Aug. 25, 1942. B. L. TAYLOR 2,293,780

POCKET SYRINGE

Filed July 8, 1941

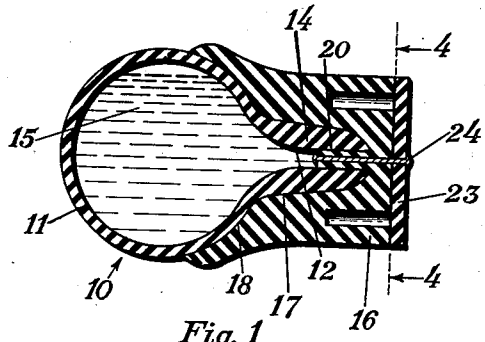

Fig. 1

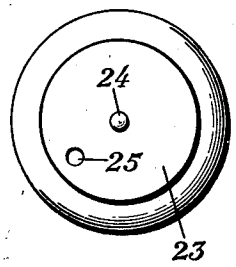

Fig. 3

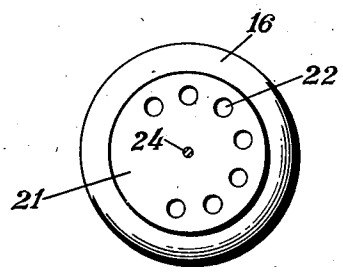

Fig. 4

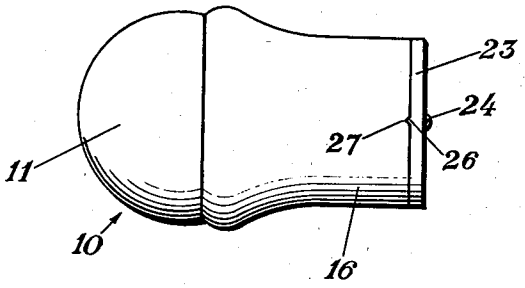

Fig. 2

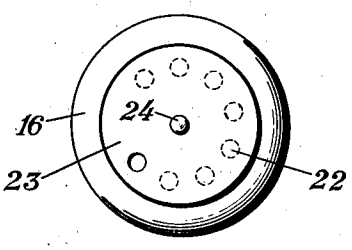

Fig. 5

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Patented Aug. 25, 1942

2,293,780

UNITED STATES PATENT OFFICE

2,293,780

POCKET SYRINGE

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Application July 8, 1941, Serial No. 401,524

5 Claims. (Cl. 128—232)

(Granted under the act of March 3, 1883, as amended April 30, 1928; 370 O. G. 757)

This invention relates to a pocket syringe, and has for an object to provide an improved pocket syringe of the type generally shown in U. S. Patents 991,022 and 1,490,966, but having advantages over the device of these patents in economy of construction and simplicity of use.

A further object of this invention is to provide an inexpensive pocket syringe which can easily be carried and is of the type that it may be carried in the pocket when the syringe is already filled with the antiseptic liquid, without danger of leakage, irrespective of the position it may assume in the pocket, and, furthermore, may easily have a new antiseptic solution made therein by dropping a soluble capsule containing a concentrated antiseptic therein and then filling the syringe with water so as to dissolve the capsule and make the syringe ready for use, the antiseptic capsule being of a type that may be easily carried in pockets formed in the syringe.

A further object of this invention is to provide an improvement over the pocket syringe shown in applicant's prior application, Serial No. 336,405, filed May 21, 1940, now Patent No. 2,255,833, of September 16, 1941.

A further object of this invention is to provide an improved pocket syringe having means for carrying refills; that is, having means for carrying a plurality of the aforementioned capsules so that a supply of such capsules can be kept with the syringe at all times.

A further object of this invention is to provide a means for carrying a plurality of medicated capsules, which means is integral with a means for keeping the nozzle of the syringe clean and uncontaminated.

Still a further object of this invention is to provide a spare medicated capsule-carrying protector for the nozzle of the syringe, which capsule-carrying protector, in turn, is provided with a cover for locking a plurality of the capsules within the protector but permitting the removal of the individual capsules one at a time, as desired.

With the foregoing and other objects in view, the invention consists in the construction, combination and arrangement of parts hereinafter described and illustrated in the drawing, in which:

Fig. 1 is a sectional view through the syringe protector and protector cap of this invention.

Fig. 2 is an elevational view of Fig. 1.

Fig. 3 is an end view of the protector end of the nozzle.

Fig. 4 is a sectional view on line 4—4 of Fig. 1; and

Fig. 5 is a view similar to Fig. 3, but showing the location of the capsule pouches relative to the discharge opening on the protector cap.

There is shown at 10 the pocket syringe of this invention. This syringe 10 includes a bulb 11 of somewhat flexible rubber and has a discharge passage 12 leading through a thickened less flexible nozzle 14 for receiving and discharging the liquid 15. Fitted over the outside of the nozzle 14 and extending partly about the bulb 11 is a nozzle protector 16 preferably made of a similar material, or any suitable plastic or composoition, but of such thickness that it is substantially rigid. This protector 16 is provided with an internal opening 17 which flares outwardly as at 18 so that it may fit snugly about the outside of the nozzle 14 and the adjacent area of the bulb 11.

