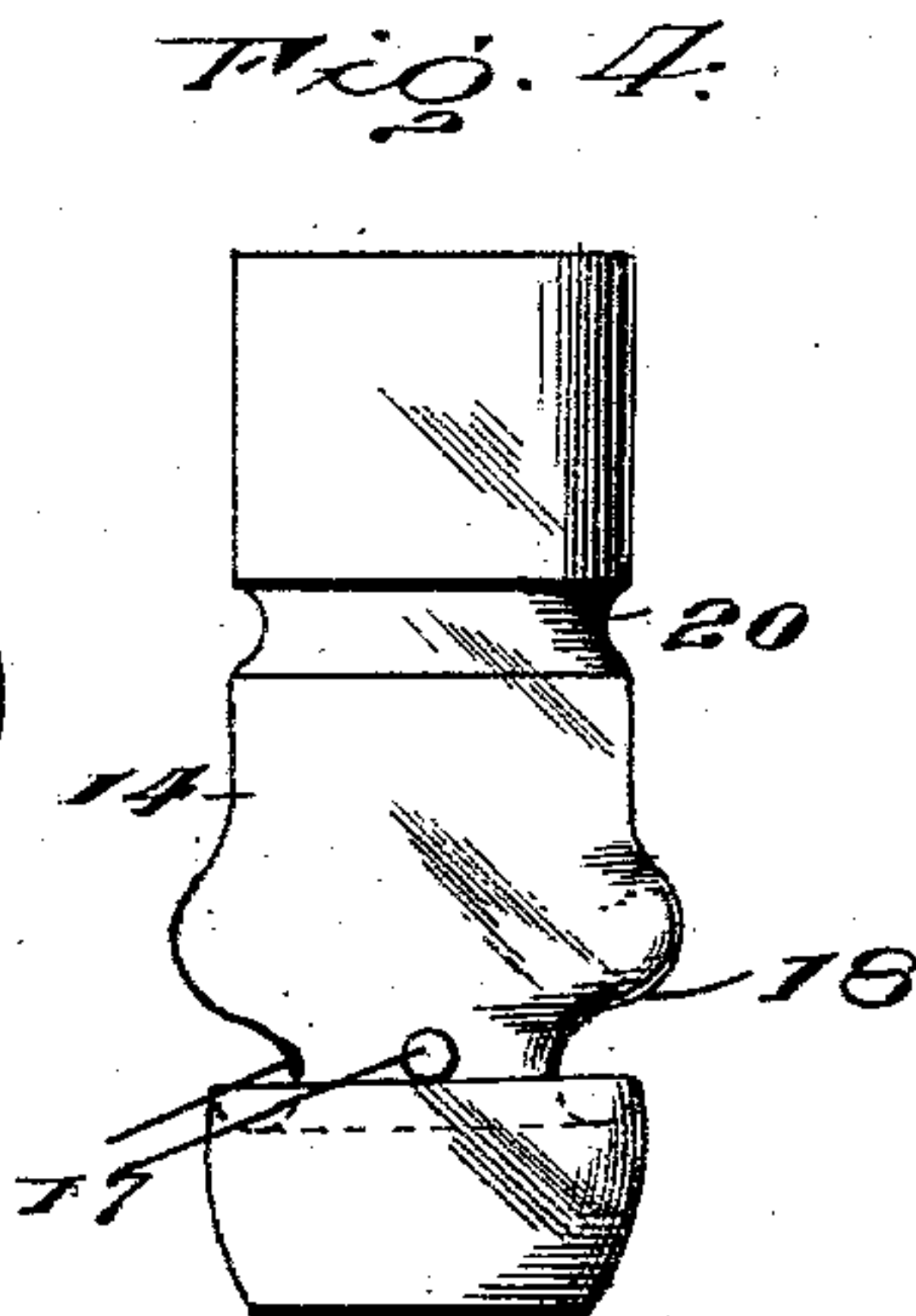
