

F. W. STANTON.
 SYRINGE.
 APPLICATION FILED SEPT. 28, 1920.

1,392,085.

Patented Sept. 27, 1921.

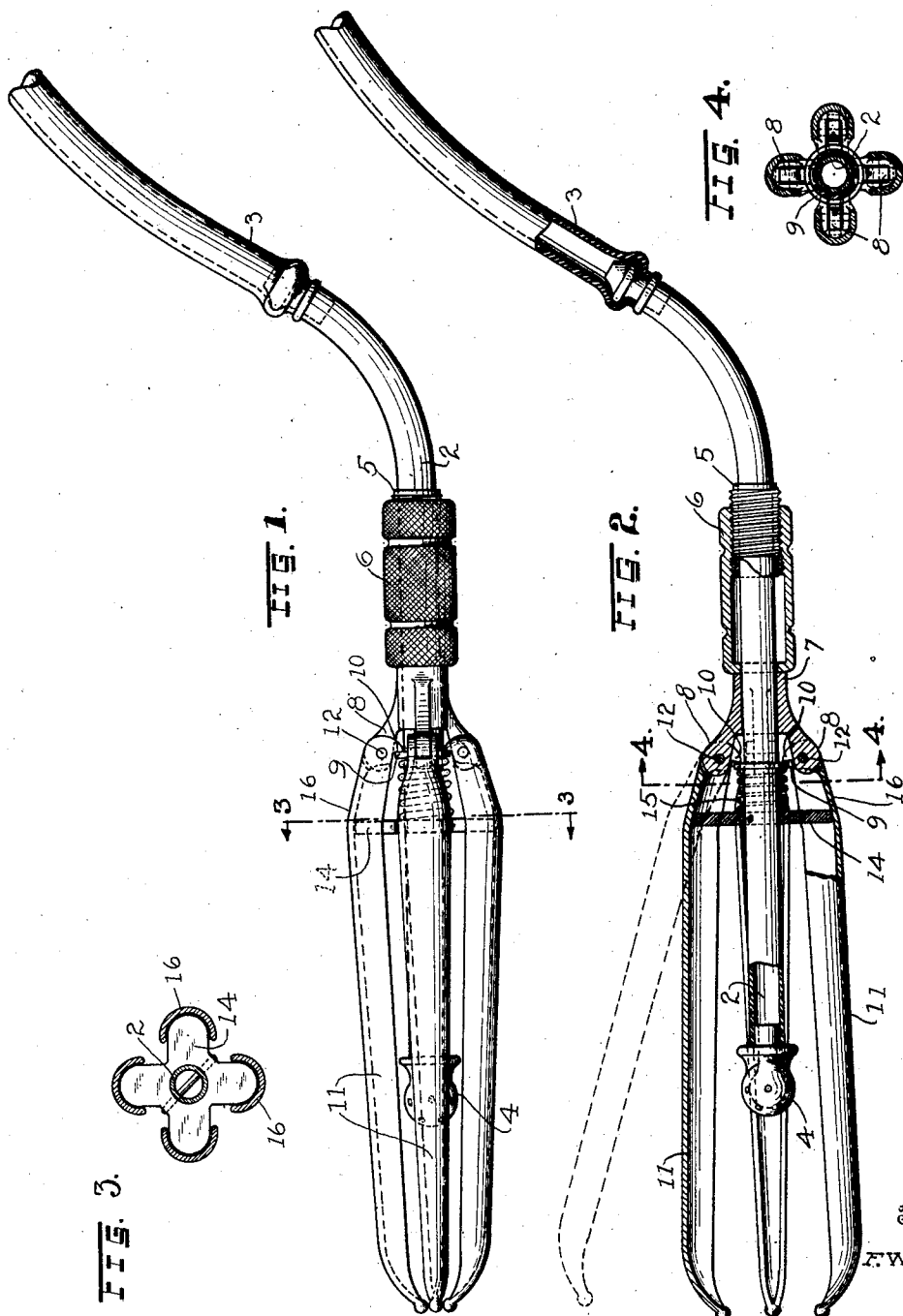


FIG. 3.

FIG. 1.

FIG. 2.

FIG. 4.

Inventor
 F. W. STANTON.

Fisher & Moore Attorneys

UNITED STATES PATENT OFFICE.

FREDERICK W. STANTON, OF CHICAGO, ILLINOIS.

SYRINGE.

1,392,085.

Specification of Letters Patent. Patented Sept. 27, 1921.

