

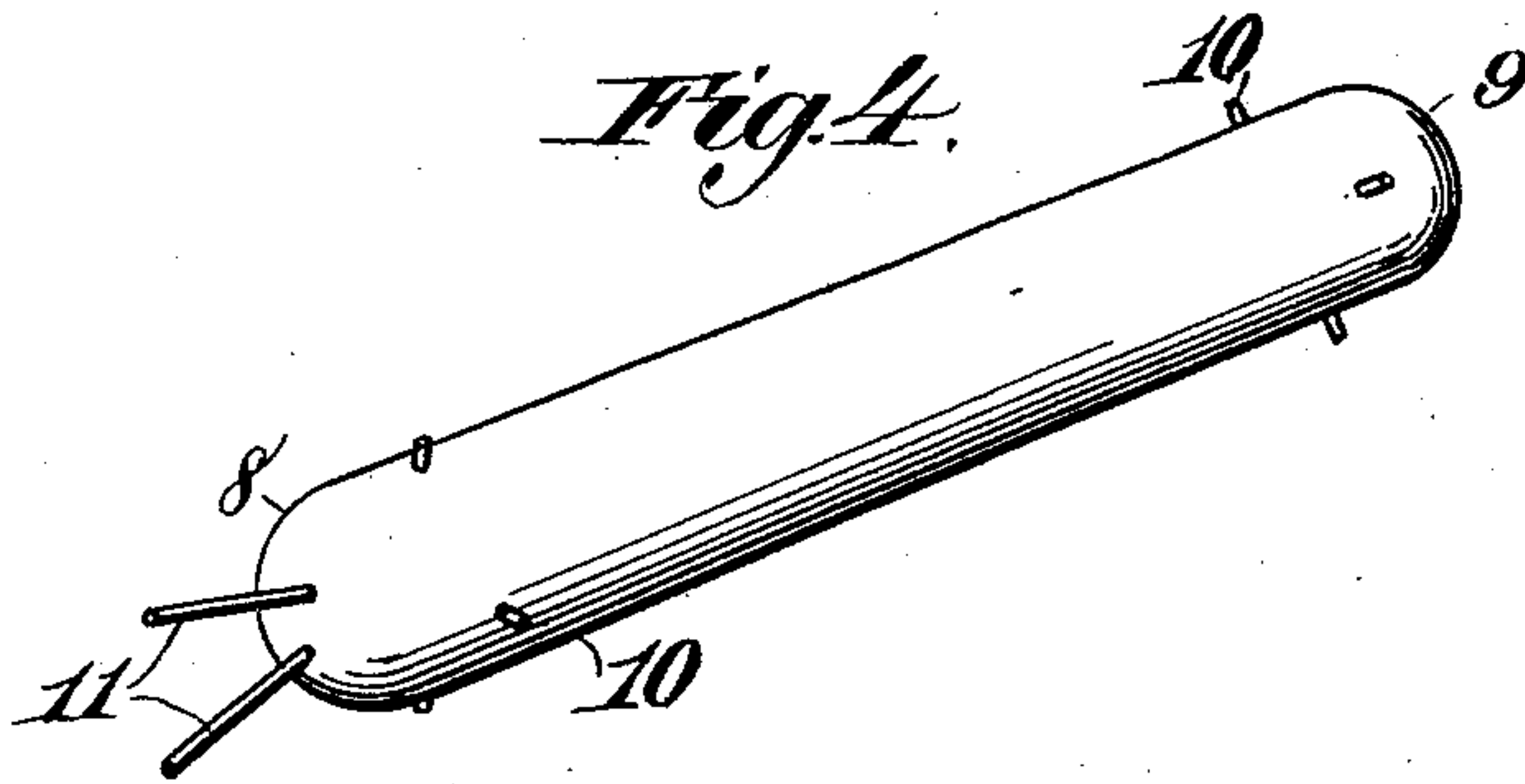
