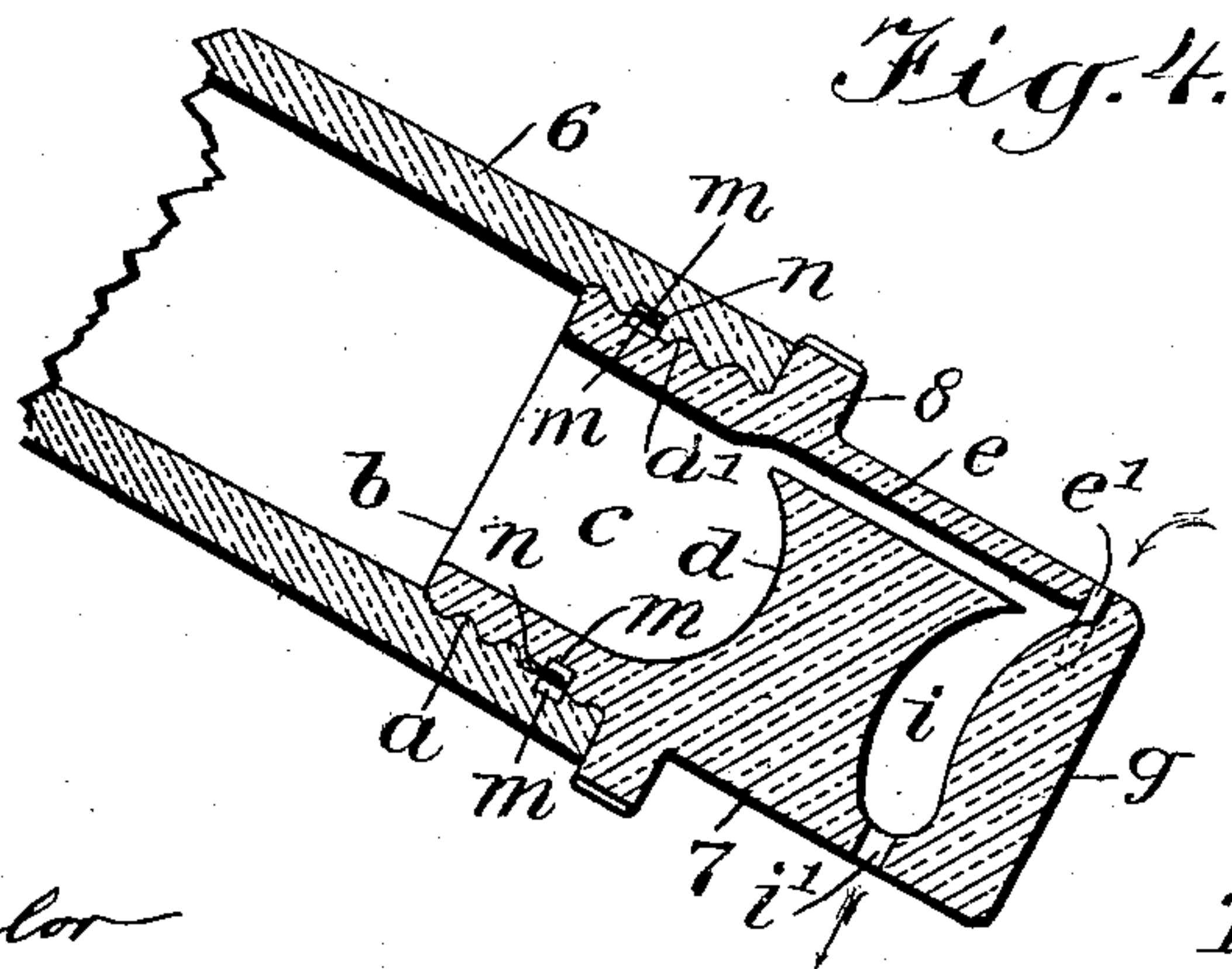
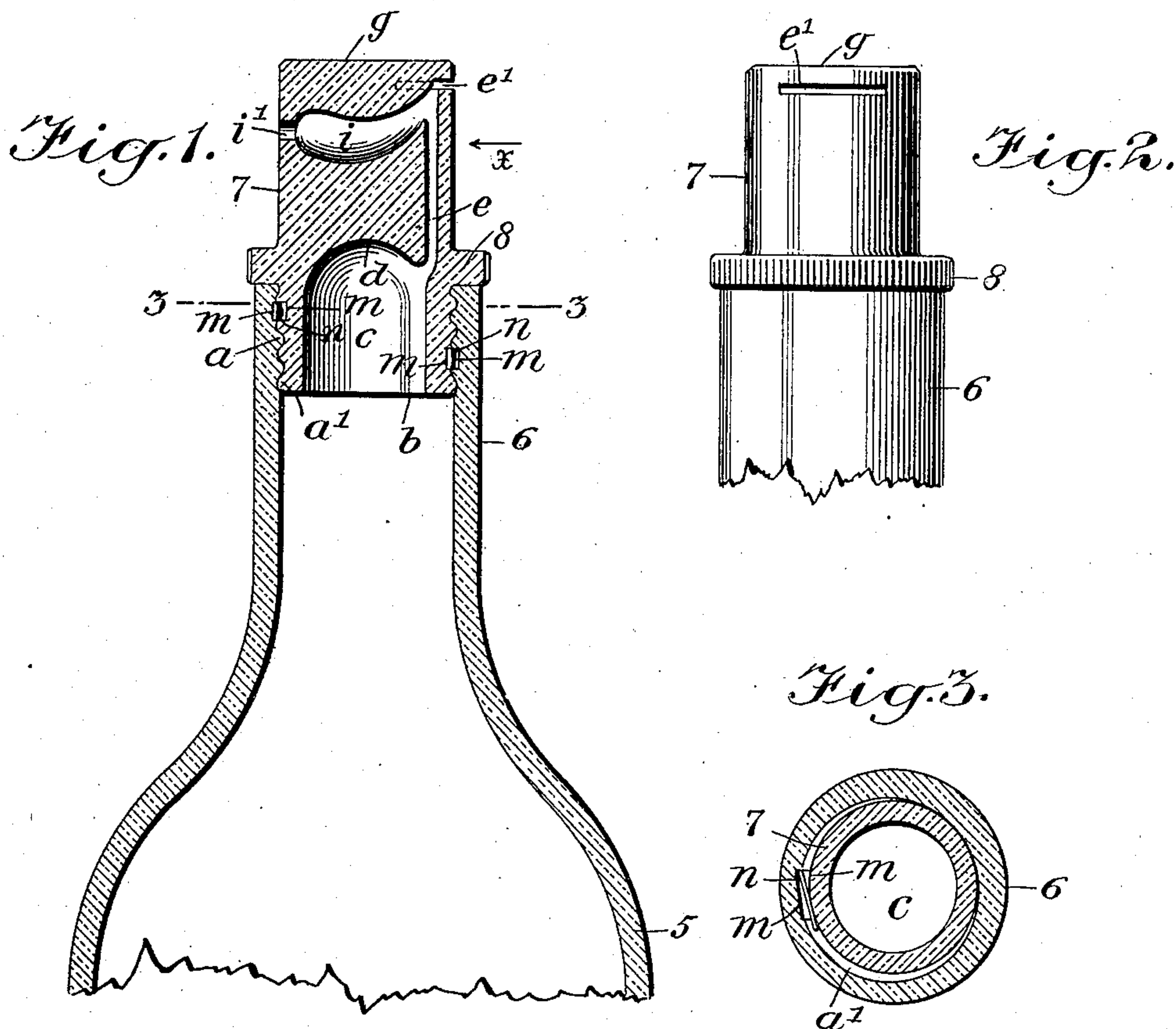


