July 26, 1927. 1,637,264

J. MASONICK ET AL

SYRINGE

Filed Nov. 6 1925 2 Sheets-Sheet 1

Fig. 1

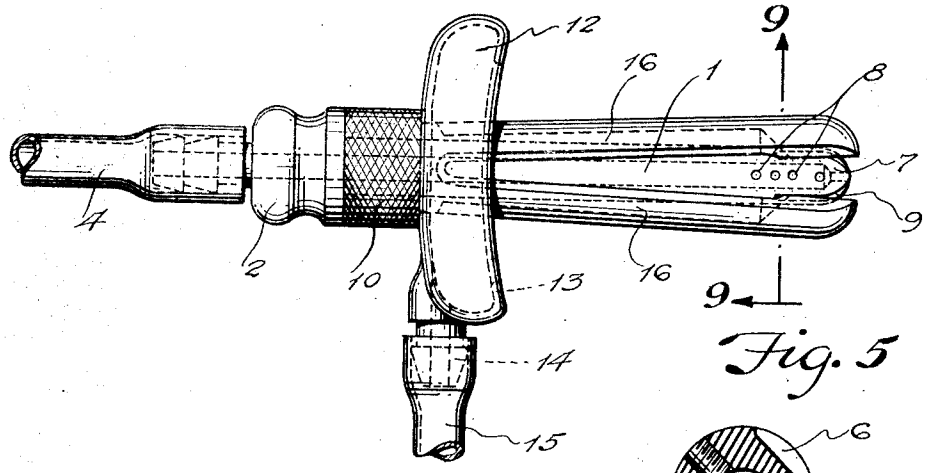
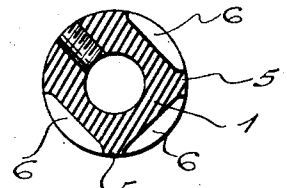


Fig. 2

Fig. 5



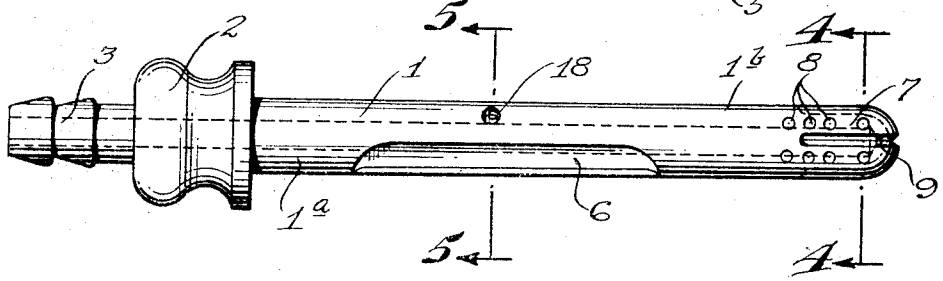
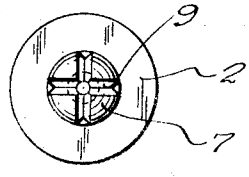