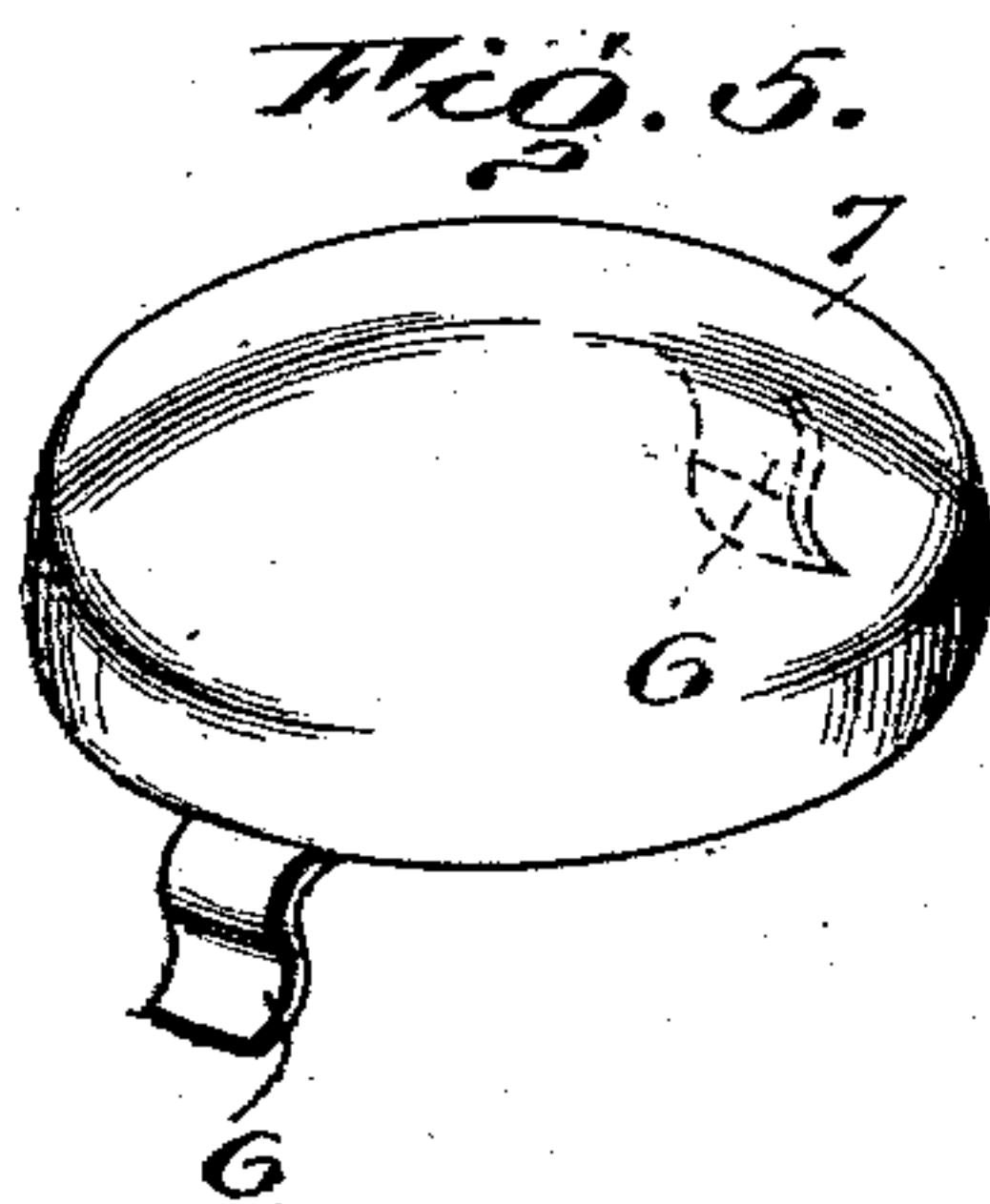