No. 898,261.

PATENTED SEPT. 8, 1908.

T. S. RAINEY.
CLOSURE FOR THE NECKS OF BOTTLES.

APPLICATION FILED JAN. 25, 1908.



WITNESSES
Geo. W. Haylor
Wm. L. Patton

INVENTOR
Thomas S. Rainey
BY *Mumma & Co.*
ATTORNEYS.

UNITED STATES PATENT OFFICE.

THOMAS SEBASTIAN RAINEY, OF NEW ORLEANS, LOUISIANA.

CLOSURE FOR THE NECKS OF BOTTLES.

No. 898,261.

Specification of Letters Patent.

Patented Sept. 8, 1908.

Application filed January 25, 1908. Serial No. 412,574.

To all whom it may concern:

Be it known that I, THOMAS S. RAINEY, a citizen of the United States, and a resident of New Orleans, in the parish of Orleans and State of Louisiana, have invented a new and Improved Closure for the Necks of Bottles, of which the following is a full, clear, and exact description.

The purpose of this invention is to provide novel, simple details of construction for a closure for the neck of a bottle or other receptacle, which when inserted and secured therein, after the receptacle is filled, will permit the contents to be freely decanted, but will prevent a refilling of the same.

The invention consists in the novel construction and combination of parts, as is hereinafter described and defined in the appended claims.

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 views.

Figure 1 is a sectional side view of the upper portion of a bottle and neck thereon, and a like view of the improved closure device inserted and secured in the pouring end of the bottle neck; Fig. 2 is an exterior side view of the improved closure, and of the portion of the neck of a bottle engaged therewith, seen opposite the arrow *x* in Fig. 1; Fig. 3 is a transverse sectional view substantially on the line 3—3 in Fig. 1, and Fig. 4 is a sectional side view of a bottle neck and the improvement secured therein, these parts being inclined so as to dispose them in a position for discharging the contents of the bottle.