Fig. 3



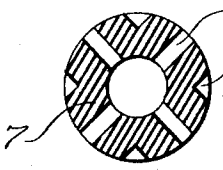


Fig. 4

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Fig. 6

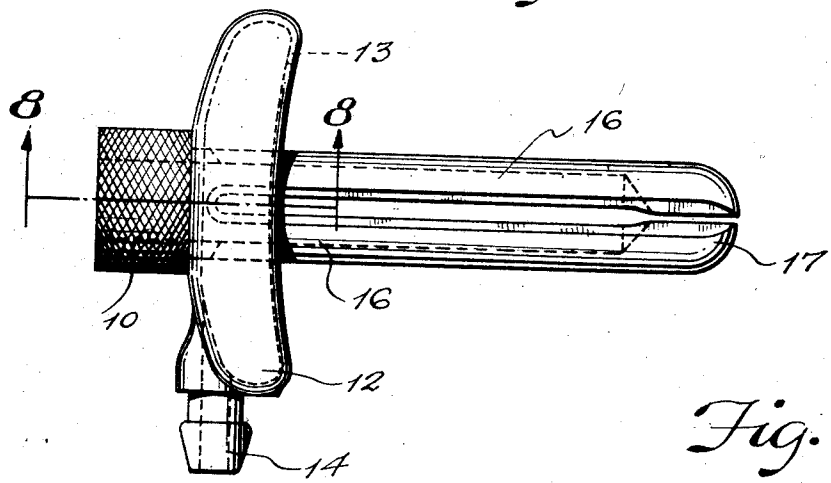


Fig. 7

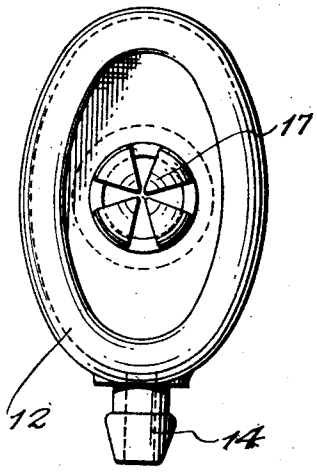


Fig. 8

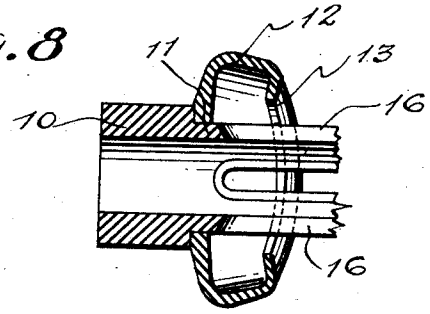
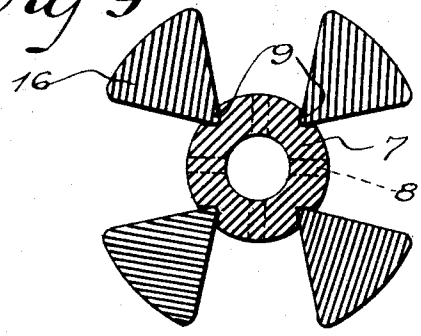


Fig 9



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Patented July 26, 1927. 1,637,264

UNITED STATES PATENT OFFICE.

JACOB MASONICK, GUSTAV STUEBNER, AND JOHN STUEBNER, OF CHICAGO, ILLINOIS; SAID MASONICK ASSIGNOR TO SAID GUSTAV STUEBNER.

SYRINGE.

Application filed November 6, 1925. Serial No. 67,331.

This invention relates to syringes, and more particularly to a syringe specially adapted for use by women.

One of the main objects of the invention is to provide a nozzle and means associated therewith which will insure a thorough cleansing action. A further object is to provide means associated with a nozzle which can be expanded, after insertion, so as to spread the parts and expose the same to the action of the sprays of water or a solution discharged through the openings of the nozzle. A further object is to provide expandible spreading means so associated with the nozzle as to be contracted while the nozzle is inserted in position for use to facilitate withdrawal of the nozzle and effectually eliminate possibility of pinching or injury to any of the tender parts of the wall of the cavity into which the device is inserted in use. A further object is to provide a nozzle and associated parts of the character stated which can be produced at relatively low cost. Another object is to provide simple and efficient means whereby the water discharged from the nozzle can be collected and led off through a discharge tube. Further objects will appear from the detailed description.

In the drawings:

Figure 1 is an elevation of the nozzle and associated parts, the nozzle being in operative position;

Figure 2 is an elevation of the nozzle;

Figure 3 is an end view of the nozzle taken from the discharge end thereof;

Figure 4 is a section taken substantially on line 4—4 of Figure 2;

Figure 5 is a section taken substantially on line 5—5 of Figure 2;

Figure 6 is an elevation of the spreader arms, and receiving basin;

Figure 7 is a plan view of the complete device;

Figure 8 is a section taken substantially on line 8—8 of Figure 6;

Figure 9 is an enlarged section taken on line 9—9 of Figure 1.

The device includes a nozzle 1 provided at one end with a gripping element or knob 2, from which extends a corrugated nipple 3. This nipple is adapted for reception of a flexible tube 4 which may be connected to a small tank or container supported in an elevated position, or other suitable means, for supplying water or a solution to the nozzle under pressure. Portion 1^a of the nozzle adjacent knob 2 is of cylindrical cross-section, the central portion of the nozzle being of approximately square cross-section with a longitudinally extending rib 5 at each corner, as illustrated in Figure 5. The spaces 6 between ribs 5 provide passages for the flow of the water or solution discharged from the nozzle downward about the same. The other end portion 1^b of the nozzle is of cylindrical shape and terminates in a head 7 closed at its outer end and provided with suitably spaced and directed spray openings 8 communicating with the interior or base of the nozzle. Head 7 is provided in its outer surface with four equally spaced V-shaped grooves 9 extending longitudinally of the head and intersecting at the tip or apex thereof. This nozzle and the knob 2 and nipple 3 are preferably formed integrally of hard rubber, though any other suitable or preferred material may be used.

