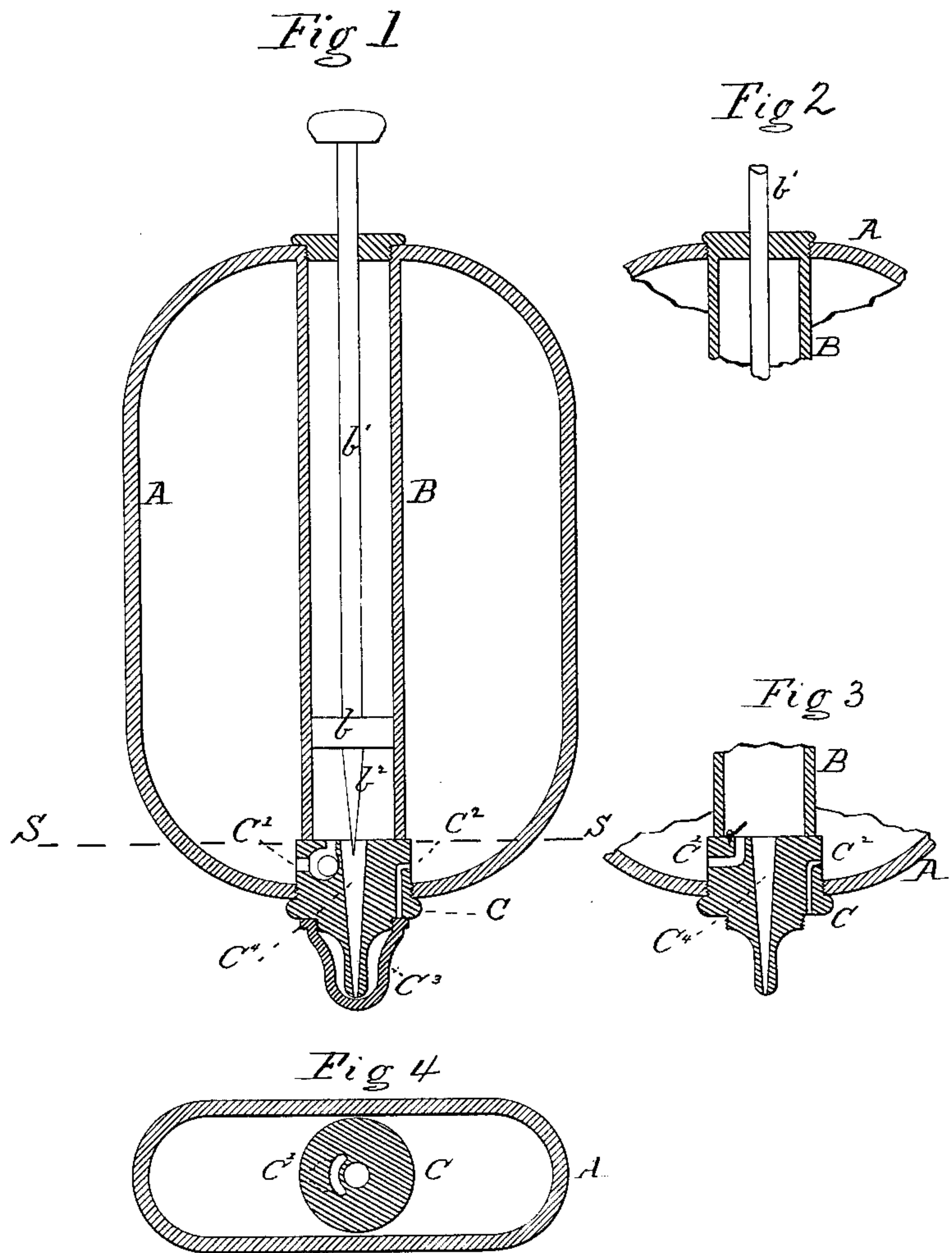


J. L. DIBBLE.
Syringe.

No. 213,978.

Patented April 8, 1879.



Witnesses
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JOHN L. DIBBLE, OF BROOKLYN, NEW YORK.

IMPROVEMENT IN SYRINGES.

Specification forming part of Letters Patent No. **213,978**, dated April 8, 1879; application filed November 13, 1876.

To all whom it may concern:

Be it known that I, JOHN L. DIBBLE, of the city of Brooklyn, county of Kings, State of New York, have invented a new and useful Improvement in Syringes, which improvement is fully set forth in the following specification, reference being had to the accompanying drawings.