Application filed September 28, 1920. Serial No. 413,276.

To all whom it may concern:

Be it known that FREDERICK W. STANTON, citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, has invented certain new and useful Improvements in Syringes, of which the following is a specification.

This invention relates to a syringe which is particularly constructed to conduct a jet or spray of water into a cavity of the body while the walls of the cavity are dilated or being dilated by means of a series of fingers which are spread and held open in varying degree by an adjustable screw member within reach of the user of the instrument. The parts are also particularly related and organized to permit convenient assembly and disassembly, and to provide a compact and easily operated device which can be sterilized without injury or detriment.

In the drawing accompanying this application Figure 1 is a side elevation of my improved syringe with the fingers closed, and Fig. 2 is a sectional view and side elevation with the fingers partly opened or spread apart. Fig. 3 is a cross section on line 3—3, Fig. 1, showing the fulcrum member for the dilating fingers. Fig. 4 is a cross section on line 4—4, Fig. 2, showing the sliding yoke for the dilating fingers.

The syringe comprises a straight water delivery tube 2 having a curved intake portion with which a rubber hose 3 may be connected, and the discharge end of this tube is provided with a round perforated spraying tip 4. Tube 2 is also screw threaded or provided with a fixed screw-threaded portion 5 at its rear end which is engaged by a screw sleeve 6 or equivalent adjusting member adapted to be moved longitudinally in opposite directions on tube 2. The front end of this screw sleeve is adapted to bear against a slidable yoke 7 having perforated ears 8 which project radially and forwardly therefrom and are spaced apart from tube 2 to permit a sliding collar 9 on the tube to contact with the lateral offsets 10 on the divided ends of a series of dilating fingers 11 which are connected to ears 8 by pivot pins 12. Each finger is rounded in cross section and extends forwardly beyond the discharge end of the tube and rests loosely upon the rounded extremity of a correspondingly-situated arm on a fulcrum member 14 sta-

tioned upon tube 2 in advance of yoke 7, 55 and a coiled spring 15 is confined upon tube 2 between stationary member 14 and the sliding collar 9 to constantly press the said collar toward yoke 7, and thereby maintain constant contact of the collar with the offsets 60 10 on the several fingers and also constantly press the yoke rearwardly against the adjusting screw member 6. In so doing each finger 11 is held in yielding contact with the fulcrum member 14 and in sliding engage- 65 ment therewith also, so that when the yoke is moved forward by the adjusting member 6, each finger will be caused to spread apart an equal distance from the tube inasmuch as the rear end portion 16 of each finger is 70 bent and inclined toward the tube to promote this result. The degree of dilation given is dependent upon the extent of longitudinal movement imparted to screw sleeve 6 by the operator, and manifestly, the screw 75 sleeve 6 locks the fingers as set regardless of the angle of inclination given. The radial arms of the fulcrum member 14 furnish open spaces or exits between them for the escape of the douching fluid, and the sides of each 80 channeled finger bear against the side edges of the arms of the fulcrum member and guide and hold the fingers in their movement relatively to each other and the tube.

What I claim is:

1. A syringe, comprising a conducting tube having a screw-threaded portion and a fulcrum member fixed thereon, a screw sleeve engaged with said screw-threaded portion, a sliding yoke in thrust engagement 90 with said sleeve, dilating fingers engaging said fulcrum member and pivotally-connected with said yoke, a sliding collar engaging said pivoted fingers, and a spring bearing against said collar. 95

2. A syringe, comprising a conducting tube having a fixed fulcrum member and a slidable yoke mounted opposite each other on said tube, separate fingers having inclined portions engaging said fulcrum member and offset ends pivotally connected with said yoke, a spring pressed sliding collar upon said tube engaging said offsets, and a longitudinally-movable operating member for said yoke sleeved upon said tube. 100 105

3. A syringe, comprising a tube having radial arms fixed thereon and a yoke with ears slidably sleeved thereon, a slidable col-

lar and a coiled spring interposed between
said arms and collar, a set of channeled arms
in sliding engagement with said radial arms
having inclined portions pivotally connect-
ed with said yoke and adapted to be spread
5 by said radial arms, projecting portions on
said channeled arms adapted to contact with

said collar, and a screw sleeve in screw con-
nection with said tube adapted to operate
said yoke. 10

Signed at Cleveland, in the county of
Cuyahoga and State of Ohio, this 20th day
of September, 1920.

FREDERICK W. STANTON.