Within the internal opening 17 there is provided a boss 20, this boss 20 being of a diameter substantially equal to the internal diameter of the passage 12 and is to be inserted into the passage 12 so as to make a tight fit therewith and serve to act as a stopper therefor while the protector 16 is in position about the nozzle 14 and bulb 11.

The end face 21 of the protector 16 is substantially cylindrical in shape, and extending through this and face 21 is a plurality of capsule pouches 22 of a diameter about equal to the diameter of the passage 12. Each pouch 22 is of a depth sufficient to receive one medicated capsule therein, which capsule may contain a suitable concentrated antiseptic which, when dissolved in water, will provide a syringe full of antiseptic of proper strength, according to the use for which it is intended. As shown, seven pouches 22 are disposed about the end face 21, but more or less may be provided, as desired.

Fitted over the end face 21 is a protector cap 23, being pivotally secured thereto by a pin 24 riveted centrally therethrough and through the boss 20. Extending through this cap 23 is an aperture 25 of a diameter corresponding to the diameter of the pouches 22. By rotating the cap 23 the aperture 25 may be successively brought into position with each of the pouches 22 for the purpose of loading or discharging capsules in the pouches. Although as many pouches 22 may be provided as desired, at least one space will be left so that the aperture 25 may be left in such space when it is desired to retain the capsules within the pouches and not discharge any capsule therefrom.

To insure that the discharge aperture 25 in the protector cap 23 may remain over this space, a slight protuberance 26 may be provided on the cap 23 and a cooperating depression 27 in the protector 16 will keep the cap 23 from accidental rotation but will permit intentional rotation when desired.

In operation, as thus described, the syringe 10 may be carried in a garment pocket or handbag, either empty or already filled with water for the initial use thereof. Before placing it in the pocket or handbag each of the pouches 22 may be filled with a suitable antiseptic capsule by inserting such capsule through the aperture 25 into each pouch 22. When carried in the pocket or handbag the discharge aperture 25 will be kept over the blank space having no pouch by the cooperating protuberance 26 and depression 27. In order to use the syringe, the cap 23 is rotated to bring the discharge opening 25 into alignment with one of the pouches 22 and the capsule is permitted to drop out therefrom into the operator's hand. The protector 16 is then withdrawn from the nozzle 14 and the capsule is inserted through the passage 12 into the bulb 11. If not already filled with water, the nozzle 14 may be then inserted into a suitable supply and water drawn through the passage 12 into the bulb 11. A few moments are allowed to pass, allowing the capsule to dissolve and mix the antiseptic within the water, thus providing the desired solution. The nozzle 14 is then inserted in the body orifice in which it is to be used and the bulb squeezed to discharge the solution into position. After using the same, the protector is placed back in position with the boss 20 extending into the passage 12, keeping the same clean and ready for further use at a later time, as needed, whereupon the same procedure may be followed.

Other modifications and changes in the number and arrangement of the parts may be made by those skilled in the art without departing from the nature of this invention, within the scope of what is hereinafter claimed.

The invention described herein may be manufactured and used by or for the Government of the United States of America for governmental purposes without the payment of any royalties thereon or therefor.

Having thus set forth and disclosed the nature of this invention, what is claimed is:

1. A pocket syringe comprising a bulb body, a bulb nozzle, a protector adapted to fit over said nozzle, and a plurality of capsule receiving pouches extending into said protector.

2. A pocket syringe comprising a bulb body, a bulb nozzle, a protector adapted to fit over said nozzle, a plurality of capsule-receiving pouches extending into said protector, and a protecting cap movably secured to said protector.

3. A pocket syringe comprising a bulb body, a bulb nozzle, a protector adapted to fit over said nozzle, a plurality of capsule-receiving pouches extending into said protector, and a protecting cap movable secured to said protector, said protecting cap being provided with a charge and discharge aperture therethrough adapted to be aligned with one of said pouches.

4. A pocket syringe comprising a bulb body, a bulb nozzle, a protector adapted to fit over said nozzle, a plurality of capsule-receiving pouches extending into said protector, and a protecting cap movably secured to said protector, said protecting cap being provided with a charge and discharge aperture therethrough adapted to be aligned with one of said pouches, said capsule-receiving pouches being provided in a face of said protector, said protecting cap being in the form of a disc pivoted to said face.

5. A pocket syringe comprising a bulb body, a bulb nozzle and a protector adapted to fit over said nozzle, a body orifice tip integral with said nozzle and extending therefrom, said nozzle being of semi-flexible material, said nozzle being substantially thickened compared to said bulb, said protector having a flared opening cooperating with the exterior of said nozzle and the adjacent portion of said bulb, and a boss secured to said protector within said flared opening thereof, said boss being extendable into the passage of said nozzle.

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