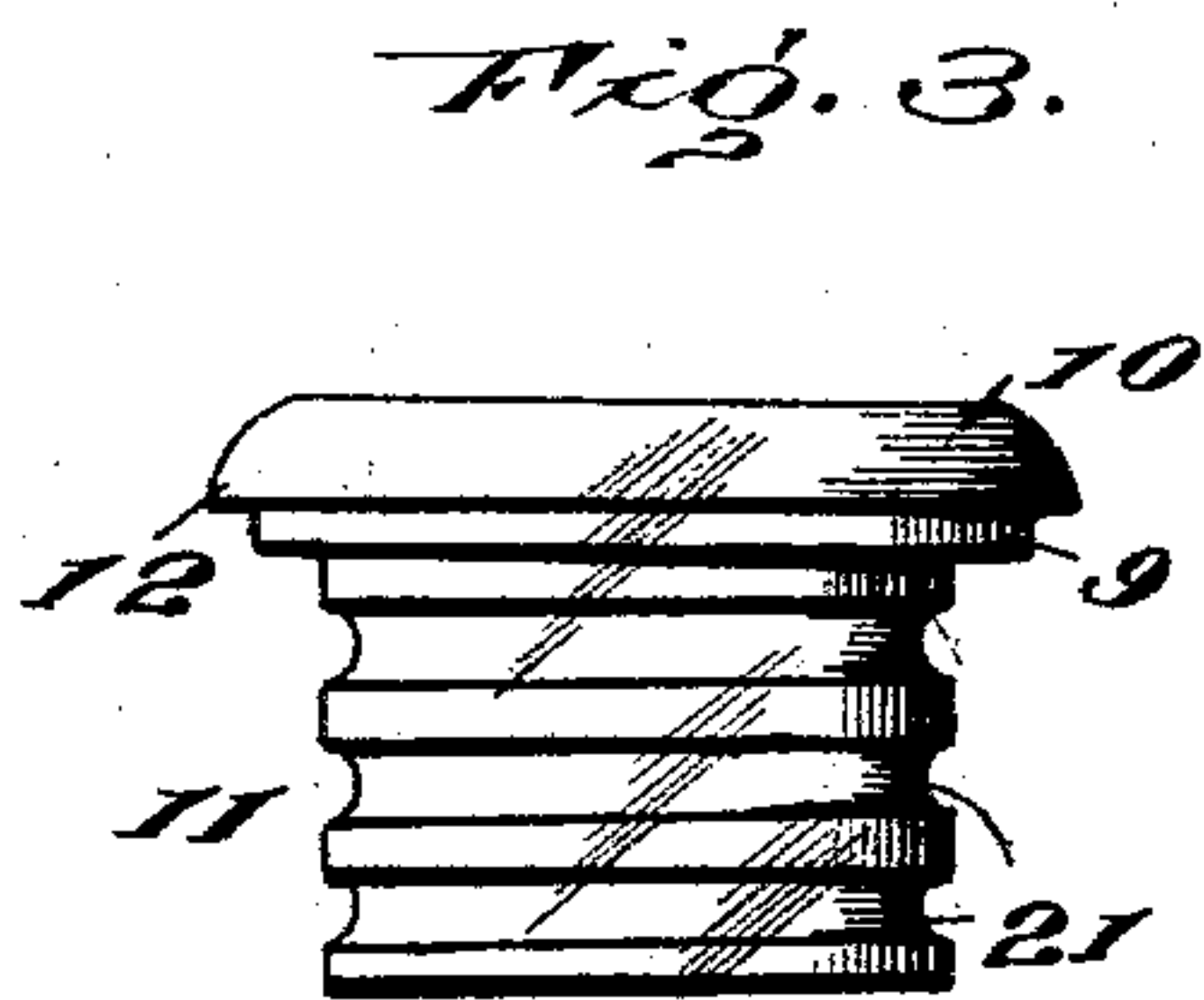