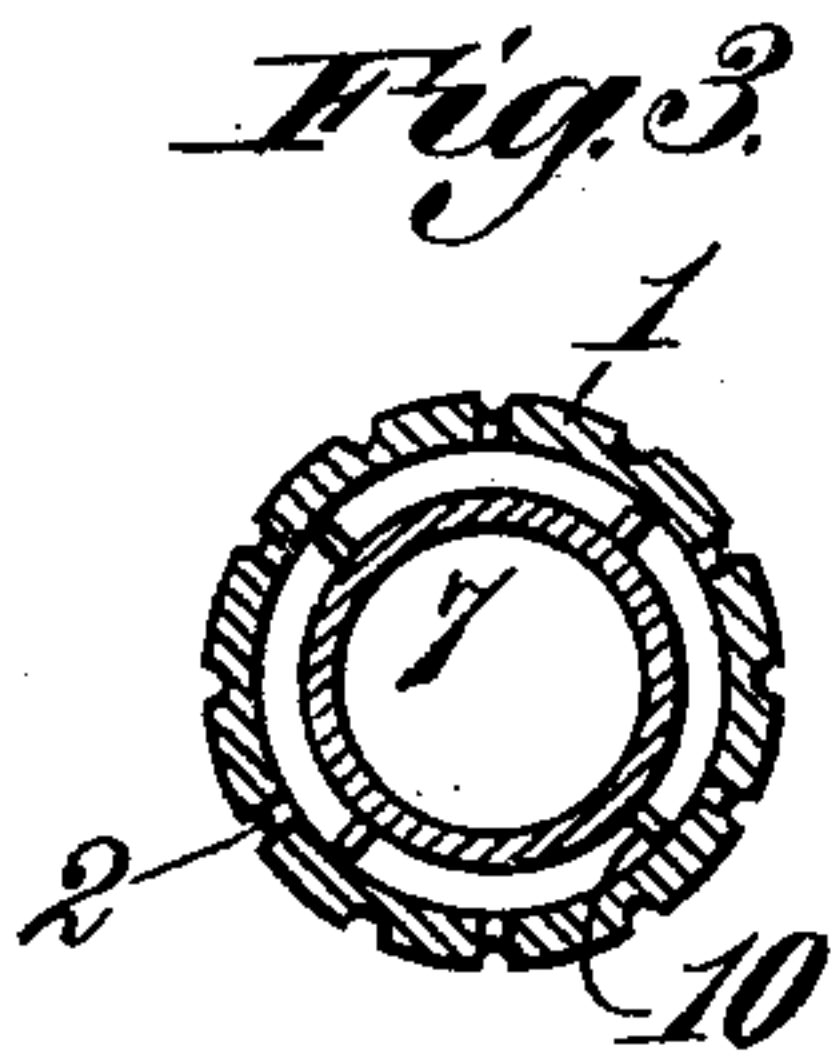
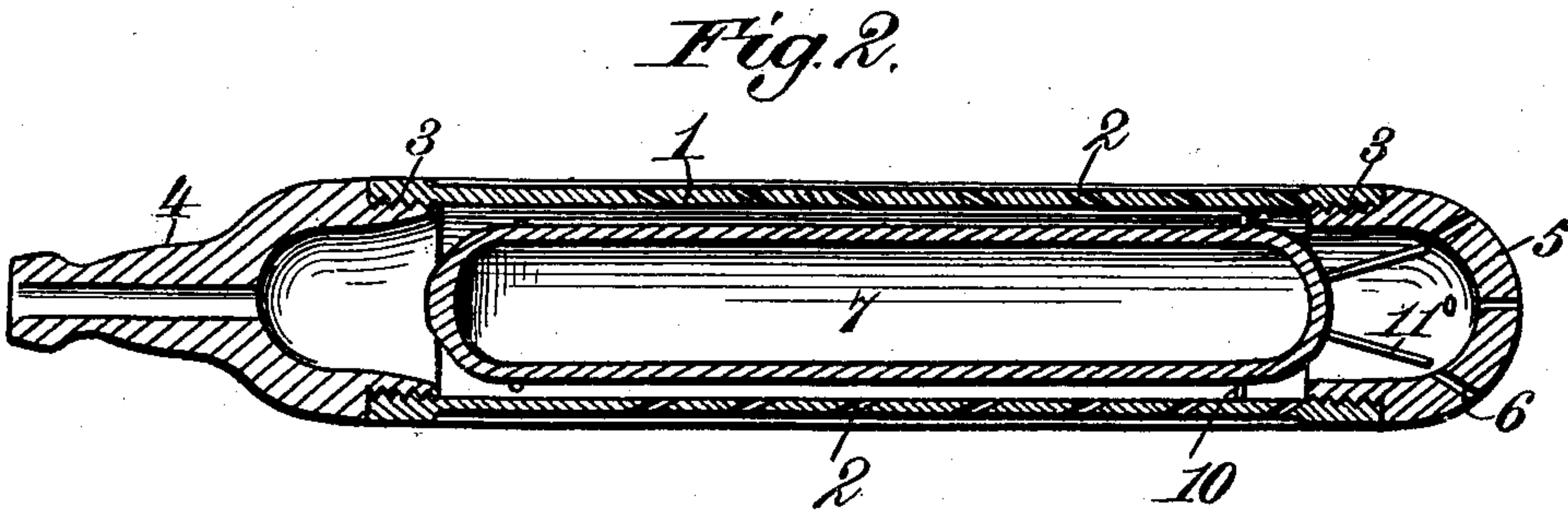