In several frequent forms of urinal diseases the common treatment is the injection into the urethra of astringent, cooling, or healing mixtures. Much of the success of this treatment depends on making these internal applications repeatedly and at intervals of few hours. This makes it desirable to carry the necessary instruments and medicines about the person, and it is often very inconvenient to properly charge a syringe from an ordinary vial.

My invention consists of a medicament-flask, provided with a partially-inclosed urethral syringe, so arranged that it may be repeatedly charged from the contents of the surrounding flask and discharged at will without separating the parts.

The following is what I consider the best method of carrying out the invention.

Figure 1 is a longitudinal section of the apparatus in the plane of its greatest diameter. Fig. 4 is a cross section on the line S S. Figs. 2 and 3 represent modifications in the details of construction.

Similar letters of reference represent like parts in all the figures.

A is a flask, of any desired outline, but preferably of a flattened oval form, as represented, constructed of vulcanized india-rubber, gutta-percha, or other suitable material. In the center of this flask, tightly attached or fitted into the bottom, and extending nearly the whole length of the interior of the flask, is the tube B, which forms a barrel for the syringe. Into this barrel is the piston *b*, connected with the rod or handle *b*¹ in the manner usual in the construction of syringes.

The stopper C is so proportioned and constructed that it bears tightly against both the end of the barrel B and the neck or mouth of the flask A. It is centrally pierced for a discharge-tube, C⁴, and is provided with a valve, C¹, and a vent, C², and performs the triple function of a cork or stopper for the flask,

and, in combination with the tube B, a discharge-pipe and valve-case for the syringe.

The nipple or point where the discharge-pipe terminates is protected by the cap C³, preventing its stoppage by dust or other matter from the pocket, and also covers the vent C² when the instrument is not in use.

Attached to the piston *b* is a projection, *b*², of similar outline to the interior of the discharge-pipe.

The mode of operation will be readily understood. The flask having been filled in the manner of an ordinary vial, the operator removes the cap C³, holds the flask with the discharge-pipe downward, covering the discharge-orifice with the finger of one hand, and draws up the handle or syringe-rod with the other. The fluid enters through the valve C¹ and fills the syringe-barrel, while air is admitted through the vent C² to supply its place. On forcing in the piston-rod the fluid is discharged through the discharge-pipe. The projection on the piston enters and fills the discharge-pipe, driving out the fluid and preventing drip. The operation may be repeated as long as sufficient fluid remains in the flask to fill the syringe-barrel.

Many modifications may be made without departing from the principle of the invention—as, for instance, the barrel B may be made solid with case A, or may be made separately, and screwed or otherwise attached to the case. The valve C¹ may be a ball-valve, as in Fig. 1, or a flap-valve, as in Fig. 3, or of any other suitable form.

The cap C³ may be dispensed with, as also may the vent C², in which case it will be necessary to occasionally partially open the stopper C to admit air to the case after using the apparatus; but in my view they are both desirable devices, and add to the perfection of the whole.

I am aware that patents have been issued to John Stull, 1856, and to G. Conover, 1870, for improvements in syringes, aiming to remedy some of the difficulties referred to; but I consider my device better fitted to accomplish the purposes for which it is designed.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. A combined syringe and medicament-

flask constructed and arranged with the central barrel or tube, B, extending from the bottom of the flask to a point near its orifice or neck, and forming, in connection with the stopper C and piston *b*, a syringe susceptible of being charged from the contents of the surrounding flask and discharged at will by the motion of the piston *b*, substantially as described and set forth.

2. In combination with the case A and the barrel B, the stopper C, provided with discharge-tube C⁴, substantially as described.

3. In combination with the stopper C, and in connection with the interior of the case A and of the barrel B, the valve C¹, substantially as described.

4. In combination with the stopper C, and

in connection with the interior and exterior of the case A, the vent C², substantially as described.

5. In combination with the stopper C, the discharge-pipe C⁴, and vent C², the cap C³, substantially as described.

6. In combination with the piston *b* and the discharge-tube C⁴, the projection *b*³, substantially as and for the purpose set forth.

In testimony whereof I have hereunto set my hand this the 2d day of November, in the year 1876.

JOHN L. DIBBLE.

In presence of—

F. A. BALDWIN,

E. BALDWIN.