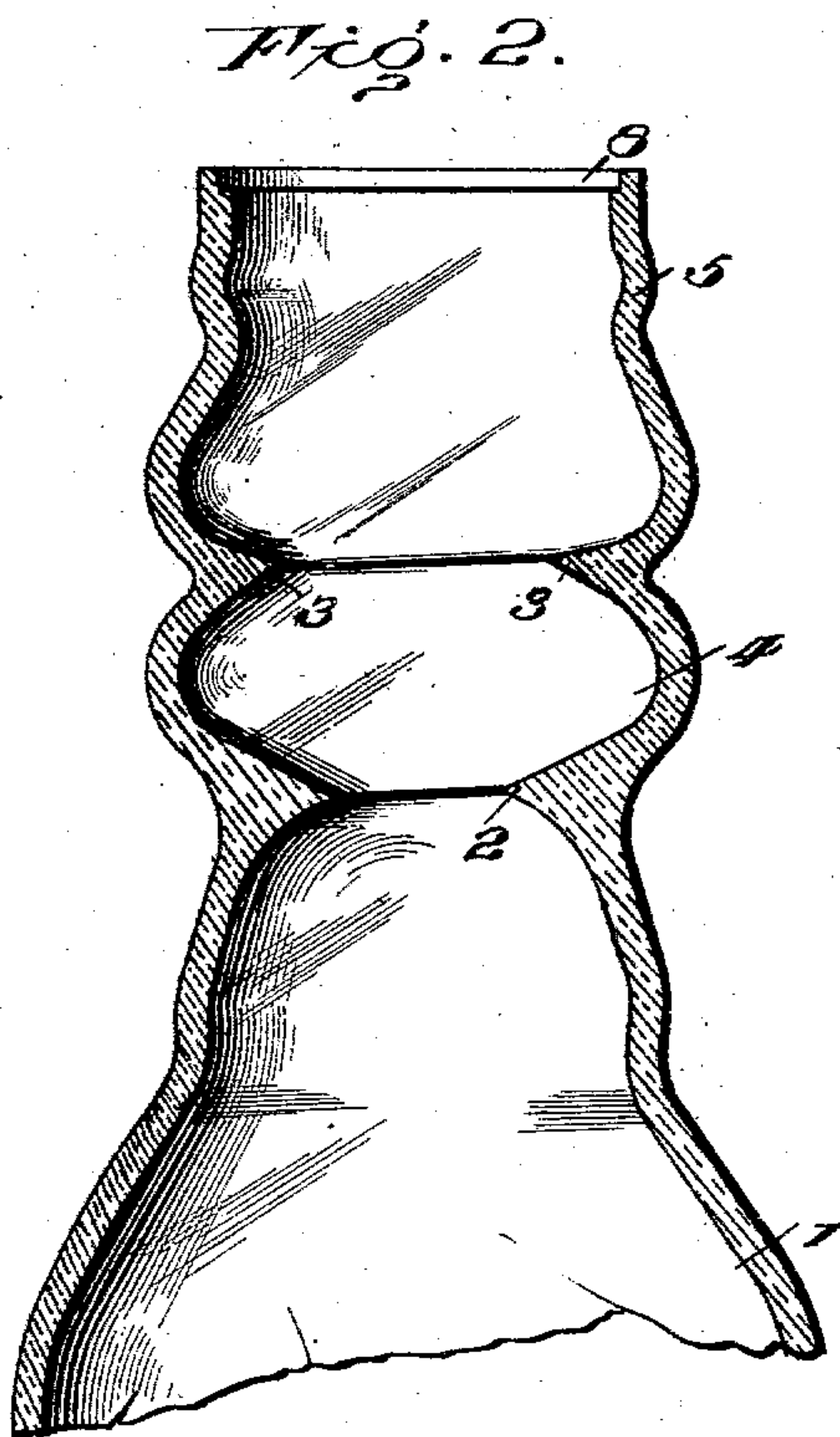
