

(No Model.)

W. F. WARE.
COMBINED BOTTLE STOPPER AND SYRINGE.

No. 526,880.

Patented Oct. 2, 1894.

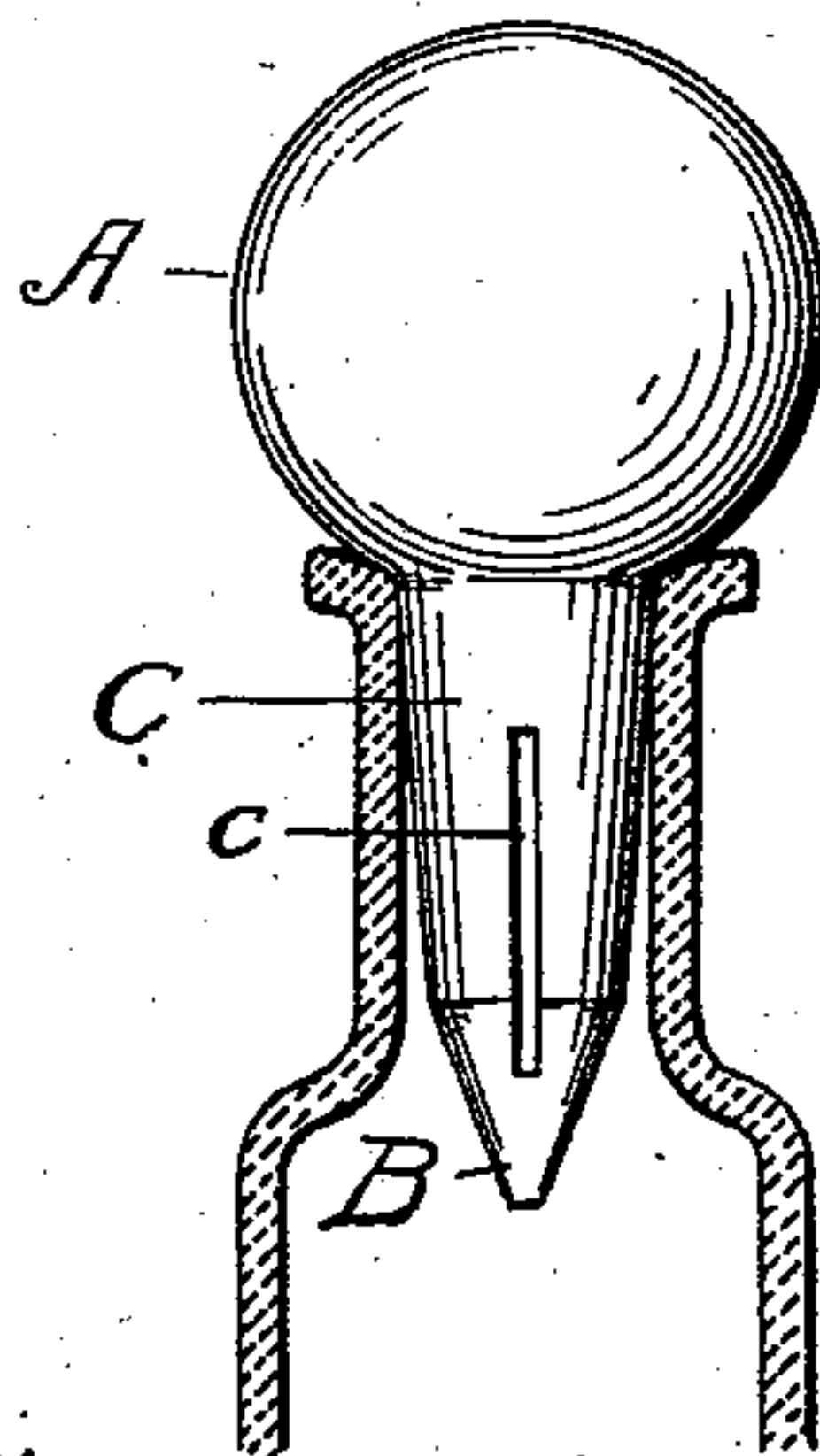


FIG. 1

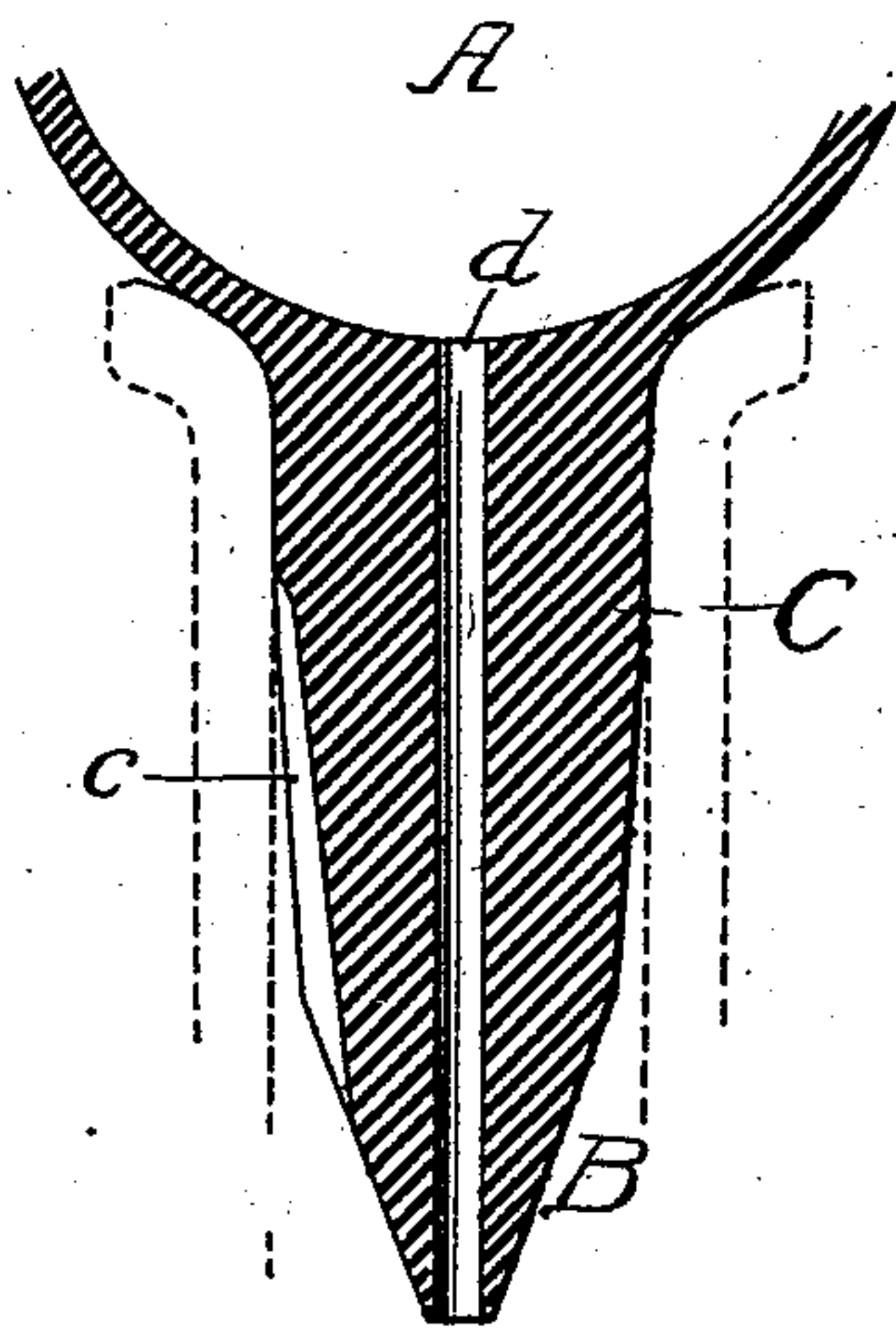


FIG. 2

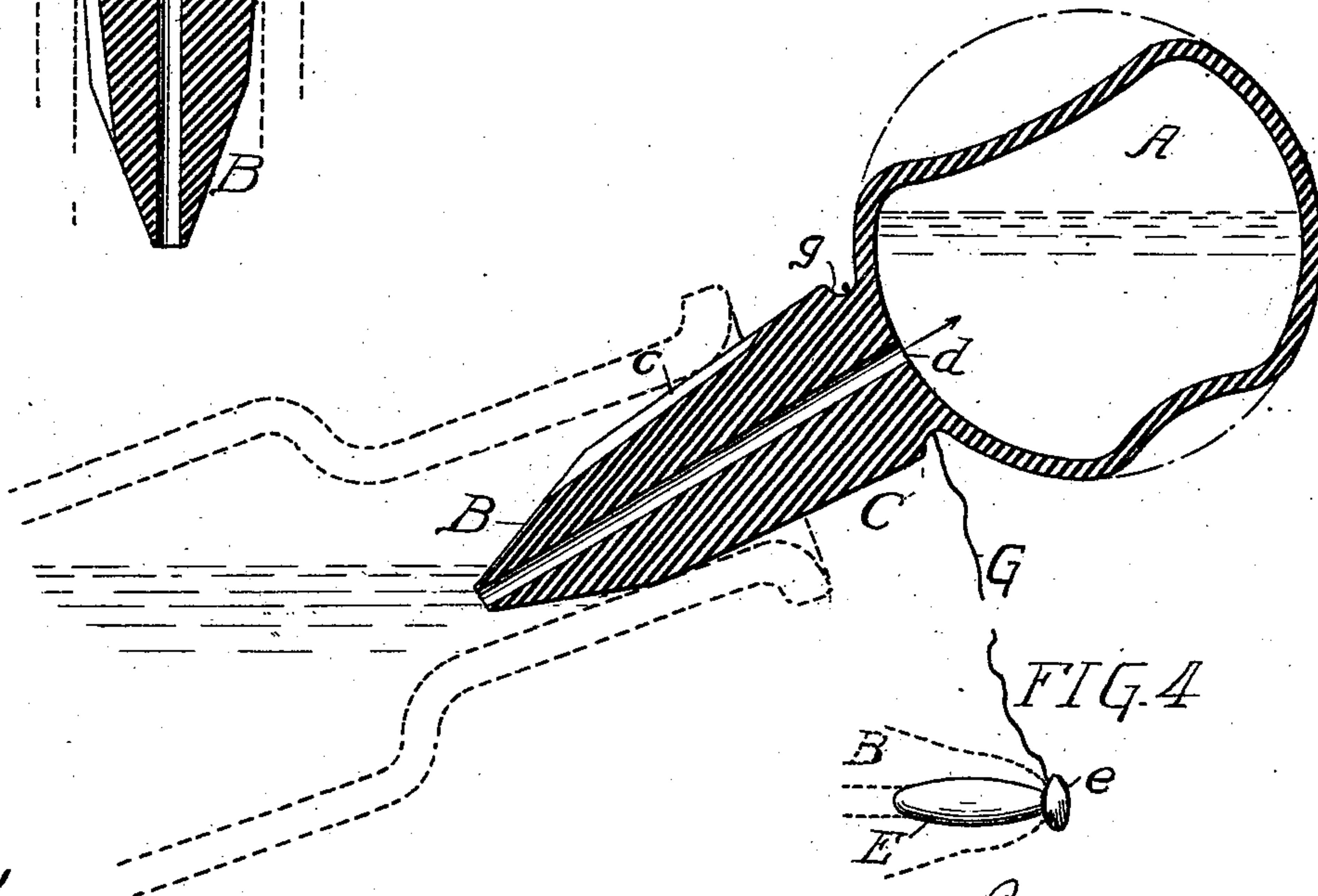


FIG. 3

FIG. 4

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UNITED STATES PATENT OFFICE.

WALTER F. WARE, OF CAMDEN, NEW JERSEY.

COMBINED BOTTLE-STOPPER AND SYRINGE.

SPECIFICATION forming part of Letters Patent No. 526,880, dated October 2, 1894.

Application filed November 23, 1893. Serial No. 491,743. (No model.)

To all whom it may concern:

Be it known that I, WALTER F. WARE, a citizen of the United States, and a resident of the city of Camden and State of New Jersey, have invented a certain new and useful Improvement in a Combined Bottle-Stopper and Syringe, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

My invention relates to an improved combined bottle-stopper and syringe which may be employed as a urethral injector, and has for its principal object to provide a device which will perform the double function of a bottle-stopper and syringe, or may be filled and carried in the pocket separately and used when necessary.

In the accompanying drawings, Figure 1 is an elevation of a combined bottle-stopper and syringe manufactured in accordance with my invention and illustrating it in position in the neck of a bottle and acting as a stopper therefor. Fig. 2 is a sectional elevation of the same on a somewhat larger scale. Fig. 3 is a similar view showing the position of the device when the syringe bulb is being filled with fluid from a bottle, and Fig. 4 is a view of a stopper which may be inserted in the nozzle of the syringe when it is desired to carry the latter filled with the injecting fluid.

In using injecting fluids for various urethral diseases, it is desirable to carry the medicine in a small bottle and to employ a very small syringe capable of holding just enough fluid for a single injection, and to avoid the annoyance of carrying separately the bottle and syringe.

I propose to so manufacture the bottle-stopper that it may be employed as a syringe without materially increasing the size of the stopper or making the latter so large that it cannot be conveniently carried, with the bottle, in the pocket, and being of yielding material cannot be accidentally broken, as is the case with the glass barrel syringes commonly used for this purpose.

