

J. W. WAINWRIGHT.
 SYRINGE.
 APPLICATION FILED OCT. 16, 1908.

951,160.

Patented Mar. 8, 1910.

Fig. 1.

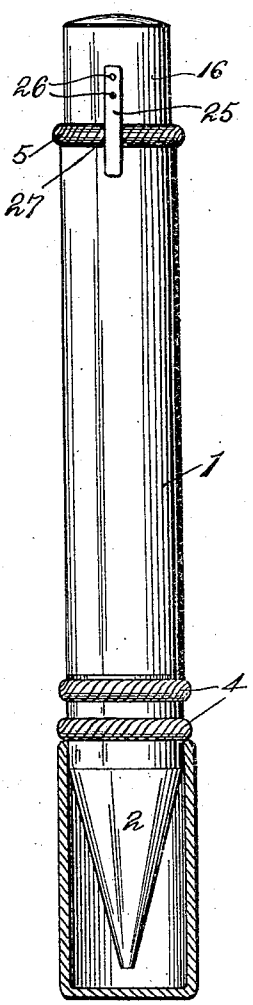


Fig. 5.

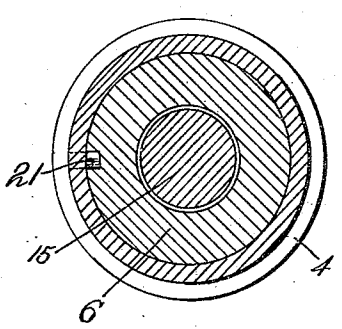


Fig. 6.

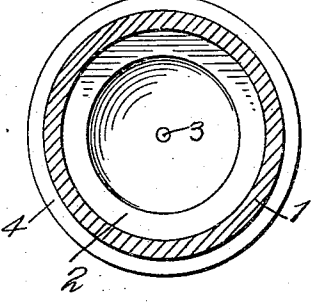


Fig. 3.

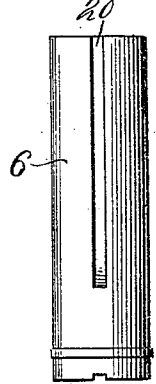


Fig. 4.

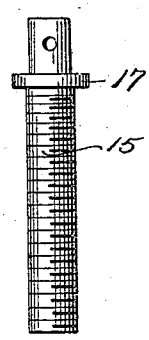
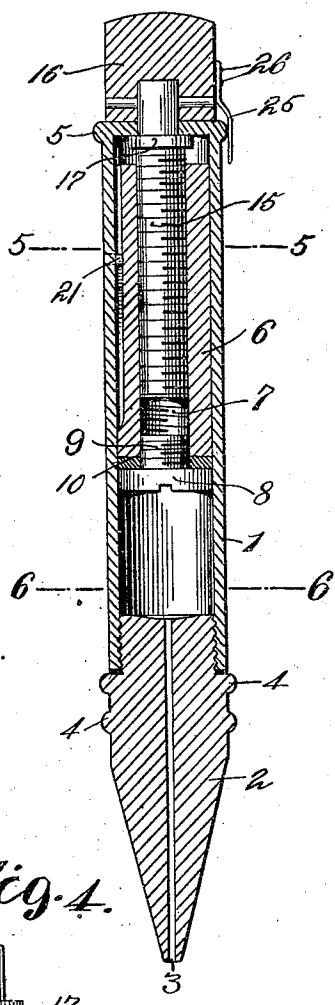


Fig. 2.



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SYRINGE.

951,160.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, JOHN W. WAINWRIGHT, a citizen of the United States, residing in the city of New York, county of New York, and State of New York, have invented certain new and useful Improvements in Syringes, of which the following is a full, clear, and exact specification.

This invention relates to syringes.

The principal object of the invention is to provide a syringe which is particularly intended for the prevention of disease, and which is adapted to contain a quantity of antiseptic or germicidal liquid, only a small portion of which is to be used at each operation, whereby the device can be used a number of times without need of re-filling.

A further object of the invention is to provide a device which will present the appearance of a fountain pen, watch charm or the like, instead of resembling a surgical instrument.

One convenient embodiment of the invention is disclosed herein but it is to be distinctly understood that changes in this embodiment may be made within the scope of the following claims, without departing from the spirit of the invention.

In the accompanying drawing, forming part of this specification: Figure 1 is a side elevation of an injector constructed in accordance with the invention, the general design being that of a fountain pen. Fig. 2 is a vertical section through the device. Fig. 3 is a side elevation of the plunger. Fig. 4 is a side elevation of the swiveled rod for operating the plunger. Fig. 5 is a transverse section on the line 5-5 of Fig. 2. Fig. 6 is a transverse section on the line 6-6 of Fig. 2.

