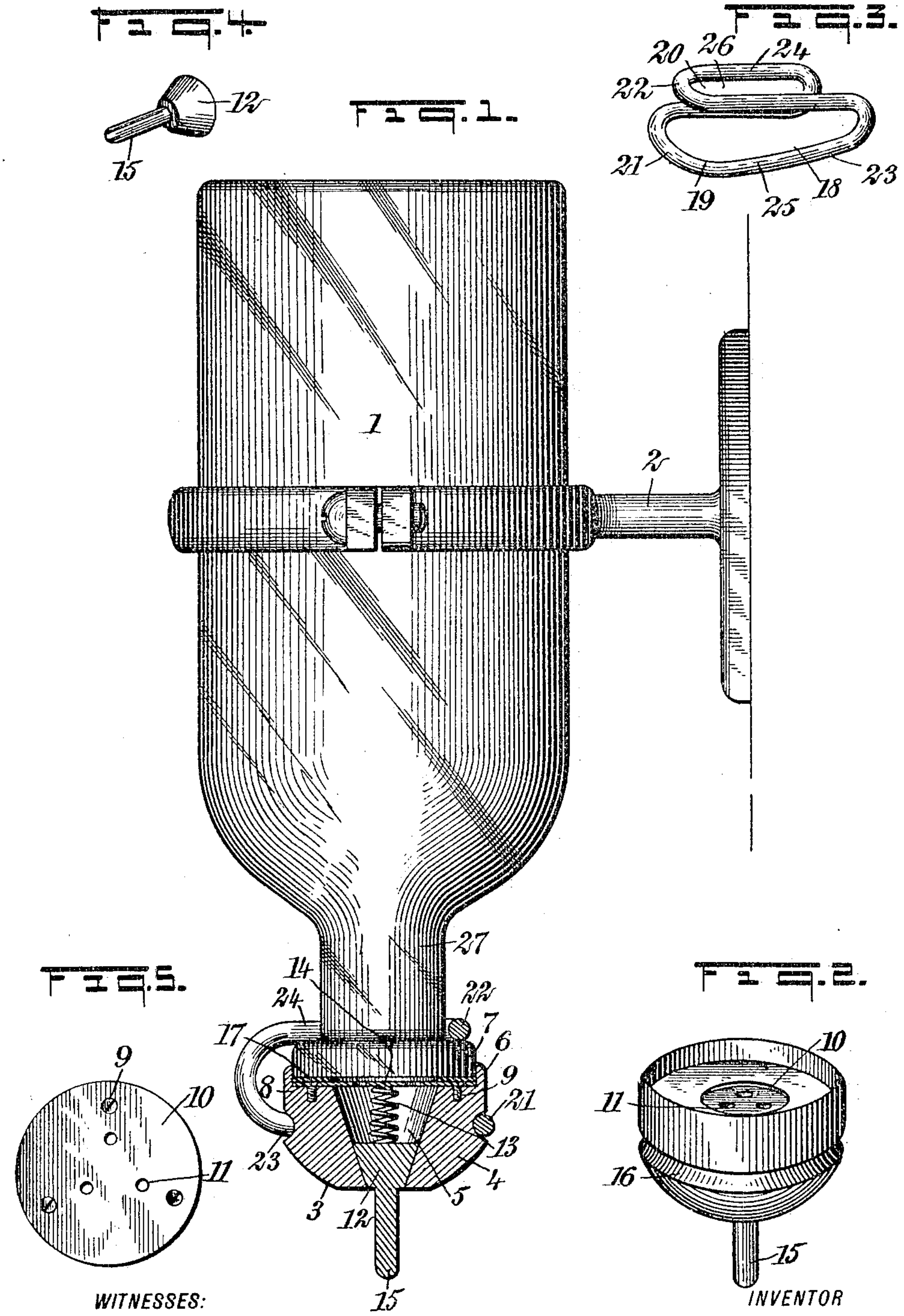
No. 798,775. PATENTED SEPT. 5, 1905.

C. B. FORSYTH.

DISPENSING BOTTLE.

APPLICATION FILED APR. 13, 1905.



WITNESSES:

INVENTOR

Charles B. Forsyth

BY

ATTORNEYS

UNITED STATES PATENT OFFICE.

CHARLES BURDETT FORSYTH, OF ALEXANDRIA BAY, NEW YORK, ASSIGNOR OF ONE-HALF TO VALORUS A. BRADBURY, OF EVANSTON, WYOMING.

DISPENSING-BOTTLE.

No. 798,775 Specification of Letters Patent. Patented Sept. 5, 1905.

Application filed April 13, 1905. Serial No. 255,368.

To all whom it may concern:

Be it known that I, CHARLES BURDETT FORSYTH, a citizen of the United States, and a resident of Alexandria Bay, in the county of Jefferson and State of New York, have invented a new and Improved Dispensing-Bottle, of which the following is a full, clear, and exact description.