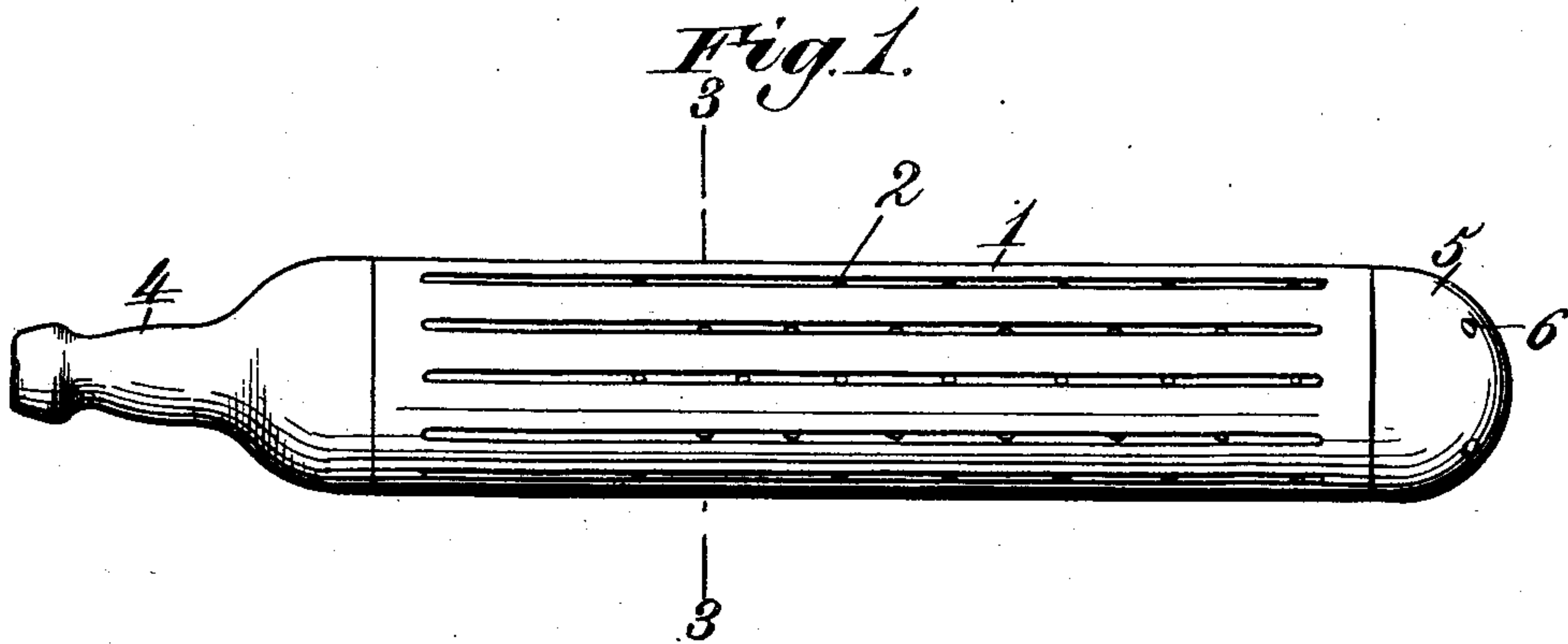
No. 697,412.