Referring to the drawings C represents a bottle-stopper formed of rubber and having its exterior of slight conical form as is usual

in rubber stoppers, so that it may be readily inserted in the neck of the bottle. At the upper end of this neck, and preferably formed integral therewith, is a bulb, A, of sufficient size to contain the quantity of fluid necessary for a single injection, and at the lower end of the stopper is a nozzle, B, tapering or otherwise graduating down to a comparatively small end so that it may be readily inserted in the mouth of the urethra.

Through the nozzle and the stopper and extending from the bulb, A, to and communicating with the interior of the bottle is a passage, d, preferably of the same diameter throughout its entire length so that while the walls of the nozzle portion are comparatively thin and yielding, the walls of the stopper will be much thicker and will yield but very little, if any, more than an ordinary solid rubber stopper.

On the exterior of the stopper and nozzle portions is a longitudinally disposed groove, e, forming a passage through which air may be admitted to the bottle when the syringe bulb is being filled, as shown more clearly in Fig. 3, the groove extending from a point on the nozzle near the lower tapering end to a point slightly below the point of junction of the bulb, A, with the stopper, but not extending a sufficient distance to interfere with the usefulness of the stopper when the latter is fully in the neck of the bottle, as shown in Fig. 2.

As it may sometimes be desirable to carry in the pocket enough of the fluid for a single injection only I propose, after filling the syringe bulb, to insert within the discharge mouth of the nozzle a stopper plug, E, having a head, e, for convenience in inserting and removing it, there being between the main body of the plug and the head, e, a portion of less diameter than that of the main body and forming a contracted neck to which the elastic mouth of the nozzle will closely fit and prevent accidental discharge of the fluid.

The plug, E, is preferably constructed as shown in Fig. 4 having an enlarged head, e, and the main body of the plug of greater diameter in cross section intermediate in its length diminishing toward the head and toward the inner end. For convenience, this

stopper plug may be attached to the stopper, C, by a flexible cord, G, secured at one end to the plug and at its opposite end to a groove, g, in the stopper, C.

5 Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. A bottle-stopper provided at one end with a hollow bulb and at its opposite end with a
10 conical nozzle, a centrally disposed passage extending through the nozzle and stopper into and communicating with the interior of the bulb, and said stopper being provided with a longitudinally disposed exterior air passage
15 extending for a portion only of its length, substantially as specified.

2. A combined bottle-stopper and syringe formed of a single piece of soft rubber, and comprising a bulb, a gradually diminishing
20 nozzle, and a neck portion situate between the nozzle and bulb, said neck portion having a slightly conical or tapering exterior and having thickened walls formed thicker or heavier than those of the nozzle or bulb, and
25 adapted to form a bottle-stopper, substantially as specified.

3. A combined bottle-stopper and syringe, formed of a single piece of soft rubber, and comprising a bulb, a conical nozzle, and a
30 neck portion situate between the nozzle and bulb, said neck portion having a tapering exterior and adapted to form a bottle stopper, there being on the periphery of the neck portion a groove extending from a point below
35 the junction of the nozzle with the neck to a point on the neck above the line of junction, substantially as specified.

4. The combination of a bulb, A, a nozzle, B, a tapering neck portion, C, having its walls
40 thickened to form a bottle-stopper, there being a groove or air passage longitudinally disposed upon the exterior of the neck portion, said groove terminating at a point below the

upper end of the neck, so that the escape of fluid will be prevented when the neck is fully
45 in the bottle, substantially as specified.

5. In a syringe the combination of a bulb, a nozzle and intervening neck portion between the nozzle and the bulb, the whole being formed preferably integral of a single
50 piece of elastic material the walls of the nozzle being constructed to yield outwardly under pressure from within in a degree diminishing from the point toward the neck portion and a plug adapted to the mouth of the
55 nozzle, substantially as described.

6. In a combined syringe and bottle stopper the combination of a bulb, a nozzle, and an intervening neck portion between the nozzle and bulb, the nozzle portion adapted to
60 yield outwardly under pressure from within in a diminishing degree from the point toward the neck portion, the mouth of said nozzle portion being adapted to receive a plug, E, of greater diameter in cross section than the
65 diameter of the bore of the nozzle, said plug being of greater diameter in cross-section intermediate in its length and diminishing in diameter toward the opposite end, substantially as described.
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7. A syringe of elastic material consisting of the bulb, A, neck portion, C, nozzle, B, the walls of said nozzle constructed to yield to pressure from within in a degree diminishing from its point toward the neck portion,
75 a plug, E, adapted to be inserted in the mouth of the nozzle, circumferential groove, g, and flexible cord extending from said plug around said grooved neck portion, substantially as described.
80

In witness whereof I have hereunto set my hand this 22d day of November, A. D. 1893.

WALTER F. WARE.

Witnesses:

T. F. BOARDMAN,
JOHN MAYHEW.