W. D. SIMPSON.

NOZZLE.

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1,237,111

Patented Aug. 14, 1917.

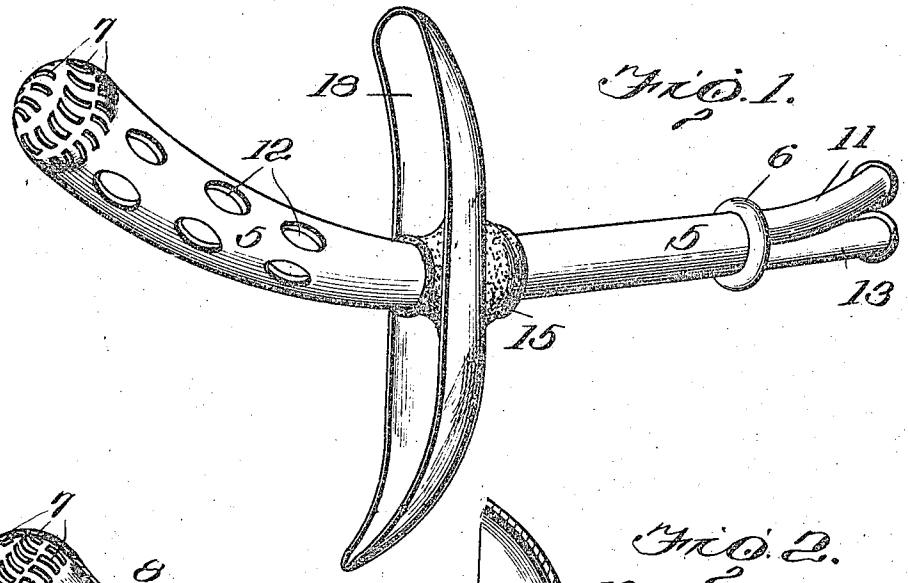

Fig. 1.

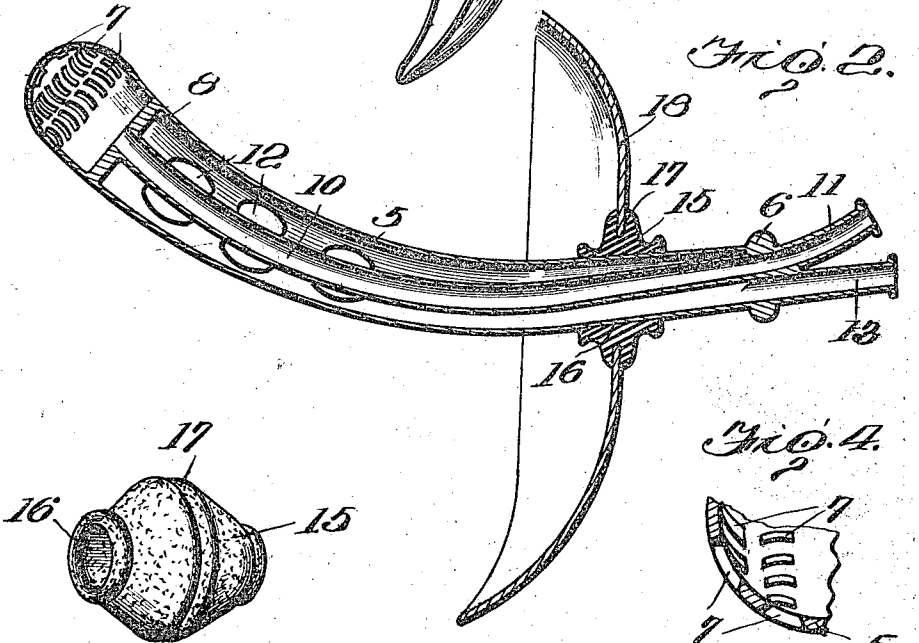

Fig. 2.

Fig. 3.

Fig. 4.

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Witnesses

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UNITED STATES PATENT OFFICE.

WILLIAM D. SIMPSON, OF ABBEVILLE, SOUTH CAROLINA.

NOZZLE.

1,237,111. Specification of Letters Patent. Patented Aug. 14, 1917.

Application filed December 23, 1916. Serial No. 138,590.

To all whom it may concern:

Be it known that I, WILLIAM D. SIMPSON, a citizen of the United States, residing at Abbeville, in the county of Abbeville and State of South Carolina, have invented a new and useful Nozzle, of which the following is a specification.

This invention relates to nozzles for syringes and the like and more particularly to that type of nozzle provided with a return pipe.