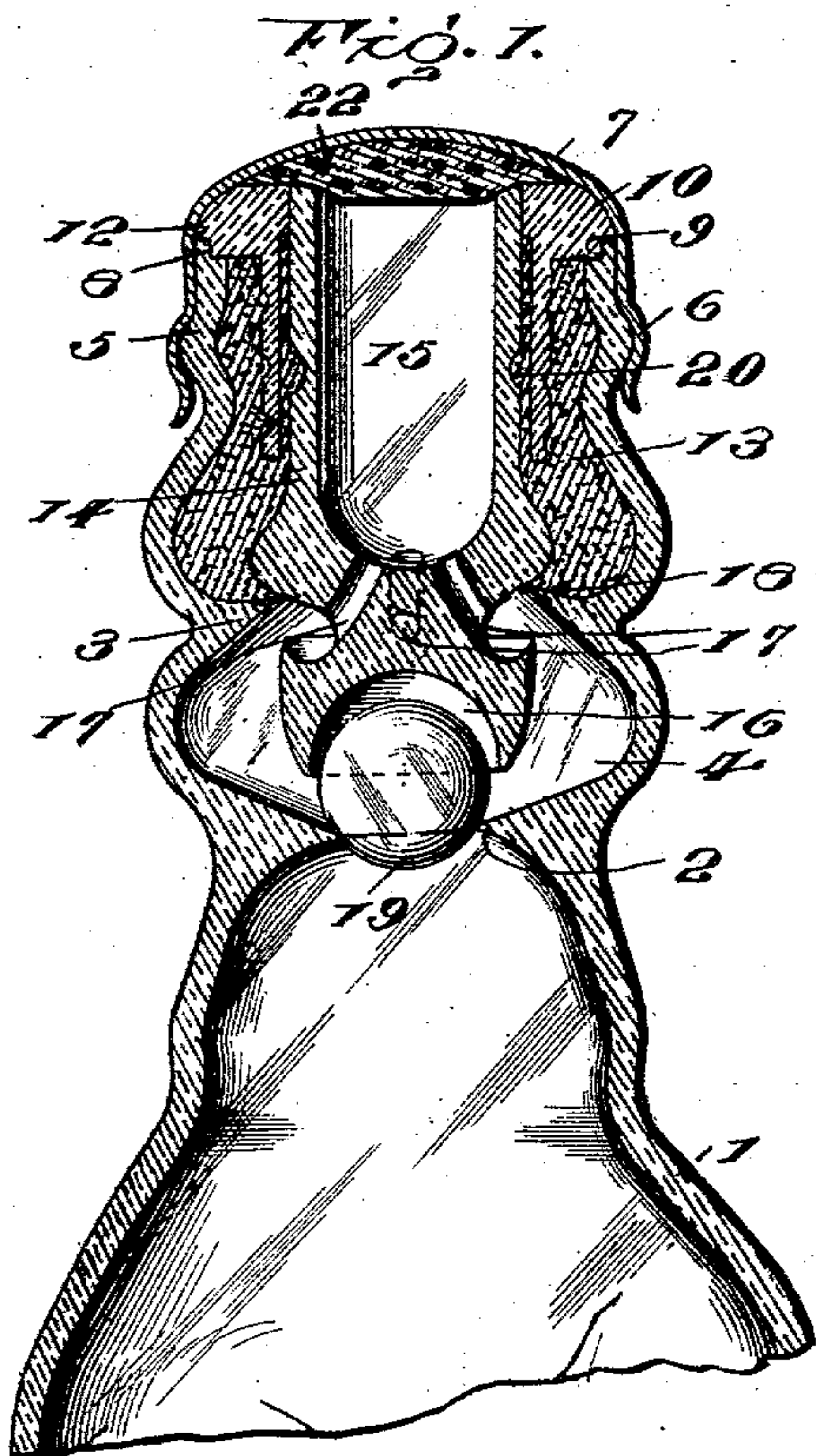


