

No. 878,175.

PATENTED FEB. 4, 1908.

J. S. ALSTON.  
BOTTLE STOPPER.

APPLICATION FILED APR. 18, 1907.

Fig. 1.

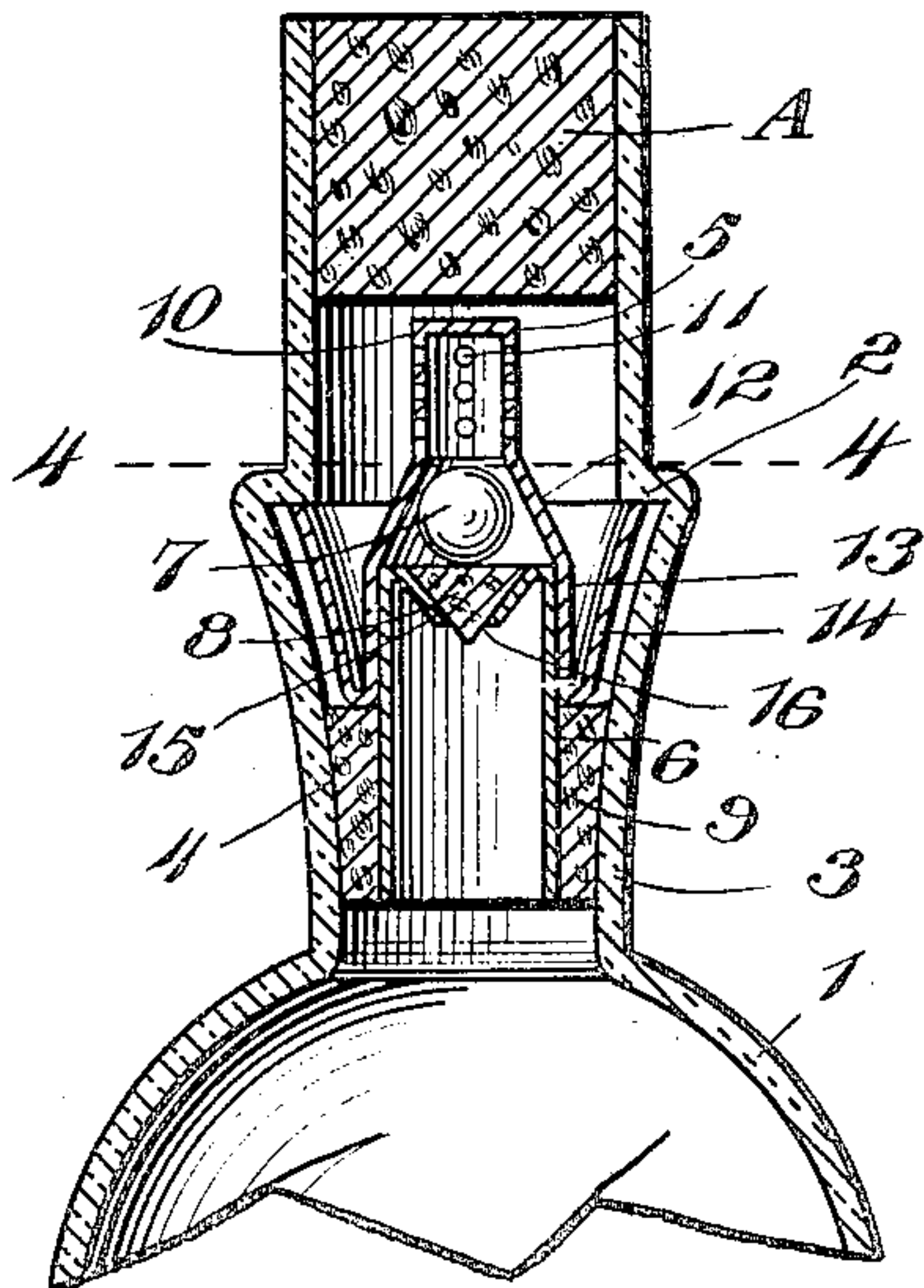


Fig. R.

