

J. W. PERKINS.
 SYRINGE NOZZLE.
 APPLICATION FILED APR. 26, 1909.

933,578.

Patented Sept. 7, 1909.

Fig. 1.

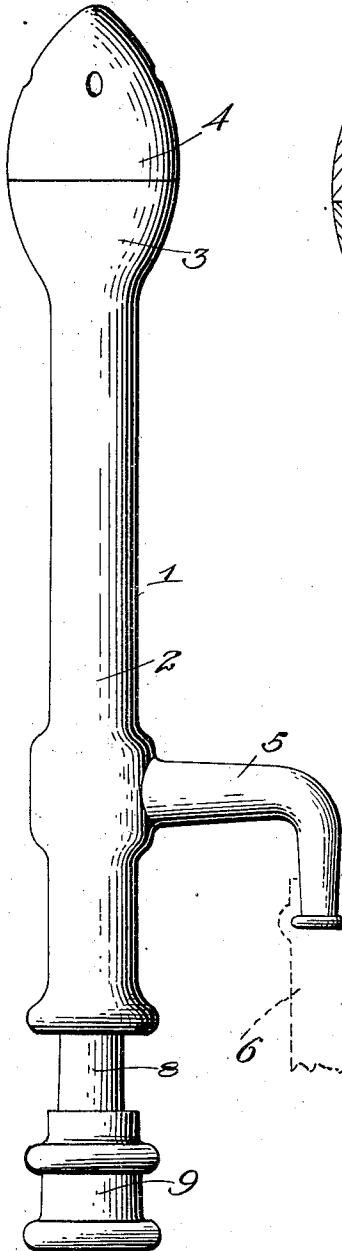


Fig. 2.

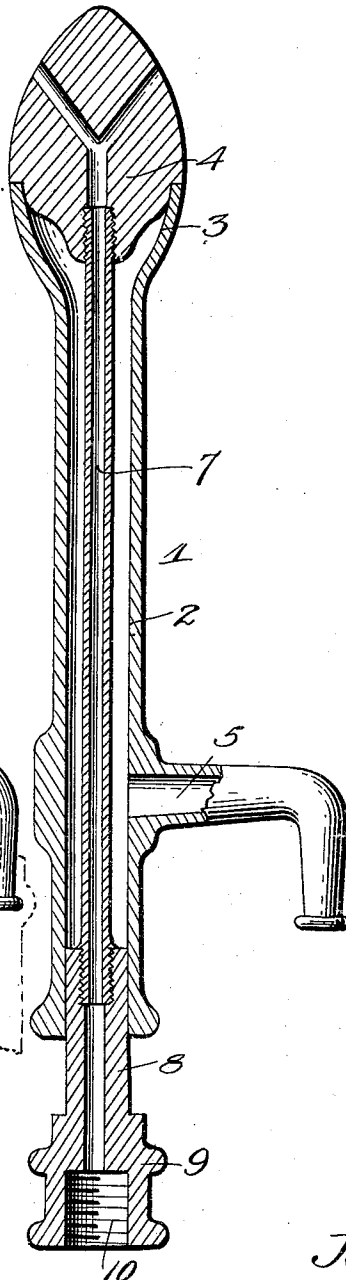
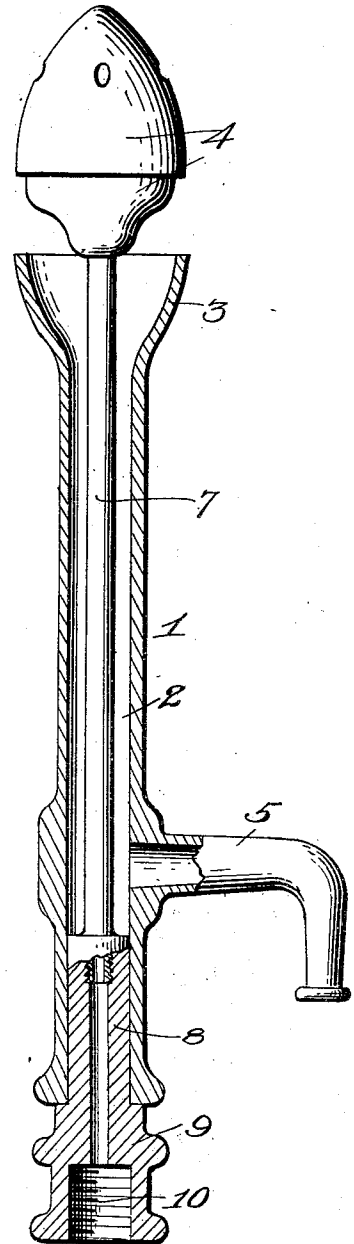


Fig. 3.