No. 743,907.

PATENTED NOV. 10, 1903.

C. H. MILLER.  
NON-REFILLABLE BOTTLE.  
APPLICATION FILED JUNE 20, 1903.

NO MODEL.



WITNESSES:

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INVENTOR

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BY

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# UNITED STATES PATENT OFFICE.

CHARLES H. MILLER, OF LOGTOWN, MISSISSIPPI.

## NON-REFILLABLE BOTTLE.

SPECIFICATION forming part of Letters Patent No. 743,907, dated November 10, 1903.

Application filed June 20, 1903. Serial No. 162,423. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES H. MILLER, a citizen of the United States, residing at Logtown, in the county of Hancock and State of Mississippi, have invented certain new and useful Improvements in Non-Refillable Bottles, of which the following is a specification.

This invention has relation to bottles, jars, jugs, and like vessels or receptacles having necks or spouts to facilitate the pouring off of the liquid contents and to receive the stopper or other closure.

The purpose of the invention is to devise novel means for preventing the reuse of the bottle or package after the same has been emptied, thereby preventing imposition upon the consumer and a material decrease of the income to the party or concern placing a special brand or kind of goods upon the market under an arbitrary label, trade-mark, or kindred protection.

This invention while aiming to prevent the refilling of a necked receptacle also strives to minimize the cost of manufacture and the expense attendant upon assorting and assembling the parts when filling the packages.

For a full description of the invention and the merits thereof and also to acquire a knowledge of the details of construction of the means for effecting the result reference is to be had to the following description and drawings hereto attached.

While the essential and characteristic features of the invention are susceptible of modification, still the preferred embodiment of the invention is illustrated in the accompanying drawings, in which—

Figure 1 is a vertical central section of the upper portion of a bottle or necked receptacle embodying the invention, the component parts being in the position which they will assume after the package has been filled and sealed. Fig. 2 is a view similar to Fig. 1, the several parts being removed. Fig. 3 is a detail view in elevation of the protector. Fig. 4 is a view in elevation of the guard. Fig. 5 is a detail view in perspective of the cap.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

The body of the bottle, receptacle, or like package is indicated at 1, and its neck is provided with an inner annular extension 2, forming a valve-seat, and with a second inner annular extension 3, constituting a stop to limit the downward movement of the guard and support the same when placed within the neck prior to the operation of sealing. The portion of the neck between the inner annular extensions 2 and 3 is outwardly swelled, as shown at 4, to provide ample room for the outflow of the fluid contents of the bottle or package when the latter is tilted to pour off its contents. The neck near its upper end is formed with an annular bulge 5 for cooperation with the spring-holder 6 of the cap 7 to hold the latter in place. The end of the neck is rabbeted, as shown at 8, to receive the shoulder 9 of outer flange 10 at the upper end of the protector 11. The flange 10 has an outer lip 12 to overlap and rest upon the end of the neck and in conjunction with the shoulder 9 preclude access to the cementing material 13, by means of which the guard and protector are secured within the neck of the package.

The guard 14 has a recess or opening 15, extended inward from its upper end, and a depression 16 in its lower end to receive the upper portion of the ball-valve 19, provided to close down upon the valve-seat 2. The lower portion of the guard is enlarged and provided with a series of curved passages 17, which communicate with the opening 15 and with the annular space surrounding the lower end of the guard, formed by means of the swelled portion 4 of the neck. The passages 17 curve downward and outward and extend through the sides of the guard at a point just below the annular shoulder 18, which is adapted to rest upon the inner annular extension 3, so as to support the guard within the neck of the bottle or package and form a close joint therewith and prevent any of the cementing material 13 escaping into the space formed below the shoulder 18 and supporting part 3. By having the passages 17 curved in the manner set forth a wire or other instrument introduced into the opening 15 is prevented from reaching the valve 19. An annular groove 20 is formed in the outer side



of the guard to receive a portion of the cementing material, thereby preventing inward or outward displacement of the guard after said material has hardened or set.

5 The protector consists of a sleeve 11, having a flange 10 at its upper end projecting beyond opposite sides of the sleeve, so as to properly space the latter and the guard and insure cementing material coming upon both  
10 sides of the sleeve and forming a tight and secure joint therewith. The outer side of the sleeve is formed with a series of annular grooves 21, into which the cementing material 13 enters to form a lock-joint and prevent possible outward displacement of the  
15 protector.

The cap 7 is of metal and is provided with spring-holder 6, having outwardly-deflected portions to engage over the outer bulged or  
20 swelled portion 5 of the neck, so as to hold the cap against casual displacement. A packing material 22 is arranged within the upper end of the cap and is adapted to provide a close joint between the same and the  
25 upper ends of the protector and guard. The cap also serves as a convenient means for holding the parts comprising the closure in place in the neck of the bottle or package, thereby facilitating and minimizing the cost  
30 incident to filling the packages and properly closing the same.