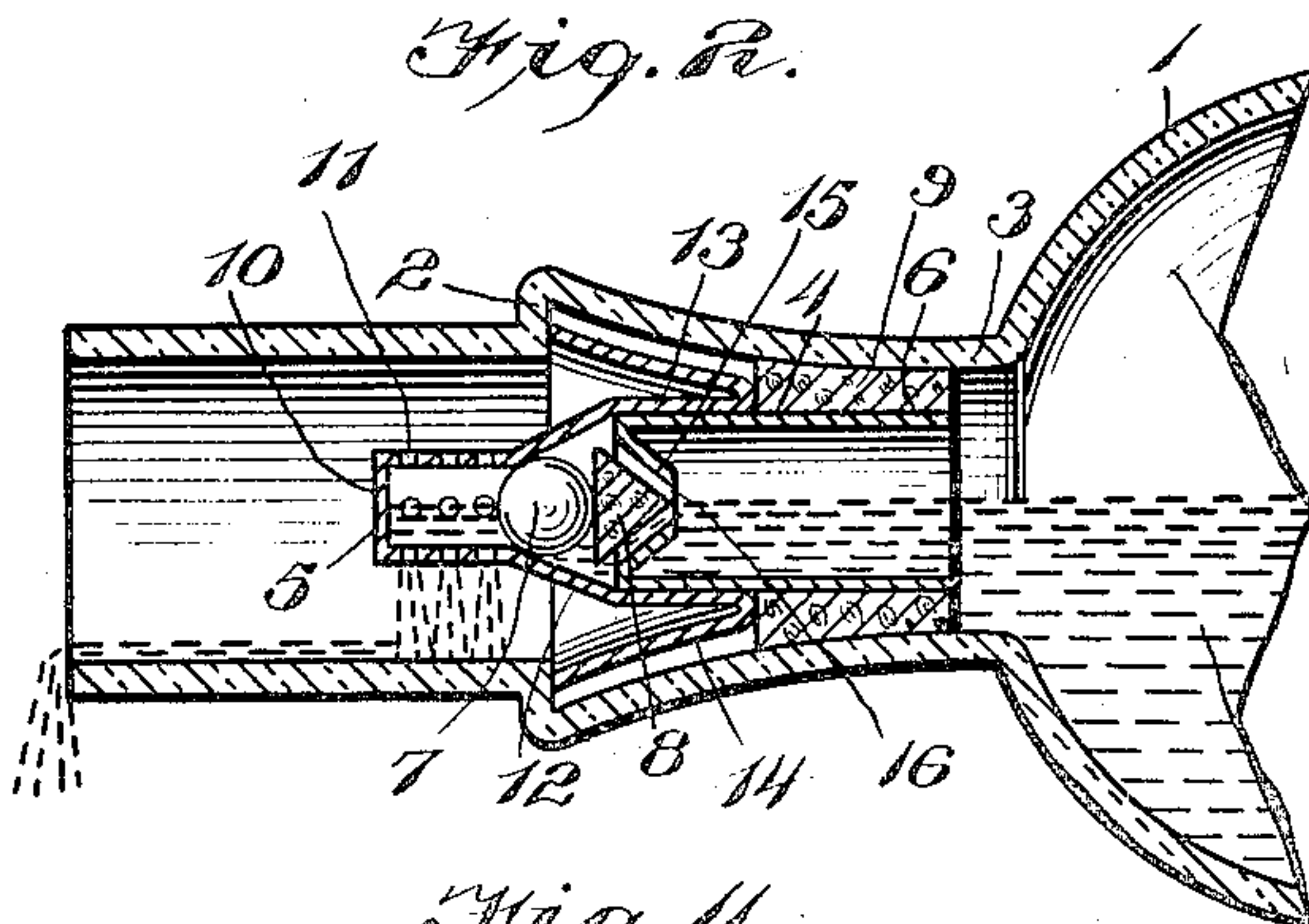


Fig. 1.

