

F. W. STANTON.
 SYRINGE.
 APPLICATION FILED DEC. 23, 1920.

1,412,975.

Patented Apr. 18, 1922.

Fig. 1

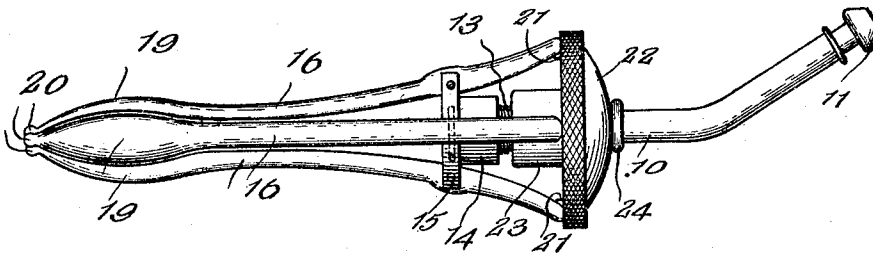


Fig. 2

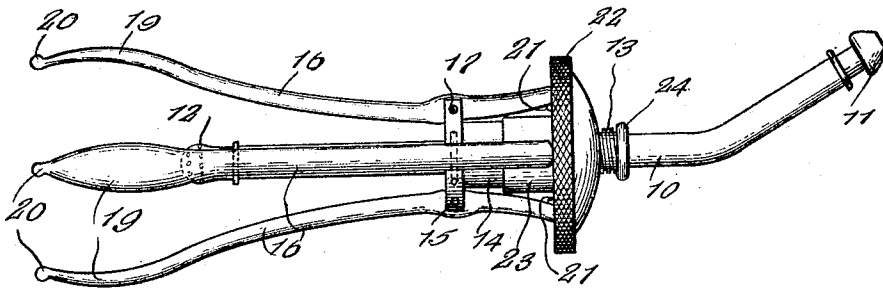


Fig. 3

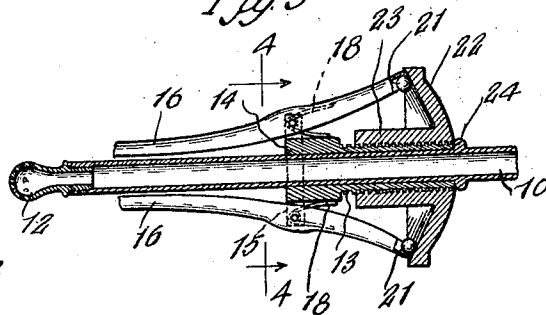
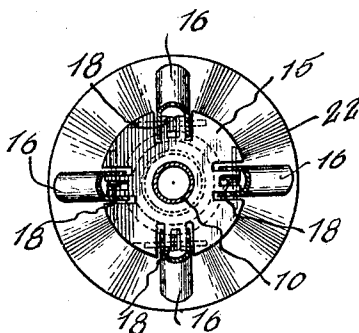


Fig. 4



Witness.
 Carl E. Anderson.

Inventor:
 Frederick H. Stanton

Murray Katz Nelson
 By. Atty.

UNITED STATES PATENT OFFICE.

FREDERICK W. STANTON, OF CHICAGO, ILLINOIS.

SYRINGE.

1,412,975.

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To all whom it may concern:

Be it known that I, FREDERICK W. STANTON, a citizen of the United States, and resident of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in a Syringe, of which the following is a specification.

My invention relates to syringes and particularly to a novel vaginal syringe having certain features of construction which distinguish it from those heretofore produced.

One of the important advantages of my invention is that of its simplicity of construction. Such devices being used by those who are unfamiliar with mechanical appliances must be of such simple construction as to assure proper operation under all circumstances. The device combines the elements of simplicity and efficient operation and in addition may be very cheaply constructed. The device includes as necessary elements three principal parts; that is, a tube to one end of which a hose may be secured, and the other end of which provides a spray, a series of arms pivoted intermediate their ends and movable radially of the tube, and a cone threaded to the tube, the cone overlying the rear ends of the arms and being adapted by rotative movement to effect radially inward movement of the rear ends of the arms. This serves to effect radially outward movement of the arms and to cause suitable distention of the passage to permit thorough cleansing and the discharge of the cleansing agent.