The parts—that is, the ball-valve 19, protector 11, and guard 14—may be loosely placed in position in the neck of the bottle at the  
35 factory and are held in place by the cap 7. This method obviates the loss of time and cost incident to shipping the parts in bulk and necessitating assorting and assembling thereof when filling the bottles or packages.

40 In accordance with this invention the bottle or package to be filled and having the elements comprising the closure loosely held in place is received by the filler and the parts removed, and after the bottle has been filled  
45 said parts are replaced, thereby insuring proper fit and avoidance of the annoyance and loss of time incident to selecting and fitting of parts when shipped in bulk. After the bottle has been filled the ball-valve 19 is  
50 placed in position. The guard 14 is next inserted into the neck and arranged to be supported therein by the shoulder 18 resting upon the inner annular extension 3. The cementing material 13, such as plaster-of-paris or  
55 other self-hardening plastic material, is filled into the space formed between the guard and upper portion of the neck. The protector 11 is now introduced into the neck and the sleeve portion pressed into the space formed between  
60 the upper portion of the guard and the corresponding parts of the neck. After the cementing substance has set or become hard the parts cannot be removed without breaking or otherwise mutilating the package to  
65 such an extent as to render detection certain. The cap 7 is finally placed in position and se-

cured by the spring arms or holders 6, engaging over the part 5. When it is required to pour off the liquid contents of the bottle, the cap is removed and the bottle or package  
70 tilted in the accustomed way, the valve 19 moving away from the seat 2 and entering the depression 16 and the liquid passing out of the bottle through the space 4, passages 17, and opening 15, as will be readily comprehended.  
75

Having thus described the invention, what is claimed as new is—

1. In a necked receptacle, a valve arranged within the neck, an inner extension projected  
80 into the neck at a point above the valve, and a guard having an outer extension near its lower end to rest upon said inner extension of the neck and having its lower end portion spaced from the part of the neck between the  
85 seats of the valve and guard, said guard having an opening extended therein from its upper end and having passages in communication at their upper ends with said opening and at their lower ends with the space surrounding  
90 the lower end of the guard, substantially as set forth.

2. In combination, a package having a neck provided with upper and lower inner extensions, the latter forming a valve-seat, a valve  
95 adapted to close downward upon said seat, a guard having its end portions spaced from the neck and having an opening extended therein from its upper end, an outer shoulder between its upper and lower ends to rest upon  
100 the upper inner extension of the said neck and having outwardly and downwardly curved passages in communication at their upper ends with the opening at the upper end of the guard and in communication at their lower  
105 ends with the space surrounding the lower end of the guard and comprised between the aforesaid upper and lower inner annular extensions of the neck, and cementing material filling the space formed between the upper  
110 portion of the guard and neck, substantially as specified.

3. In combination, a bottle or package having a neck provided with upper and lower inner annular extensions, the latter forming a  
115 valve-seat, a valve adapted to close downward upon said seat, a guard having its end portions spaced from the neck and supported therein by means of the said upper inner annular extension thereof and having an opening  
120 in its upper end and passages in its lower portion connecting said opening with the space surrounding the lower end of the guard and comprised between the upper and lower inner annular extensions thereof, and a protector  
125 comprising a sleeve which enters the space formed between the guard and neck, and a flange extending over and closing the space formed between said guard and neck, substantially as set forth.  
130

4. The combination of a bottle or package having its neck provided with upper and lower



inner annular extensions, a valve cooperating with the lower inner annular extension, a guard supported within the neck of the package at a point between its upper and lower  
5 ends and having a depression in its lower end and an opening in its upper end and having passages extended outward and downward from the opening, a protector comprising a flange and sleeve, the latter extended into the  
10 space formed between the guard and neck,

and cementing material filling the space between the upper portions of the guard and neck, substantially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

CHARLES H. MILLER. [L. S.]

Witnesses:

E. W. MAXSON,

R. G. BURELL.