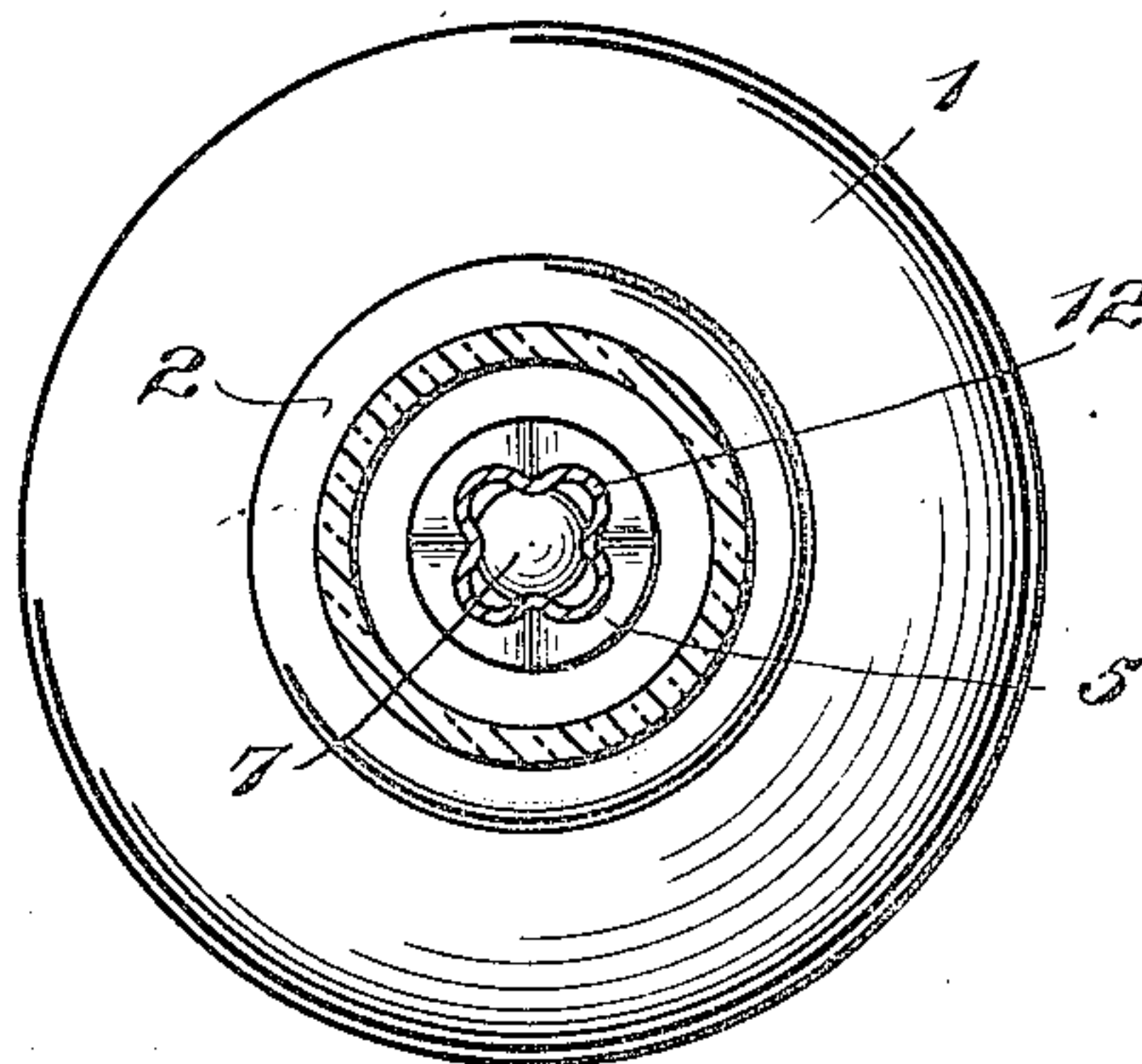


Fig. 3.