Patented Apr. 8, 1902.

R. L. McMURRAN.
SYRINGE NOZZLE.

(Application filed Dec. 24, 1901.)

(No Model.)



Witnesses.
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UNITED STATES PATENT OFFICE.

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SYRINGE-NOZZLE.

SPECIFICATION forming part of Letters Patent No. 697,412, dated April 8, 1902.

Application filed December 24, 1901. Serial No. 87,100. (No model.)

To all whom it may concern:

Be it known that I, ROBERT LOWRY McMURRAN, a citizen of the United States, residing at Portsmouth, in the county of Norfolk and State of Virginia, have invented new and useful Improvements in Syringe-Nozzles, of which the following is a specification.

This invention relates to syringe-nozzles, and has for its object to provide a device of the character referred to which shall be extremely simple and inexpensive in construction and which will operate to thoroughly irrigate and wash out the vaginal canal, which may be readily taken apart for the purpose of cleaning the device, and in which the fluid employed for irrigating the vagina will be equally distributed through all the perforations in the irrigator.

To these ends my invention consists in the features and in the construction, combination, and arrangement of parts hereinafter described and particularly pointed out in the claims following the description, reference being had to the accompanying drawings, forming a part of this specification, wherein—

Figure 1 is a side elevation of my improved irrigator. Fig. 2 is a longitudinal sectional view thereof. Fig. 3 is a transverse sectional view taken on line 3 3 of Fig 1, and Fig. 4 is a detailed perspective view of the core removed.

Broadly, my invention comprises an outer perforated cylinder provided at one end with a perforated cap and at its other end with a nipple adapted to be connected with the ordinary and usual compressible bulb or fountain and an inner imperforate core or cylinder concentrically arranged within the outer perforated cylinder in such manner as to leave a confined space between said core and outer cylinder, whereby the pressure of the liquid supplied to the irrigator is equalized throughout every part of the latter and the cleansing fluid is equally distributed through all the perforations.

Referring to the drawings, 1 indicates a hollow cylinder provided with numerous perforations 2. As shown, the perforations formed in the cylinder are inclined rearwardly for the purpose hereinafter explained. The cylinder may have a smooth periphery, if so

desired; but preferably it is longitudinally corrugated, as shown, and the perforations are preferably formed in the grooves between the ribs forming the corrugations. The opposite ends of the cylinder 1 are internally threaded, as at 3, and screwed into the rear threaded end is a nipple 4, adapted to be inserted in one end of a tube, the other end of which may be connected with the usual and ordinary compressible bulb or fountain. (Not shown.) In the other or forward end of the cylinder is screwed a hollow cap 5, rounded externally, as shown, and provided with a plurality of perforations 6.

Disposed within the hollow cylinder 1 is a cylindrical core or cylinder 7, rounded at its opposite ends, as indicated at 8 and 9, said core being of slightly less diameter than the internal diameter of cylinder 1. Arranged on the periphery of said core near its opposite ends are two annular series of projections 10, which project a sufficient distance beyond the periphery of the core to loosely engage the interior of the cylinder 1. Said projections operate to center the core within the perforated cylinder and hold it concentrically therein in such manner that a uniform annular space will intervene between the periphery of the core and the interior of the cylinder. In like manner projections 11 are formed on or fixed to or in the forward end 9 of the core and abut the inner end of the cap and prevent the end of said core from seating in the inner end of said cap and closing the perforations therein. For the sake of lightness and economy the core is preferably made hollow and of any suitable light and thin material. I have shown the projections on the core as consisting of small pins or pegs, that are inserted in the periphery and in the forward end of the core, and for the sake of cheapness of manufacture this is the preferred arrangement; but it will be manifest that the projections may be formed in various different ways and either attached to or formed integrally with the core.

The entire device may be made of any suitable substance—such, for example, as vulcanized rubber or celluloid or any material that is sufficiently light and not affected by the action of water or the usual cleansing compounds employed for treating the vagina.

