J. P. TACEY.

MEDICAL SYRINGE.

APPLICATION FILED OCT. 22, 1910.

1,004,103. Patented Sept. 26, 1911.

Fig. 1.

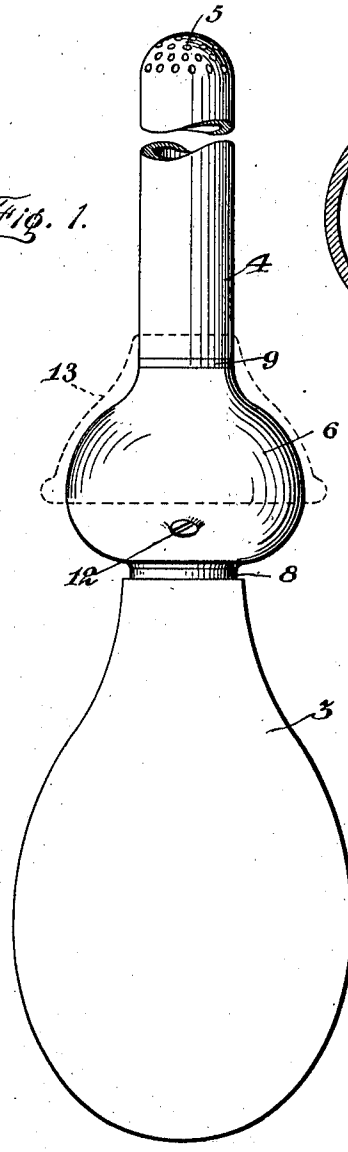


Fig. 3.

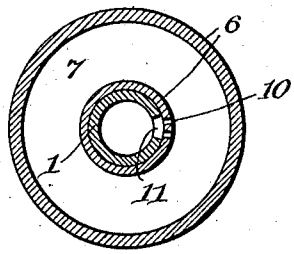
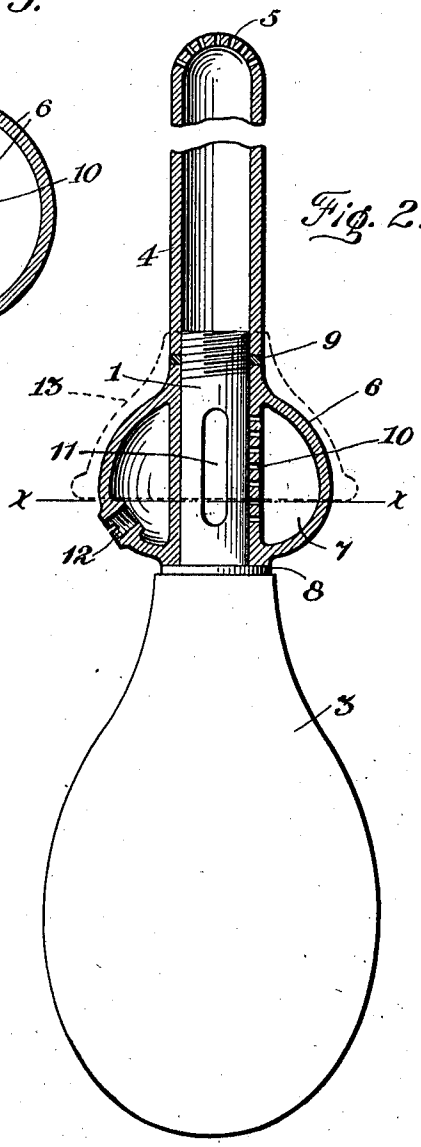


Fig. 2.



Witnesses

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UNITED STATES PATENT OFFICE.

JOHN P. TACEY, OF DETROIT, MICHIGAN.

MEDICAL SYRINGE.

1,004,103. Specification of Letters Patent. Patented Sept. 26, 1911.

Application filed October 22, 1910. Serial No. 588,415.

To all whom it may concern:

Be it known that I, JOHN P. TACEY, a citizen of the United States of America, residing at Detroit, in the county of Wayne and State of Michigan, have invented certain new and useful Improvements in Medical Syringes, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to syringes for medicinal purposes and to an arrangement thereof which provides means for medicating the spray thrown by the syringe, the medicament being so disposed that the spray becomes impregnated with or carries with it a certain definite proportion at each discharge. The structure of the syringe is also of such design that the medicament chamber may be entirely closed, enabling the implement to be used for ordinary purposes without removing or emptying the container.