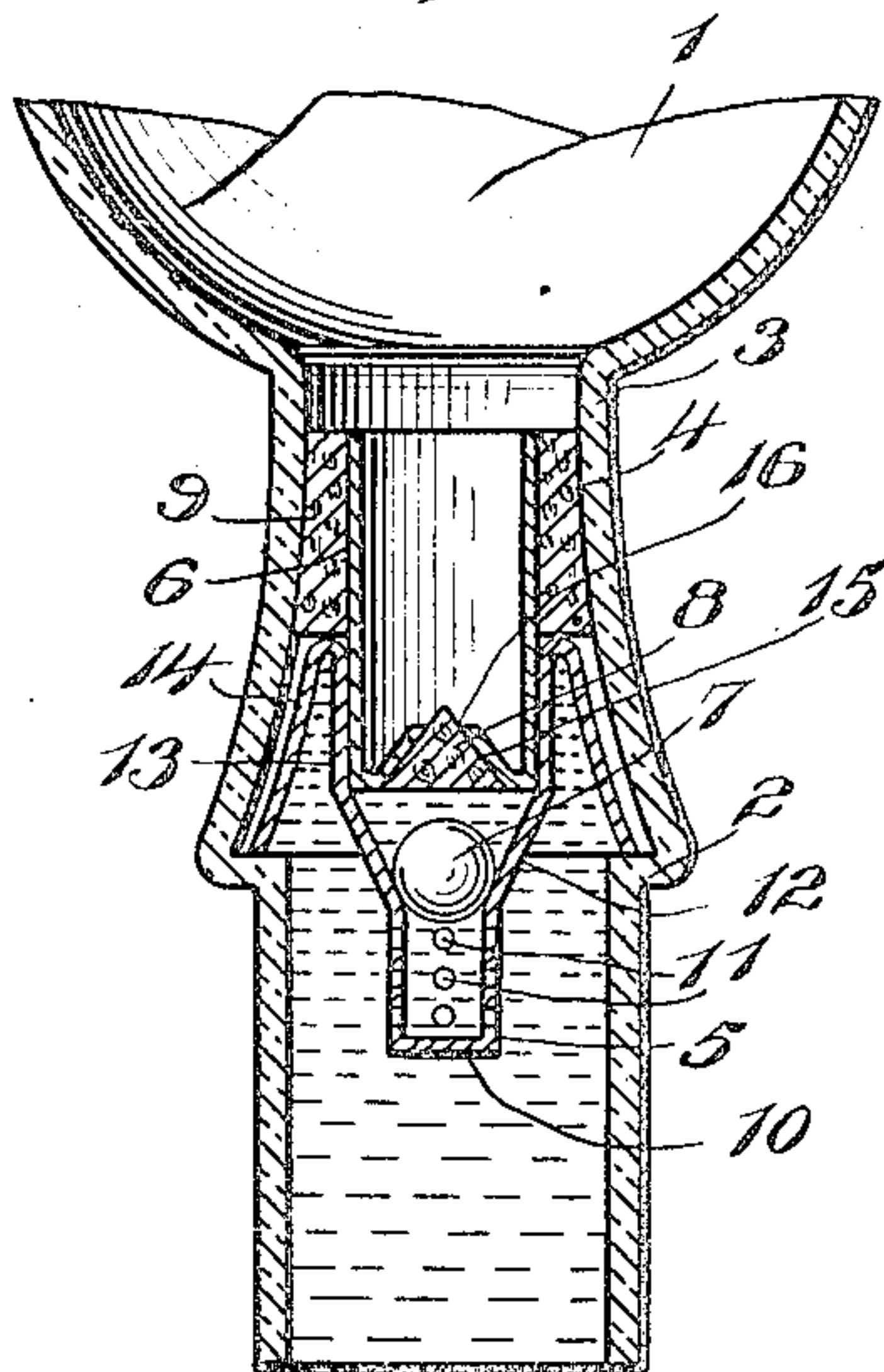


Fig. 5.

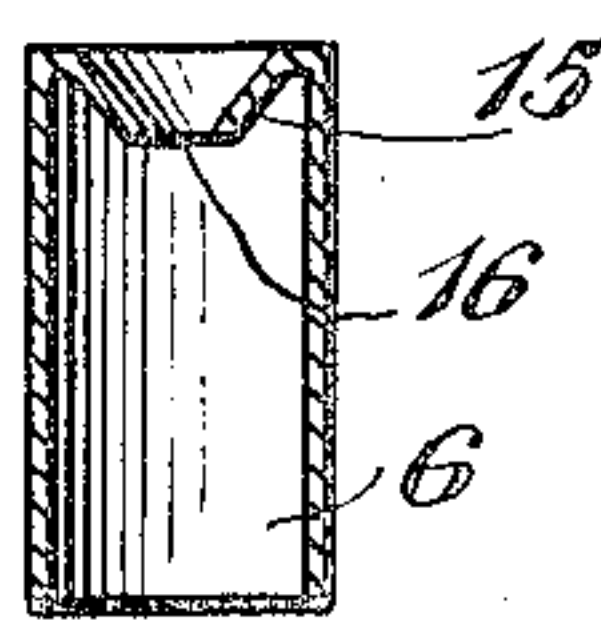


Fig. 9.

