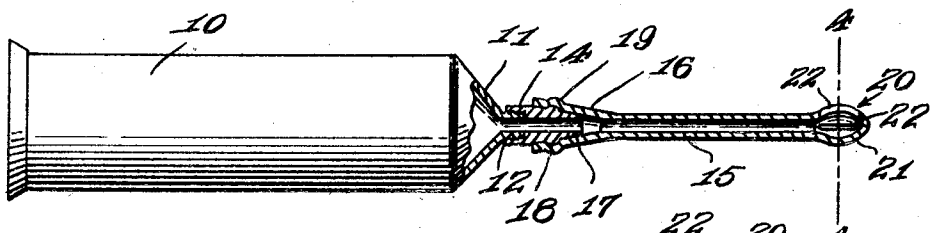


Fig. 2.

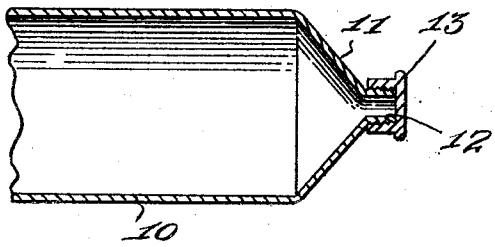
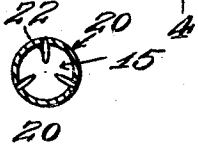


Fig. 4.



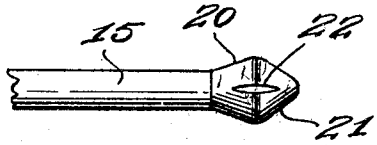
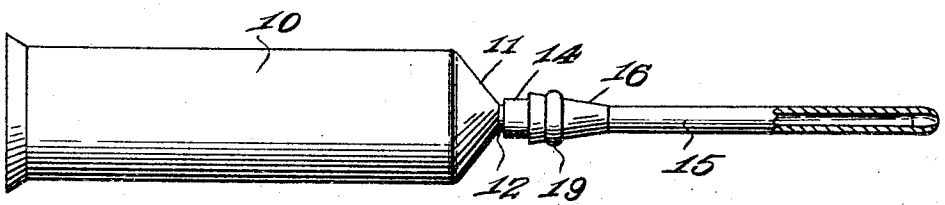


Fig. 3.

Fig. 5.



WITNESS

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UNITED STATES PATENT OFFICE

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FOUNTAIN APPLICATOR

Application filed November 29, 1929. Serial No. 410,595.

This invention relates to new and useful improvements in surgical instruments of the type employed in the treatment of diseases through the sexual organs.

An object of the invention embodies a form of applicator or catheter having lateral orifices through which the medicament may be expressed.

An additional object of the invention consists of a form of collapsible tube for the catheter whereby the medicament may be introduced by one unskilled with the customary forms of apparatus generally employed for this purpose.

A further object of the invention contemplates the provision and arrangement of a form of coupling between the discharge end of the collapsible tube and the catheter whereby the more delicate membranes will not be injured during the injection of the medicament.

With the above and other objects in view, the invention further consists of the following novel features and details of construction, to be hereinafter more fully described, illustrated in the accompanying drawings and pointed out in the appended claim.

In the drawings:—

Figure 1 is a side elevation of the present invention partly broken away to illustrate the construction and relative arrangement of parts.

Figure 2 is a fragmentary longitudinal sectional view taken through the form of collapsible tube.

Figure 3 is a fragmentary elevation of the catheter with the side or lateral orifices.

Figure 4 is a horizontal sectional view taken on line 4—4 of Figure 1.

Figure 5 is a view similar to Figure 1 with a different form of catheter having a single orifice within its extremity through which the medicament is expressed.

Referring to the drawings in detail wherein like characters of reference denote corresponding parts, the reference character 10 indicates generally the conventional form of collapsible tube of the type used by the manufacturers of tooth paste, oil paint and etc., and which include sloping reducer ends 11 and externally threaded discharge necks 12 upon which closure caps, such as indicated at 13, may be applied to prevent the contents of the tube from being squeezed or oozing out, incident to climatic conditions or to prevent the ingress of air to harden the substance within the tube.

In the present invention, it is my purpose to provide a convenient and practical form of connection between the discharge neck of a collapsible tube of this nature and the surgical type of catheter. In carrying out my invention, I employ a form of coupling, such as indicated at 14, and which is associated with the discharge neck of the collapsible tube after the manner of the conventional closure cap 13. The coupling 14 is in addition provided with a longitudinal bore to be aligned with that of the bore in the discharge neck 12 of the collapsible tube. The catheter 15 is provided with a frusto-conical shaped portion 16 upon one end thereof to effectively accommodate the adjacent sloping exterior wall or surface 17 of the coupling in the manner suggested in Figure 1 of the drawings.

An annular bead 18, arranged upon the outer surface of the inclined side wall of the coupling 14, is designed for reception within an annular groove 19 upon the inner side of the frusto-conical shaped end 16 of the catheter 15. The bead and groove establish a form of connection by means of which the catheter will remain stationary and against turning while the collapsible tube is being compressed or rolled from one end thereof to discharge the medicament therethrough.

In Figures 1, 3 and 4 of the drawings, I have shown the catheter 15 as being successively enlarged and reduced to provide a communicating frusto-conical shaped portion 20 having connection at its smaller end with the adjacent end of the catheter and joined at its enlarged end with the base of a conical shaped member 21. The side walls of the frusto-conical shaped portion 20 and conical-shaped portion 21 are slotted, as at 22, and through which the medicament is forced for application within the body of the patient and upon the vaginal membrane. The ar-

rangement of the slots 20 upon the sides of the enlargement for the catheter will obviate the subjecting of any of the delicate membranes from being brought into direct contact with the edge of a tube with resulting injury.

The forms of catheter shown in Figures 1 and 5 of the drawings may be used to advantage in the treatment of tissues under different conditions, affected with different diseases and upon the different sex.

The invention is susceptible of various changes in its form, proportions and minor details of construction, and the right is herein reserved to make such changes as properly fall within the scope of the appended claim.

Having described the invention, what is claimed is:—

A catheter of tubular formation having an outwardly flared extremity, a coupling for the catheter being shaped for accommodation within the flared extremity of the catheter, the flared extremity being annularly grooved upon the inner surface thereof, a bead extending circumferentially of the coupling about the inclined wall thereof for rotary connection within said groove, the opposed end of the catheter being successively enlarged and reduced closing the longitudinal bore thereof, and the large and reduced portions being longitudinally slotted adjacent the points of connection therefor to facilitate ejection of a medicament therethrough.

In testimony whereof I affix my signature.

EMMA L. BELLOWS.