No. 871,474. PATENTED NOV. 19, 1907.

W. T. BUCKNER.

SYRINGE.

APPLICATION FILED JAN. 21, 1907.

Fig. 4.

Fig. 1.

Fig. 5.

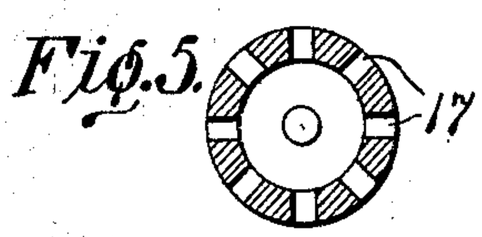

Fig. 2.

Fig. 3.

WITNESSES:

E. F. Stewart

L. L. Dickerson

William T. Buckner,

INVENTOR

By C. A. Snow & Co.

ATTORNEYS

UNITED STATES PATENT OFFICE.

WILLIAM THOMAS BUCKNER, OF SHELBYVILLE, KENTUCKY.

SYRINGE.

No. 871,474. Specification of Letters Patent. Patented Nov. 19, 1907.

Application filed January 21, 1907. Serial No. 353,323.

To all whom it may concern:

Be it known that I, WILLIAM T. BUCKNER, a citizen of the United States, residing at Shelbyville, in the county of Shelby and State of Kentucky, have invented a new and useful Syringe, of which the following is a specification.

This invention relates to syringes and more particularly to the means for applying medicine to the urethra of the male organ, for the prevention and treatment of gonorrhea and other venereal diseases.

The object of the invention is to provide a syringe designed to be inserted into the urethra and having a fluid-receiving passage and communicating discharge orifices, whereby the medicament may be brought into intimate contact with the parts infected, or exposed to infection, and the urethra thoroughly washed from within outwardly, thereby removing all germs and infectious matter deposited in the folds of the mucous membrane.

A further object of the invention is to provide the active end of the syringe with an inflatable collar which expands when liquid is forced through the instrument and thus forms an obstruction, or barrier, in the urethra beyond the point of infection, so that when the out-flow of the medicine from the urethra is prevented by compressing the mouth of the penis around the tubular body portion of the syringe the germs or bacteria lodged in the mucous membrane or lining of the urethra may be effectually destroyed without danger of contaminating the unaffected parts.

A further object of the invention is to provide a jacket or covering for that portion of the tubular member of the syringe necessary to be inserted into the urethra so that the syringe may reach its proper position without coming in contact with the infected area.

A still further object of the invention is to generally improve this class of devices so as to increase their utility, durability and efficiency.

Further objects and advantages will appear in the following description, it being understood that various changes in the form, proportions, size and minor details of construction may be made without departing from the spirit or sacrificing any of the advantages of the invention.

In the accompanying drawings forming a part of this specification—Figure 1 is a longitudinal sectional view of a syringe constructed in accordance with my invention showing the manner of using the same. Fig. 2 is a side elevation of the syringe with the jacket or envelop in position on the tubular body portion thereof, and ready to be inserted into the mouth of the urethra. Fig. 3 is a similar view, partly in section, showing the point or active end of the syringe forced through the adjacent end of the jacket or envelop. Fig. 4 is a transverse sectional view taken on the line 4—4 of Fig. 1. Fig. 5 is a similar view taken on the line 5—5 of Fig. 1.

Similar numerals of reference are employed to indicate corresponding parts throughout the several figures of the drawing.

The syringe consists of a tubular body portion 5 formed of glass, guttapercha, metal or other suitable material, said body portion being provided with a liquid-containing chamber or passage 6 and having one end thereof reduced to form a threaded nipple 7 for detachable engagement with a removable cap 8.

The tubular member or body portion 5 is attached to a compressible bulb or similar liquid containing receptacle 10 of any suitable or approved construction.

Extending transversely across the tubular member at the nipple 7 is a partition or diaphragm 11 having an opening or orifice 12 formed therein and through which the medicine or antiseptic fluid flows into the chamber 13 of the cap when the bulb 10 is compressed.

The end of the nipple 7 is formed with a cup shaped depression 14 which constitutes a seat for the valve 15, the latter being retained in position by inwardly extending pins 16, and having a plurality of space corrugations or ribs formed in its exterior surface so as to permit the liquid in the chamber 13 to gradually escape when the compression on the bulb is relieved and it is desired to remove the instrument from the urethra.

The walls of the tubular member 5 are provided with a plurality of discharge openings or orifices 17, inclined from the liquid containing chamber 6 toward the mouth of the penis, and through which the liquid is discharged in contact with the mucous membrane of the urethra so as to effectually destroy any germs that may be lodged between or within the folds of the membrane.