The invention will be more readily understood by reference to the accompanying drawings, in which:

Figure 1 is a side elevation of a device constructed in accordance with my invention; the parts being shown in the collapsed position of the arms;

Figure 2 is a similar view showing the arms in a distended relation;

Figure 3 is a longitudinal sectional view showing the parts more in detail; and

Figure 4 is a sectional view on the line 4-4 of Figure 3.

In the drawings it will be seen that I provide a tube 10, the rear end 11 of which is constructed to facilitate the attachment of a rubber hose thereto. The opposite end 12 of the tube provides a spray or spray nozzle which may be of any desired form in order to secure effective discharge of water or other cleansing agent.

Mounted on the tube is a sleeve having a threaded portion 13 and an enlarged portion 14, the latter providing radial lugs or ears 15 which are suitably apertured to provide bearings for the arms 16. The latter are held in place by means of pins 17 and are retained normally in the position of Figure 1 by means of springs 18. These arms may be formed as shown of relatively light weight material bent into U or channel shape. The arms at a point near their outer extremities are bent and re-bent in the arc of a circle as indicated at 19 and, as best shown in Figure 2, are slightly flattened and thereby broadened. The extremities are in the form of a rounded protuberance or ball, as best shown at 20. It will be noted that the arms are pivoted at a point near their rear ends and that the rearwardly projecting portions terminate in curved or rounded members 21 which underlie or are received within a cone 22 which forms a part of a nut 23 which is threaded upon the sleeve 13. The periphery of the cone may be milled or knurled to provide for a sure finger grip. The rearward movement of the nut on the threaded portion of the sleeve may be limited by a flange 24 formed on the tube 10. The threads formed on the sleeve and nut will be relatively coarse, that is, of rather steep pitch in order that but slight rotative movement of the cone will be necessary to effect the required radial movement of the extremities of the arms.

The manner of use of the device is too well known to require extended description, it being thought sufficient to say that after having been inserted a slight rotative movement of the nut serves to effect proper distention of the arms, whereupon the spray performs its function, the waste liquid being readily discharged through the open spaces surrounding the tube. Obviously the construction is capable of much modification and I do not wish to be limited except as indicated, in the appended claims.

It will be noted that the tube 10 is not rigidly secured to the sleeve 14, being slidable therein in order to regulate the effective length of the spray.

I claim:

1. A syringe comprising a tube having a spray outlet at its extremity, a plurality of arms pivoted to the tube intermediate their ends and having their outer ends free, a cone overlying the rear extremities of the

arms, and means for effecting movement of the cone to cause radially outward movement of the arms at their outer ends.

2. A syringe comprising a tube having
5 an outlet, a plurality of arms pivoted to the tube near their rear extremities and having their outer ends free, and a cone longitudinally movable on the tube and adapted to overlie the rear ends of the arms,
10 whereby to effect radial movement of the outer ends of the arms relative to the tube.

3. A syringe comprising a tube having an outlet at its outer end and means for connecting a hose to its inner end, arms
15 pivoted to the tube and disposed in spaced relation around the axis of the tube, the outer ends of the arms being free, and a hollow cone longitudinally movable on the tube and adapted to overlie and radially
20 move the inner ends of the arms.

4. A syringe comprising a tube having an outlet at its outer end, arms pivoted to the tube and having their outer ends free, and a hollow cone threaded on the tube and
25 adapted by rotative movement to overlie and

cause radial movement of the rear ends of the arms and whereby result in radial movement of the outer ends of the arms.

5. A syringe comprising a tube having an outlet at its outer end, arms pivoted to
30 the tube and having their outer ends free, and a concave nut mounted on the tube adjacent the rear ends of the arms, the rear ends of the arms being positioned to enter the concavity of the nut and to be moved
35 radially by rotative movement of the nut, whereby opposite radial movement is imparted to the outer ends of the arms.

6. A syringe comprising a tube having an outlet at its end, arms pivoted to the tube
40 and disposed around the axis of the tube, the outer ends of the arms being free, a member longitudinally movable on the tube and having a concave face, the rear ends of said arms being positioned to engage the concave face
45 of said member and to be moved radially by longitudinal movement of said member.

Signed at Chicago, Illinois, this 20th day of December, 1920.

FREDERICK W. STANTON.