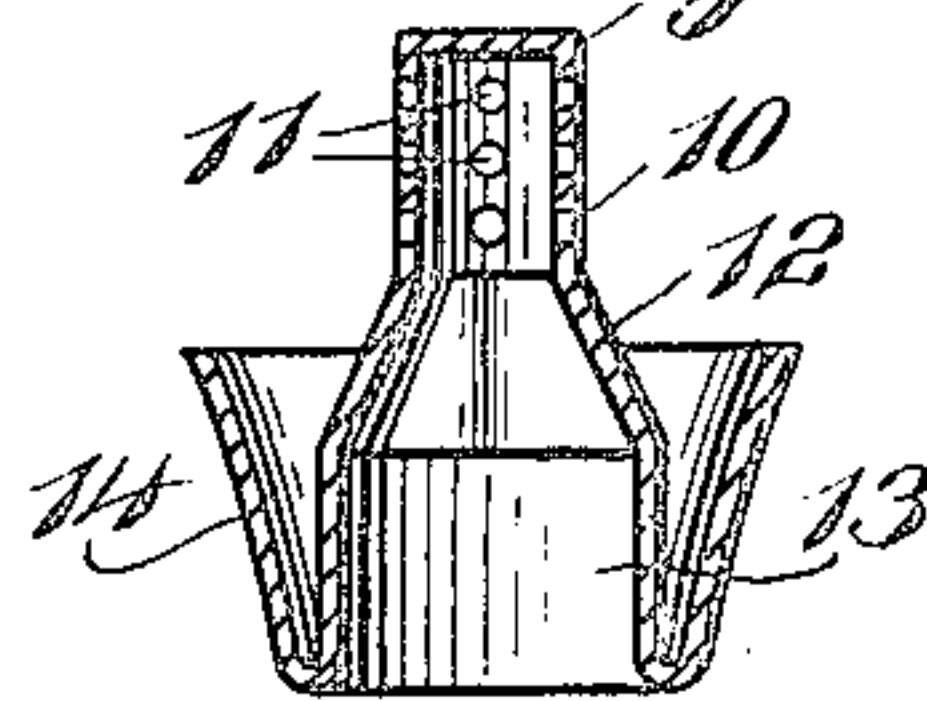


Fig. 7.



Fig. 6.

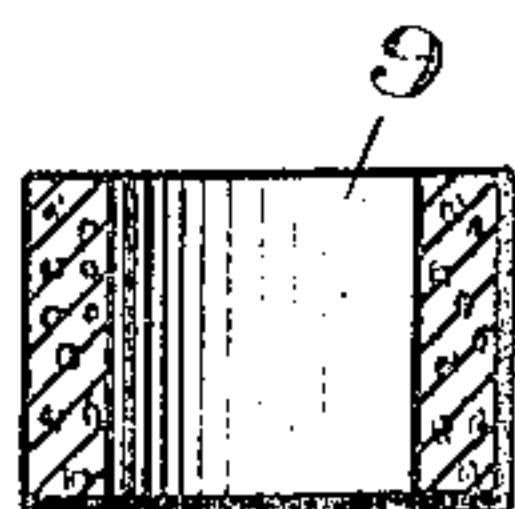


Fig. 10.

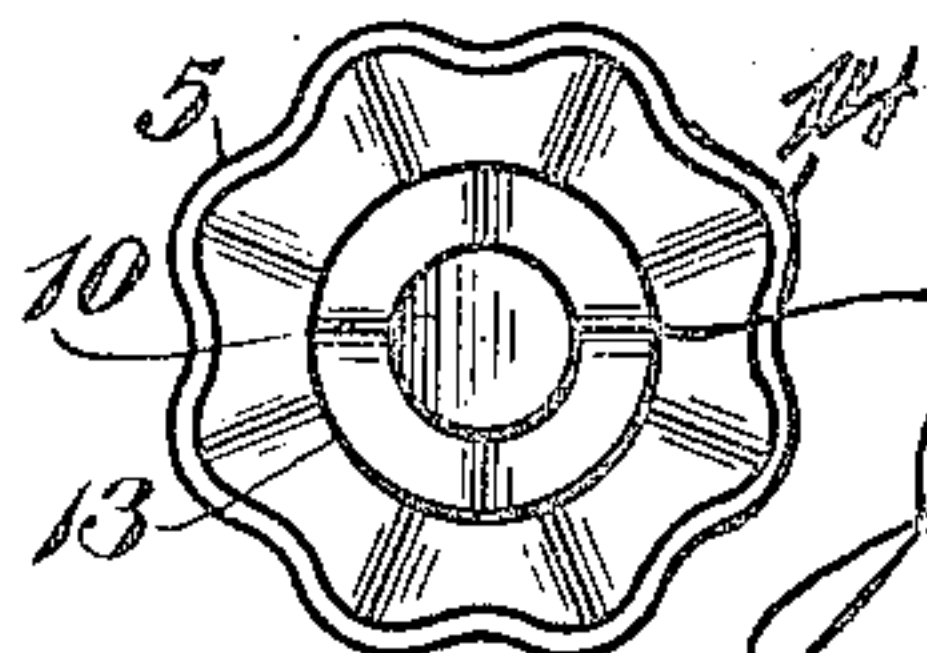


Fig. 8.