The cap 8 is provided with a pointed or conical terminal 18 and in the side walls of

the cap are one or more openings 19, normally closed by a flexible band or collar 20, the latter being preferably formed of rubber or other expansible material, so that the pressure of the liquid within the chamber 13 will expand the rubber and thus force the band or collar into engagement with the walls of the urethra at a point beyond the area of infection and thus effectually prevent contamination of the unaffected parts.

As a means for preventing infection to the cap 8 and tubular member 5, when introduced into the urethra, there is provided a protective jacket or covering 21 formed of soft gelatin, or similar material, capable of being readily punctured, said jacket being of the same shape as cap 8 and tubular member 5, and of sufficient length to pass the infected area.

The point of cap 8 is designed to pierce or puncture the jacket after the infected area is passed, and expose the rubber collar and discharge orifices 17, thereby permitting the liquid to be sprayed over the entire surface of the infected parts.

In operation the jacket or covering 21 is placed in position over cap 8, and tubular member 5, and the instrument introduced into the urethra, and forced longitudinally of same to a position immediately beyond the infected parts. When in this position the jacket 21 is punctured by the cap 8, and said jacket withdrawn back of discharge orifices 17. The bulb 10 is then compressed, which moves the valve 15 to open position so that the liquid enters the chamber 13 and expands the collar 20, thereby confining the application of the antiseptic to the infected parts. When the bulb 10 is compressed the liquid will be discharged through the orifices 17 in the direction of the mouth of the urethra thereby carrying the infectious matter with it out of the urethra, and effectually destroying and removing the germs and bacteria lodged within the folds.

In order to remove the instrument the pressure on the bulb is released, thus allowing the liquid in chamber 13 to escape through the valve and the expansible collar to contract in which event the instrument may be readily removed from the urethra without pain to the patient.

While it is preferred to use an ordinary compression bulb in connection with the syringe, it is obvious that the instrument may be connected to any suitable liquid containing receptacle or other source of fluid supply, without departing from the spirit or sacrificing any of the advantages of the invention.

Having described the invention, what I claim is—

1. A syringe including a tubular member having a discharge orifice, a piercing member carried by one end of the tubular member, a source of fluid supply, and a readily puncturable jacket covering the perforated end of the tubular member and bearing against the piercing member.

2. A syringe including a tubular member having a longitudinal liquid passage and provided with a discharge orifice communicating with said passage and opening through the side walls of the tubular member, and a readily puncturable jacket normally covering the discharge orifice and a portion of tubular member and movable longitudinally of the latter.

3. A syringe including a tubular member having a discharge orifice, a source of fluid supply, and a readily puncturable jacket normally closing the discharge orifice and movable longitudinally on said tubular member.

4. A syringe including a tubular member having a discharge orifice, a source of fluid supply communicating with said member, an expansible member surrounding the walls of the tubular member, and a readily puncturable jacket forming a housing for the expansible member and normally covering the discharge orifices.

5. A syringe including a tubular member having a discharge orifice, a source of fluid supply communicating with said member, an expansible member carried by the tubular member, and a valve for controlling the flow of liquid from the tubular member to the expansible member.

6. A syringe including a tubular member provided with a discharge orifice, a source of fluid supply communicating with said member, an expansible member, a valve for controlling the supply of fluid from one member to the other, and a readily puncturable jacket surrounding the expansible member and normally covering the discharge orifice.

7. A syringe including a tubular member provided with discharge orifices, a cap carried by the tubular member and provided with an interior chamber, the walls of which are formed with openings, an expansible collar covering said openings, a source of fluid supply communicating with the tubular member, and a valve for controlling the flow of fluid to the chamber of said cap.

8. A syringe including a tubular member, provided with a discharge orifice, a hollow cap carried by said member, an expansible collar surrounding the cap, a source of fluid supply communicating with the tubular member and cap, respectively, a valve for controlling the flow of fluid from one to the other, and a readily puncturable jacket covering the cap.

9. A syringe including a tubular member provided with a discharge orifice inclined towards one end thereof, a hollow perforated cap engaging the tubular member, an expansible collar surrounding said perforations,

and a readily puncturable jacket, movable longitudinally of the cap and normally closing the discharge orifice.

10. A syringe including a tubular member having a perforated diaphragm at one end thereof and provided with discharge orifices inclined towards said diaphragm, a threaded extension forming part of the tubular member and provided with a valve seat, a cap threaded on the extension and provided with a pointed terminal, said cap having its side walls perforated, an expansible collar covering the perforations in the cap, a valve engaging the seat, a source of fluid supply communicating with one end of the tubular member, and a jacket covering the pointed terminal of said cap and a portion of the tubular member.

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

WILLIAM THOMAS BUCKNER.

Witnesses:
THOMAS FLETCHER POYNTER,
MAY FECKHEIMER ROTHCHILD.