In the drawings, 5 indicates the body and 6 the neck of a receptacle, that may be formed of any suitable material and have any preferred dimensions. The neck 6 of the bottle body 5, shown to illustrate the application of the improvement, is cylindrical and at the end furthest from the body, is internally threaded, as shown at *a*, in Figs. 1 and 4, said thread being of a coarse pitch.

The improved closure for the bottle neck 6, is in the form of a substantially cylindrical plug 7, which together with the body 5 and neck 6, is preferably made of glass, cast or blown into shape. An exterior thread *a'*, of coarse pitch similar to that of the interior thread *a*, is formed upon one end of the closing plug 7 and extends from the extremity *b* of said plug to a collar 8, which projects circumferentially therefrom at a proper dis-

tance from said extremity. The exterior diameter of the threaded end portion of the plug 7, is such that it may be freely screwed into the neck 6 by an engagement of the threads *a* and *a'*, which will impinge the true end of the neck 6 upon the collar 8, as shown in the drawings.

Centrally in the end of the closing plug 7, that has a screwed engagement with the neck 6, a cup-like recess *c* is formed of a suitable depth and terminates at a concave bottom wall *d*. Extending from the recess *c*, at the side wall thereof, a narrow channel *e* is formed in the body of the closing plug 7, and terminates a short distance below the top wall *g* of said plug, and thence extends laterally through the same, thus affording a continuous passage *e'* for air or liquid from the bottle body 5, outwardly. As shown, the passage or channel *e* may be widened in a plane parallel with the top wall *g*, and thus afford greater freedom for the exit of fluid there-through.

In the body of the closing plug 7, between the concave bottom wall *d* of the recess *c* and the outer end wall *g*, a curved and laterally disposed cavity *i*, is formed, which extends from the longitudinal channel *e* toward the opposite side of the plug. The laterally extended cavity *i* which is near the outlet *e'*, from its end that is furthest from the channel *e*, is reduced in size and extends through the side of the closing plug, as shown at *i'*, thus affording a duct for air or liquid across the plug. Opposite, shallow recesses *m* are formed in the internal and external threads *a*, *a'*, at different points, two of such pairs of recesses *m* appearing in Figs. 1 and 4 of the drawings; and in each pair of these recesses, a spring dog *n* is located, one end of the dog that is in the form of a thin strip of resilient metal being embedded in the thread on the plug 7, the free end thereof being adapted to enter the mating opposite recess, and interlock with an end wall thereof when the plug is fully screwed into the neck 6. The receptacle 5, before insertion of the closing plug 7, is filled with the liquid or other mobile material it is to hold, and then is closed by screwing the closing plug into the neck 6, until the collar 8 is seated upon the true end of said neck, as shown in Figs. 1 and 4 of the drawings. Upon a complete insertion of the closing plug 7, the spring dogs *n* will interlock at their free ends with the end walls of the recesses *m* and thus prevent the plug

from being unscrewed. The openings e' and i' may be closed by a hollow cork, gum cap or other available means, not shown, so as to produce a sealed package.

5 When the sealing appliance has been removed, the contents of the bottle may be poured therefrom by inclining the bottle so that the neck 6 will assume the position shown in Fig. 4, thus disposing the opening
10 i' downward for the escape of the contents of the bottle therethrough, the lateral passage e' becoming an inlet passage for air that flows through the channel e into the recess c and thence into the bottle body, which facilitates the free discharge of the liquid there-
15 from, the liquid at the same time traversing the channel in an opposite direction to enter the duct i .

It will be obvious that it will not be possible to readily fill the bottle after its contents have been removed, as there being but one narrow channel thereinto through the plug 7, air cannot freely escape upwardly and the liquid pass down therein at the same
20 time.

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

30 1. A closing plug for the neck of a receptacle, comprising a cylindrical body having an external thread at one end, said end having a

cupped recess therein, the plug also having a longitudinal channel extended from the recess to a point near the outer end thereof and thence laterally through the side of the plug, 35 and further provided with a transversely disposed duct near said outer end, that extends from the longitudinal channel through the opposite side of the plug.

2. A closing plug for the neck of a recepta- 40 cle, comprising a cylindrical body, a radial collar thereon near one end, an external thread on said end, the body having a cup-like recess therein at the threaded end, also a longitudinal channel extending from the re- 45 cess at one side thereof to a point near the opposite end of the plug and thence laterally out through the side of the plug, the latter being further provided with a transverse duct that extends from the longitudinal chan- 50 nel out through the opposite side of the plug, and a spring dog embedded in a recess formed in the threaded end portion of the plug.

In testimony whereof I have signed my 55 name to this specification in the presence of two subscribing witnesses.

THOMAS SEBASTIAN RAINEY.

Witnesses:

JAMES R. CAILLIER,
ARTHUR DE MARCAY.