One of the objects of the present invention is to provide a simple, practical and self-contained nozzle adapted to be used with syringes or douche bags provided with a two-way flow. A further object is to provide an improved device of the above general character having certain features of adjustability.

Other objects will be in part obvious from the annexed drawings and in part indicated in connection therewith by the following analysis of this invention.

This invention accordingly consists in the features of construction, combination of parts and in the unique relations of the members and in the relative proportioning and disposition thereof; all as more completely outlined herein.

To enable others skilled in the art so fully to comprehend the underlying features thereof that they may embody the same by the numerous modifications in structure and relation contemplated by this invention, drawings depicting a preferred form have been annexed as a part of this disclosure, and in such drawings, like characters of reference denote corresponding parts throughout all the views, of which:—

Figure 1 is a perspective view of the complete device;

Fig. 2 is a longitudinal sectional view of the complete device; and

Fig. 3 is a detail view of one of the parts; and

Fig. 4 is a detail end view of one of the parts.

Referring now to the drawings in detail, 5 denotes an elongated body portion provided with a thickened collar 6 at one end and a plurality of curved fan-shaped openings 7 at the opposite or front end. These openings are preferably of curved fan-shape, that is, having a relatively small opening on the inner surface of the member 5 which flares outwardly toward the outer surface and is also curved in order to provide a scooping jet to the water or solution ejected therethrough.

It is to be noted that the plurality of fan-shaped openings 7 at the forward end of the nozzle extend in opposite directions and as they flare from the interior outwardly a series of radially disposed jets curved in cross section are produced, and these jets cause a more efficient cleaning action upon the surface treated.

Near the forward end there is provided a partition 8 through which a central pipe 10 passes. This pipe is substantially concentric to the shank or main body portion 5 and passes outwardly through the collar 6 having at its free end 11 a flange whereby it may be more effectively and securely attached to a rubber tube or other suitable conduit leading to the source of solution.

The body portion 5 is also provided with a plurality of elongated or elliptical openings 12 communicating with the interior of the body portion 5. An outlet tube 13 communicates with the interior of the body portion 5 and is shaped similar to the inlet or inflow tube whereby it may also be attached to a flexible drain pipe. It will thus be seen that when the device is in use the solution passes through the inflow pipe 10, is discharged through the opening 7 and returns to the interior of the casing 5 through the openings 12 from whence it passes through the outflow tube 13 to a suitable collecting receptacle, not shown. Slidably mounted upon the body member 5, as shown more clearly in Fig. 3, is a flexible rubber insert 15 having a central longitudinal opening 16 and a contracted portion 17 in which a vulvar guard 18 of metal or other suitable material is adapted to be snapped by means of the flexibility of the rubber member 5. This entire part may be adjusted longitudinally of the body member 5, as desired.

From the above it will be seen that the present invention provides a simple and practical device of the character herein set forth having relatively few parts which will be cheap to manufacture and possessing certain features of adjustability which renders the device highly desirable in use and operation. The invention is believed to accomplish, among others, all the objects and advantages herein set forth.

Without further analysis, the foregoing will so fully reveal the gist of this invention that others can by applying current knowledge readily adapt it for various applications without omitting certain features that, from the standpoint of the prior art, fairly constitute essential characteristics of the generic or specific aspects of this invention, and therefore such adaptations should and are intended to be comprehended within the meaning and range of equivalency of the following claims.

I claim:

1. A device of the character described comprising an elongated body member having an interior partition dividing the member into two chambers, the forward chamber being provided with a plurality of curved fan-shaped outlet openings, whereby a series of curved scooping jets are emitted therefrom, and the rear chamber being provided with a plurality of larger openings through which the solution is adapted to return, and a guard slidably mounted upon said body member, comprising a flexible annular member adapted to slip over said body member and adjacent therealong and provided with a contracted peripheral portion, and a relatively large concaved guard member fitting in said contracted portion and movable therewith.

2. A device of the character described comprising a single piece elongated hollow body member, a transverse partition integral therewith dividing said members into two distinct chambers, the forward chamber having a plurality of curved flaring openings diverging from the forward end and sides, whereby a series of curved scooping jets are emitted therefrom, and the rear chamber having a plurality of larger return openings in the rear of said transverse partition, an integral tube passing from the rear end centrally through said body member and partition through which a solution is adapted to pass to the forward chamber and out through the flaring openings, a return tube at the rear of said device through which the solution is discharged after passing in through said larger openings, and a separate guard adjustably mounted upon said body member.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM D. SIMPSON.

Witnesses:
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F. L. BROWNE.