Like reference numerals indicate corresponding parts in the different figures in the drawing.

The device of the present invention comprises a barrel 1 which acts as a reservoir as shown in Fig. 2. Threaded into or otherwise connected with the barrel 1 is a nose piece or nozzle 2, having a discharge opening 3 therein, which communicates with the reservoir 1. The nozzle 2 is preferably formed exteriorly with the ribs 4 which cause the device to simulate the appearance of a fountain pen, a similar rib 5 being formed on the upper end of the barrel 1. Mounted for longitudinal movement in

the barrel 1 is a plunger 6 which is formed with a threaded bore or passage 7. At its lower end, the plunger 6 is provided with a head plate 8 having a threaded plug 9 which engages the bore 7. Interposed between the head plate 8 and the plunger 6 is a packing member or washer 10 which is intended to produce a tight joint between the plunger 6 and the inner wall of the barrel or reservoir 1.

One convenient means of operating the plunger 6 will now be described: Extending into the bore 7 of the plunger 6 is a threaded rod 15 which passes through the upper end of the barrel 1. It has secured thereto a head 16. The threaded rod 15 is also provided with a collar 17. As shown in Fig. 2 the head 16 and the collar 17 serve to produce a swiveled connection between the threaded rod 15 and the barrel 1 so that by rotating the head 16, the plunger 6 can be raised or lowered. The means for preventing rotation of the plunger 6 preferably consists of a longitudinal groove 20 formed in the plunger and engaged by a pin 21 connected with the barrel 1.

The means for distributing the contents of the barrel 1 in a plurality of measured or predetermined amounts, preferably comprises a locking member or spring 25 which is riveted or otherwise secured at 26 to the head 16 and is adapted to snap into a groove 27 cut into the rib 5.

By the foregoing construction it will be observed that the plunger-operating mechanism is wholly outside of the reservoir and the liquid or substance used therein can in no way reach or impair the said mechanism.

When it is desired to use the device, it is first inserted into position and the locking device or spring 25 is disengaged from the groove so as to permit the head 16 to be given one complete revolution, after which the spring 25 will snap back into locked position. The pitch of the threads on rod 15 is intended to be arranged so that one revolution of the head 16 will discharge a sufficient quantity of liquid from the reservoir 1 for a single operation. The device, of course, can be used a number of times without refilling.

As before stated, the injector will usually be constructed in the form of a fountain pen or similar device. The material which it is preferred to use is hard rubber. It is to be understood, however, that other material

may be used and also that the shape, appearance and the details of the construction of the device can be varied.

The device of the present invention is strong, simple, durable and inexpensive in construction, as well as thoroughly efficient in operation.

What is claimed as new is:

1. A syringe having a barrel and a plunger to move longitudinally therein, swiveled means for imparting forward movement to said plunger, and means for positively interrupting said forward movement at predetermined points so as to prevent the discharge of more than a predetermined quantity of liquid at each operation.

2. A syringe having a barrel and a longitudinally sliding plunger therein, a spline upon the interior wall of said barrel, a slot in the said plunger adapted to cooperate with the spline and to prevent rotation thereof, a threaded bore in said plunger, a threaded rod fitted into said bore, a head secured to said rod for operating the same, a groove in the barrel and a locking member secured to the head and adapted to cooperate with said groove so as to lock said head against rotation at predetermined intervals in the forward movement of the plunger.

3. A syringe comprising a barrel, an elongated plunger cylinder slidably mounted therein, a plunger head secured to the lower end of the cylinder, swiveled operating means projecting into said cylinder and having a threaded engagement with the interior wall thereof whereby the cylinder will be

moved forward as the operating means is rotated, and means for interrupting the forward movement of said cylinder at predetermined intervals.

4. A syringe comprising a barrel with a nozzle at the forward end thereof, a perforated flange at the rear end of the barrel forming a cap member, a piston head within the barrel, an interiorly threaded sleeve projecting rearwardly from said head and connected thereto, an operating stem fitted into and having a threaded engagement with said sleeve, a flange on said stem engaging the inner surface of the cap member, and an operating head engaging the outer surface of said cap member and secured to the end of the stem which projects through the aperture in said cap member.

5. A syringe comprising a barrel with a fixed cap at the rear end thereof, a removable nozzle at the forward end thereof, a sleeve loosely mounted within the barrel, a piston comprising a head and a rearward extension fitted within said sleeve, an inclosing cap for the barrel, a rod having a threaded engagement with a bore in said device, a head secured to the rod at a point without the cap, the rod and head having a swiveled engagement with the cap and means for preventing rotation of the piston head.

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