This invention relates to dispensing-bottles; and the object of the invention is to provide a convenient receptacle for antiseptic liquids, liquid soap, &c., from which a small quantity of the contents may flow as desired. The invention concerns itself especially with the closure for the bottle.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a side elevation of a bottle, showing the same supported in its normal inverted position, the stopper of the bottle being represented in cross-section. Fig. 2 is a perspective of the stopper, representing the same removed from the bottle. Fig. 3 is a perspective of a yoke which is used in attaching the stopper to the mouth of the bottle. Fig. 4 is a perspective of a plug constituting a part of the stopper, and Fig. 5 is a plan of a perforated plate constituting a part of the stopper.

Referring more particularly to the parts, 1 represents a bottle of any ordinary construction, which is supported in an inverted position, as shown, by means of a bracket 2 of any common construction. In applying my invention I provide a stopper 3, which comprises a cap 4 of substantial construction, as shown, which cap is provided with a centrally-disposed conical bore 5, which converges downwardly, as shown in Fig. 1. The upper face of this cap 4 is counterbored slightly, so as to form an upwardly-projecting flange 6, which lies close against the lip 7 of the bottle when applied thereto, as indicated. In this way a recessed face 8 is formed, surrounded by said flange 6. Upon this face 8 I attach, preferably by means of small screws 9, a plate 10, the said plate being preferably provided with a plurality of perforations 11. These perforations are preferably three in number, as indicated, and located an equal distance apart.

Near the lower extremity of the conical bore 5 there is seated a plug 12, the same having a conical body, as shown, which is maintained in the lower extremity of the bore by means of a helical spring 13, disposed as shown, the upper extremity of the said spring bearing against the inner face of the plate 10. In order to prevent dislodgment of this spring, the under face of the plate 10 is preferably provided with a small nib or projection 14, surrounded by the spring, as will be readily understood. The lower portion of the plug 12 is formed into a stem 15, which projects down beneath the cap 4, as shown.

As indicated most clearly in Fig. 2, the cap 4 near its upper portion is substantially cylindrical in form, and it is surrounded by a circumferential groove 16. Below this groove the cap preferably tapers toward a reduced dimension, as illustrated.

The stopper 3 would be applied to the mouth of the bottle in the manner indicated in Fig. 1, an annular gasket or washer 17 being applied between the lip of the bottle and the plate 10, said washer being preferably of elastic material, such as rubber. When the stopper is applied in this manner to the mouth of a bottle, it is retained in position by means of a yoke 18, the construction of which is very clearly illustrated in Fig. 3. This yoke is preferably formed of a continuous piece of stout wire, which is formed into a loop 19 of enlarged dimension and a loop 20, overlying the same, which is of reduced dimension. From the bights 21 22 of the loops the material is bent so as to form bars 23 and 24, which form throats 25 and 26 therebetween, as will be readily understood. These bars 23 and 24 connect at their forward extremities, as indicated, and the bars 23, which constitute the sides of the throat 25, converge in the direction of their point of connection with the bars 24, so that the throat 25 is made to contract at its opening.

The yoke constructed as described and as illustrated in Fig. 3 would be applied so as to engage the cap 4 and the reduced neck 27 of the bottle simultaneously. In applying the yoke the contracted throat 25 would be slipped over the groove 16 aforesaid, and the yoke would be forced laterally with respect to the neck and stopper until it seated itself in substantially the relation indicated in Fig. 1, at which time the bight 21 would lie against the side of the cap and the bight 22 would rest

against the side of the neck of the bottle. The curvature and dimensions of the bights 21 22 would be such that they would conform more or less accurately to the parts which they surround.

In the operation of the bottle the person wishing to use a portion of its contents will touch the stem 15 with his hand, so as to unseat the plug 12 in an upward direction. A quantity of the liquid will then flow down to the perforation 11 and through the conical bore 5, as desired. As soon as released the spring 13 will operate to seat the plug 12 once more and close the outlet from the bottle, as will be readily understood.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. A bottle-stopper comprising a cap having a conical bore and a counterbore, a perforated plate within said counterbore, a conical plug mounted in said conical bore and having a stem projecting beyond said cap, and a spring between said plate and said plug and normally operating to maintain said plug seated in said conical bore.

2. A stopper having a cap presenting a flange adapted to engage the lip of a bottle and having a conical bore, a plug having a conical body seated in said conical bore and having a stem projected therebelow, a perforated plate mounted in said cap, and a spring between said plate and said plug.

3. In combination, a bottle presenting a lip at the mouth thereof, and a contracted neck, a cap seated on said mouth and having a conical bore therethrough, and a counterbore presenting a flange thereabout engaging said lip, a perforated plate in said counterbore, a conical plug in said conical bore, a spring between said plug and said plate and thrusting said plug upon its seat, said cap having a circumferential groove in the face thereof, and a yoke adapted to be forced laterally around said neck and said cap, presenting a contracted throat surrounding said cap at said groove, and a second throat engaging said neck, said throats having bights lying on the same side of said neck and said cap and engaging the same.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

CHARLES BURDETT FORSYTH.

Witnesses:
W. H. MARSHALL,
C. R. COOK.