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# UNITED STATES PATENT OFFICE.

JOHN S. ALSTON, OF ATLANTIC CITY, NEW JERSEY.

## BOTTLE-STOPPER.

No. 878,175.

Specification of Letters Patent.

Patented Feb. 4, 1908.

Application filed April 18, 1907. Serial No. 368,889.

*To all whom it may concern:*

Be it known that I, JOHN S. ALSTON, a citizen of the United States, residing at Atlantic City, in the county of Atlantic and State of New Jersey, have invented certain new and useful Improvements in Bottle-Stoppers; 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, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

My invention relates to bottle stoppers, but more particularly to a stopper which is so constructed that it will freely allow the contents of a bottle to be emptied, but will prevent the refilling of the same.

My invention has for its object to provide a device of this class which is simple in its construction, cheap to manufacture and easy to apply to a bottle.

With this object in view my invention consists in the novel construction of the valve guard; and also in certain combinations of parts which will be first fully described and afterwards specifically pointed out in the appended claims.

Referring to the accompanying drawing. Figure 1 is a vertical sectional view through neck of bottle showing stopper in position. Fig. 2 is a similar view showing position for emptying contents. Fig. 3 is a similar view showing bottle inverted and illustrating position of valve in an attempt to refill the bottle. Fig. 4 is a horizontal section taken on line 4—4 of Fig. 1. Fig. 5 is a vertical section through valve seat. Fig. 6 is a vertical section through cork ring. Fig. 7 is an elevation of valve. Fig. 8 is an elevation of ball. Fig. 9 is a vertical section through valve guard, and Fig. 10 is a top plan of valve guard.

Like numerals of reference indicate the same parts throughout the several figures, in which:

1 indicates a bottle which as shown in Fig. 1 is provided with a shoulder 2 in the neck thereof and a reduced portion 3 below said shoulder.

4 indicates the stopper which comprises the guard 5, valve seat 6, ball 7, valve 8 and ring 9 of cork or other suitable material.

The guard 5 comprises a reduced cylindrical

portion or end 10 provided with a number of perforations 11.

12 indicates the fluted flaring portion upon which the ball rests when the bottle is in position as shown in Fig. 2.

13 is the cylindrical body and 14 the fluted rim arranged to engage the shoulder 2 of the bottle neck as shown in Fig. 1.

The valve seat 6 is provided with a cone-shaped seat 15 and a longitudinal bore 16.

Having thus described the several parts of my invention its operation is as follows: In order to assemble the parts and apply them to a bottle, the ring 9 of cork or other material is placed on the valve seat 6 and the two are inserted in the neck of the bottle, and are forced to a bearing in the reduced portion 3 of the bottle neck as shown in Fig. 1. The cone-shaped valve 8 is then placed in position in its seat 15, the ball 7 placed in the guard 5 and the guard then inserted in the bottle neck. By reason of the fluted form of the rim 14, the said rim compresses within the neck of the bottle and expands when it reaches the shoulder 2 on the bottle neck; thus securely locking the several parts within the bottle neck and rendering it impossible to remove the same without destroying the bottle. The parts being in position, a plain cork or stopper A may be inserted in the mouth of the bottle to prevent dust from entering the same. In order to empty the contents, the bottle is tilted into position shown in Fig. 2, the liquid forcing the cork valve 8 from its seat allowing the liquid to pass through the bore 16 in the seat 6, and as that portion of the guard 5 engaged by the ball 7 is fluted, the liquid is free to pass along the flutes around the ball and out through the perforations 11 in the cylindrical end 10 of the guard. Any attempt to refill the bottle by submerging the same or by forcing liquid into the bottle when inverted will raise the valve 8 and securely seat the same in such manner that the bottle cannot be refilled.

Having thus fully described my invention what I claim as new and desire to secure by Letters Patent of the United States is:—

1. In a device of the character described, the combination of a valve and valve seat, a ball associated with said valve, a valve guard having a perforated cylindrical end portion, a flaring fluted portion adjacent said ball, a cylindrical body portion and a fluted rim for

engagement with the neck of a bottle, substantially as described.

2. In a device of the character described, the combination of a valve and valve seat  
5 for insertion within the neck of a bottle, a ball associated with said valve, a guard having a perforated cylindrical end portion, a flaring portion adjacent said ball, a cylindrical body portion and a flaring rim for en-

gagement with the neck of a bottle, substantially as described. 10

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

JOHN S. ALSTON.

Witnesses:

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HERBERT R. VOORHEES.