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UNITED STATES PATENT OFFICE.

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SYRINGE-NOZZLE.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, JOHN W. PERKINS, a citizen of the United States, residing at Everett, in the county of Middlesex and State of Massachusetts, have invented certain new and useful Improvements in Syringe-Nozzles; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to improvements in syringe nozzles.

The object of the invention is to provide an improved construction of nozzle having a return passage by means of which the injected fluid may be discharged through the nozzle and means whereby said return or discharge passage may be quickly opened or closed without removing the nozzle.

With the foregoing and other objects in view, the invention consists of certain novel features of construction, combination and arrangement of parts, as will be more fully described and particularly pointed out in the appended claims.

In the accompanying drawings, Figure 1 is a side view of a nozzle constructed in accordance with my invention; Fig. 2 is a longitudinal sectional view of the same, showing the parts in closed position; Fig. 3 is a similar view, showing the parts in open position.

Referring more particularly to the drawings, 1 denotes the nozzle which consists of a main tubular body portion or casing 2 having an outwardly flared outer end 3, which forms a seat to receive a combined valve and discharge tip 4 which is adapted to be engaged with the flaring outer end of the casing to close the same. On one side of the body portion or casing 2 of the syringe is formed a discharge nipple 5 which communicates with the interior of the casing and is preferably curved to project rearwardly and with said rearwardly projecting end is adapted to be detachably engaged the end of a flexible fluid conducting tube 6 which is adapted to carry off the return fluid after being injected by the nozzle.

The tip 4 is screwed or otherwise detachably secured to the outer end of a fluid conducting or injecting tube 7 which extends through the body portion or casing 2 and is screwed or otherwise detachably engaged with the inner end of a tubular plug 8 which

is adapted to be inserted into the inner end of the casing 2 to close the same when the flared end is opened. The plug 8 is provided on its outer end with a head 9 having a threaded socket 10 with which is adapted to be detachably connected the discharge tube of the syringe.

When the parts are arranged as shown in Figs. 1 and 2 of the drawings, the nozzle is adapted to be used in the ordinary manner for the injection of the fluid. When it is desired to allow or cause the immediate discharge of the injected fluid from the parts, the plug 8 is forced into the rear end of the casing or body portion of the nozzle thereby projecting the tip forwardly or out of engagement with its seat in the flared end 3 of the body portion thereby opening said end and forming a return conduit of the casing 2 which will permit the injected fluid to discharge or flow back through the casing and nipple where it may be carried off by the discharge tube 6.

By means of a nozzle constructed in accordance with the invention, injections may be given and removed without disturbing the patient.

From the foregoing description, taken in connection with the accompanying drawings, the construction and operation of the invention will be readily understood without requiring a more extended explanation.

Various changes in the form, proportion and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of the invention, as defined in the appended claims.

Having thus described my invention, what I claim is:

1. In a nozzle of the character described, the combination with a tubular casing, having a flared outer end forming a valve seat, and a discharge nipple arranged thereon near its outer end, of a discharge tube loosely mounted in said casing, a discharge tip on the outer end of said tube, and adapted to form a valve to engage the seat formed by the flared outer end of said casing whereby said end is opened and closed, and a plug on the inner end of said tube adapted to open and close the inner end of said casing.

2. In a syringe nozzle, a tubular casing having a flared outer end, and a rearwardly projecting discharge nipple arranged near its inner end, of a discharge tube loosely

mounted in said casing, said tube having threaded ends, a discharge tip having a screw threaded engagement with the outer end of said tube and adapted to open and
5 close the flared outer end of the casing, a tubular connecting plug having a screw threaded engagement with the inner end of said tube, said plug having on its outer end a threaded socket whereby the same may be
10 connected with a syringe, and a discharge

tube adapted to be connected with the nipple on said casing.

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

JOHN W. PERKINS.

Witnesses:

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