The nozzle is slidable through a thick ring or collar 10 of hard rubber, the outer surface of which is preferably knurled so as to be readily gripped. A reduced neck 11 extends from the inner end of collar 10 and fits tightly through the bottom of a receiving cup or basin 12 of hard rubber. This cup is of elliptical shape in plan view and is slightly curved downwardly and outwardly in the direction of its length to conform, approximately to the shape of the portion of the user's body against which the cup is pressed in use. The cup is provided at its upper open portion or top with an inwardly turned retaining flange 13 the outer surface of which is smoothed and rounded to prevent injury or discomfort to the user. An outlet nipple 14 extends from that end of the cup which, in using the device, is the lower end and is adapted for reception of a flexible tube 15 which, in practice, communicates with a suitable receptacle.

The neck 11 is provided with four arms 16 formed integrally therewith and disposed in spaced parallel relation. These arms extend in the direction of and surround nozzle 1. Each arm is provided, at its free end, with an inwardly projecting head 17 of segmental shape the apexes or edges of which fit into grooves 9 of head 7 of the nozzle when the nozzle is in its inner operative position. The arms, being formed of hard rubber, possess appreciable inherent resili-

ency which acts to urge the arms toward each other and to hold the heads 17 in proper engagement with grooves 9. As will be noted more clearly from Figure 8, the inner surfaces of arms 16 beyond heads 17 thereof conform to the bore of collar 10. When the nozzle is drawn outwardly arms 16 move toward each other into substantially the positions illustrated in Figure 6. Outward movement of the nozzle is limited by a screw 18 secured therein and projecting beyond the nozzle between two of the arms 16 for contact with neck 11. This screw is so positioned that, when the nozzle is in its outermost position, the inner end portions of the heads 17 engage into the grooves 9 at the tip of nozzle head 7. This ensures proper register of the apexes of the heads with the grooves so that these heads will be held in their proper relative positions and will be spread apart radially of the nozzle when the nozzle is moved inwardly through collar 10 into its operative position.

In using the device, the nozzle is moved into its outermost position permitting the arms to move toward each other, and the device is then inserted. After the device has been fully inserted, the nozzle is moved inwardly through collar 10 into its innermost position. This forces the arms apart and these arms serve to open or spread the parts so as to expose the same to the action of the sprays of water or solution discharged through openings 8. During the flow of water or solution through the nozzle, the cup 12 is held pressed firmly against the user's body so as to form a closure therewith about the lower portion of the nozzle. The water or solution discharged from the nozzle will flow downwardly about the same and between the arms 16 into the cup from which it is discharged through nipple 14 and tube 15. Cylindrical portion 1^a of the nozzle fits snugly through collar 10, and knob 2 fits close against the collar when the nozzle is in its inner position. This effectually prevents any leakage between the nozzle and the collar.

Due to the fact that the outer surfaces of heads 17 of arms 16 are rounded and are spaced a slight distance apart when in closed or normal position, all possibility of catching or pinching of the parts being treated is eliminated. The device constructed in this manner is very efficient in use, will not cause injury or discomfort to the user, and can be satisfactorily used without any necessity of a pan or a bowl, or other receptacle being placed under the device when in use, which is an important consideration and great convenience.

While we prefer to use hard rubber for the various parts of the device, any other suitable or preferred material can be used for this purpose. It is possible to make changes in the construction and arrangement of parts of the invention without departing from the field and scope of the same, and we intend to include all such variations, as fall within the scope of the appended claims, in this application in which a preferred form only of our invention is disclosed.

What we claim is:

1. In a device of the character described, a collar having resilient arms extending from one end thereof and disposed in spaced parallel relation, and a nozzle slidable through the collar and between the arms, said nozzle being provided at its inner end with spaced grooves extending longitudinally thereof, the arms being provided at their free ends with inwardly projecting elements engaging into said grooves and disposed to spread the arms apart when the head of the nozzle is positioned between the free end portions of said arms.

2. In a device of the character described, a collar having resilient arms extending from one end thereof and disposed in spaced parallel relation, and a nozzle having limited movement through the collar in either direction and operating between said arms, said nozzle being provided in its inner end with spaced grooves extending longitudinally thereof, the arms being provided at their free ends with heads of approximately segmental cross-section projecting inwardly beyond the inner faces of the arms and having their apexes held in engagement with said grooves by the resiliency of said arms.

3. In a device of the character described, a collar provided at one end with a reduced neck, a cup having its bottom wall fitting snugly about said neck and being adapted at its inner end to fit snugly against the user's body, a nozzle slidable through the collar and having a knob adjacent its outer end disposed to contact with the collar when the nozzle is in its innermost position, the nozzle fitting snugly through the collar and being provided with a nipple at its outer end, resilient arms extending from the neck in spaced parallel relation, the nozzle operating between said arms and the nozzle arms having cooperating means for spreading the arms apart when the nozzle is moved into its innermost position, and outlet means extending from the cup.

In testimony whereof we affix our signatures.

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GUSTAV STUEBNER.
JOHN STUEBNER.