The invention consists in the matters hereinafter set forth, and more particularly pointed out in the appended claims.

In the drawings, Figure 1 is a view in elevation of a syringe embodying features of the invention; Fig. 2 is a view thereof partly in longitudinal section and partly in elevation; and Fig. 3 is a view in section taken on or about line *x*—*x* of Fig. 2.

As herein indicated, a main tubular stem 1 has one end flanged, ribbed or otherwise fitted for attachment of the neck of a compression bulb 3 of rubber or other suitable material. The other end of the stem is screwthreaded to receive a nozzle 4 provided at its outer end with perforations 5. Nozzles of different shapes for different purposes may of course be provided. A pear-shaped or bulbous container 6 for medicament has a hollow core 7 by which it is rotatably secured on the stem between a shoulder or annular flange 8 at the bulb end thereof and a friction washer 9 clamped against the other end of the core by the nozzle 4. By tightening the nozzle and increasing the friction sufficiently, the container may be locked against movement if desired.

The core 7 of the container has a number of small apertures or a perforated area indicated at 10 which may be brought into register with an elongated slot 11 in the stem 1 whereby liquid forced in and out through the stem by operation of the compression bulb carries with it medicament placed in the container. The container is filled through a removable screw plug 12 or the like. A shield 13 of soft rubber or like material may be drawn over the medicament container, which acts as a stopper when the syringe is inserted.

In charging the syringe, the container is filled with a medicament which is usually in the form of an ointment or salve only partly soluble in water, that is, one in which the carrier is oil or of such nature that it does not become readily dissolved in water drawn in and out of the syringe. The suction of the bulb draws in water or other liquid into which the nozzle is dipped, and also a certain amount of the medicament through the perforations, the size and number of the latter determining the amount, or proportion of the medicament to that volume of water. A certain amount of air is always drawn in or out with the liquid used and this finds its way into the medicament chamber and allows the contents of the latter to work out through the perforations of the container core so that it is carried along by the passing current of liquid and distributed through the spray thrown by the instrument.

By turning the container on the stem its discharge perforations may be closed, leaving the syringe free for use in the ordinary way. The peculiar contour of the container acting as a support to the rubber shield or stopper makes the instrument particularly adaptable for vaginal or rectal uses.

Obviously changes in the details of construction may be made without departing from the spirit of the invention and I do not wish to limit myself to any particular form or arrangement of parts.

I claim as my invention:

1. A syringe, comprising a tubular stem with lateral opening, a compression bulb on one end thereof, a flange on the stem, a bulbous medicament container having a hollow core rotatably adjustable on the stem with perforations adapted to register with the stem opening, and a nozzle removably secured on the other end of the stem, and adapted to clamp the stem against the flange.

2. A syringe comprising a tubular stem with lateral opening, a compression bulb on one end thereof, a flange on the stem adjacent the bulb, a pear-shaped medicament

container having a hollow core rotatably adjustable on the stem against the flange with perforations adapted to register with the lateral opening of the stem, a nozzle screwthreaded onto the other end of the stem, and a washer on the stem between the nozzle and container core.

3. A syringe comprising a tubular stem flanged near one end, screwthreaded at the other end and provided between the ends with a lateral opening, a compression bulb on the stem end near the flange, a bulbous medicament container, a hollow core therein rotatable on the stem against the flange provided with perforations adapted to register with the lateral opening of the stem, a friction washer on the stem bearing against the core of the container and a nozzle engaging the screwthreaded end of the stem and bearing against the washer.

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

JOHN P. TACEY.

Witnesses:
C. R. STICKNEY,
OTTO F. BARTHEL.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."

Correction in Letters Patent No. 1,004,103.

It is hereby certified that in Letters Patent No. 1,004,103, granted September 26, 1911, upon the application of John P. Tacey, of Detroit, Michigan, for an improvement in "Medical Syringes," an error appears in the printed specification requiring correction as follows: Page 1, line 107, for the word "stem" read *container;* and that the said Letters Patent should be read with this correction therein that the same may conform to the record of the case in the Patent Office.

Signed and sealed this 19th day of December, A. D., 1911.

[SEAL.]

E. B. MOORE,

Commissioner of Patents.