The operation of my improved irrigator is

as follows: The parts having been assembled in the manner described, the nipple is inserted within the end of the tube leading to the compressible bulb or fountain and the irrigator is inserted in the vaginal canal, as usual. The water forced into the irrigator from the bulb or fountain is spread by the core and is forced through the confined space between the interior of the cylinder and cap and the core in a thin sheet and is distributed with uniform pressure to every part of the interior of the cylinder and cap and is forced out through the perforations therein with uniform pressure. The corrugations in the periphery of the cylinder operate to dilate the membranous lining of the vaginal canal, and the grooves between the ribs forming the corrugations act as ducts for conveying off the liquid to the mouth of the vagina. By inclining the perforations in the cylinder backward, as shown, the water or cleansing fluid discharged through said perforations is directed backward or outward toward the mouth of the vagina to facilitate its discharge and to more thoroughly wash out the vaginal canal. By screwing the nipple and the cap in the outer cylinder and by loosely arranging the core therein in the manner shown and described the parts may be quickly and conveniently taken apart for the purpose of cleaning them, so that the parts may be readily and thoroughly cleansed before and after using the device. As before described, the projections on the periphery of the core maintain every part of the periphery of said core equidistant from the interior of the perforated cylinder, and the projections (one or more) on the end of the core prevent the water from forcing said end of the core against the inner end of the cap, whereby said core cannot seat itself in the cap and close the perforations therein.

Having described my invention, what I claim is—

1. A syringe-nozzle comprising an outer perforated cylinder and an inner imperforate core of smaller external diameter than the internal diameter of said cylinder and arranged concentrically within the latter, substantially as described.

2. A syringe-nozzle comprising an outer perforated cylinder and an inner imperforate core of smaller external diameter than the internal diameter of said cylinder and arranged concentrically within the latter, and means for maintaining every portion of the periphery of said core at a uniform distance from the interior of said cylinder, substantially as described.

3. A syringe-nozzle comprising an outer hollow cylinder provided with a plurality of perforations inclined rearwardly and an inner imperforate core of smaller external diameter than the internal diameter of said cylinder and arranged concentrically within the latter, substantially as described.

4. A syringe-nozzle comprising an outer

perforated cylinder provided at one end with a perforated cap and at its other end with a nipple for introducing the cleansing fluid into said cylinder, and an inner imperforate core of smaller external diameter than the internal diameter of said cylinder, and of less length than said cylinder, said core being arranged concentrically within the cylinder, and means for maintaining every part of the exterior of said core out of contact with the interior of the cylinder and its cap, substantially as described.

5. A syringe-nozzle comprising an outer perforated cylinder and an inner imperforate core of smaller external diameter than the internal diameter of said cylinder, and arranged within the latter, and projections on the periphery of said core arranged to loosely engage the interior of the cylinder and hold said core concentrically within the cylinder, substantially as described.

6. A syringe-nozzle comprising an outer perforated cylinder, provided at one end with a perforated cap and at its other end with a nipple for the introduction of a cleansing fluid, of an inner imperforate core of smaller external diameter than the internal diameter of said cylinder and arranged within the latter and laterally-projecting pegs fixed in the periphery of said core and loosely engaging the interior of the perforated cylinder, said pegs operating to hold the core concentrically in the cylinder, substantially as described.

7. A syringe-nozzle comprising an outer perforated cylinder, provided at one end with a rounded perforated cap and at its other end with a nipple for the introduction of a cleansing fluid, a hollow inner imperforate core rounded at its opposite ends, and of less length and diameter than the inner dimensions of the cylinder and cap, and projections on the periphery and forward end of said core for holding the latter out of contact with the interior of both the cylinder and cap, substantially as described.

8. A syringe-nozzle comprising an outer perforated cylinder internally threaded at its opposite ends, a hollow rounded, perforated cap screwed in one end of said cylinder, a nipple for the introduction of a cleansing fluid screwed in the opposite end of said cylinder and a removable imperforate core, rounded at its opposite ends, and of less dimensions externally than the internal dimensions of said cylinder and cap and removably arranged within said cylinder, and projections on the periphery and forward end of said core for holding the latter out of contact with the interior of the cylinder and cap, substantially as described.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

ROBERT LOWRY McMURRAN.

Witnesses:

JNO. N. HUME,
WILL SCHMOCK.