

No. 837,089.

PATENTED NOV. 27, 1906.

J. W. MADDOX.
BOTTLE OR RECEPTACLE.
APPLICATION FILED APR. 7, 1906.

Fig. 1.

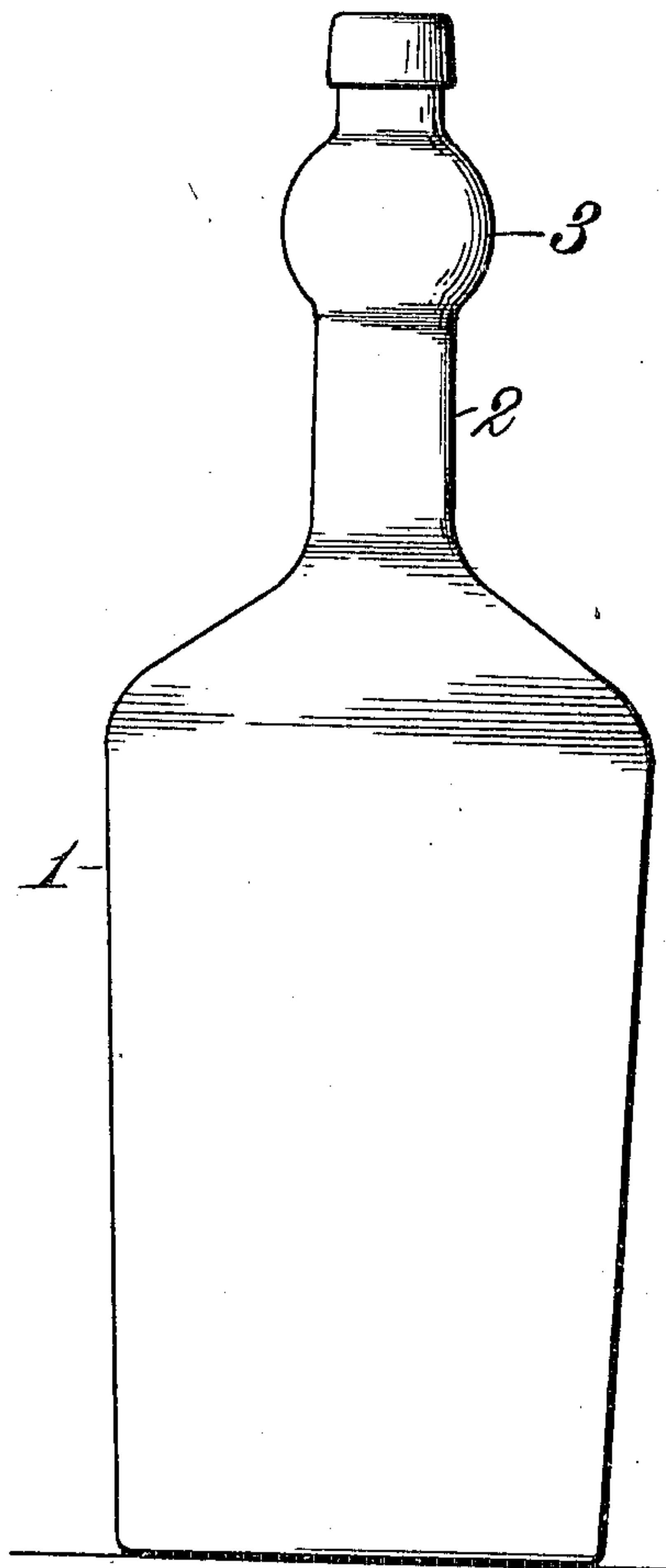


Fig. 2.

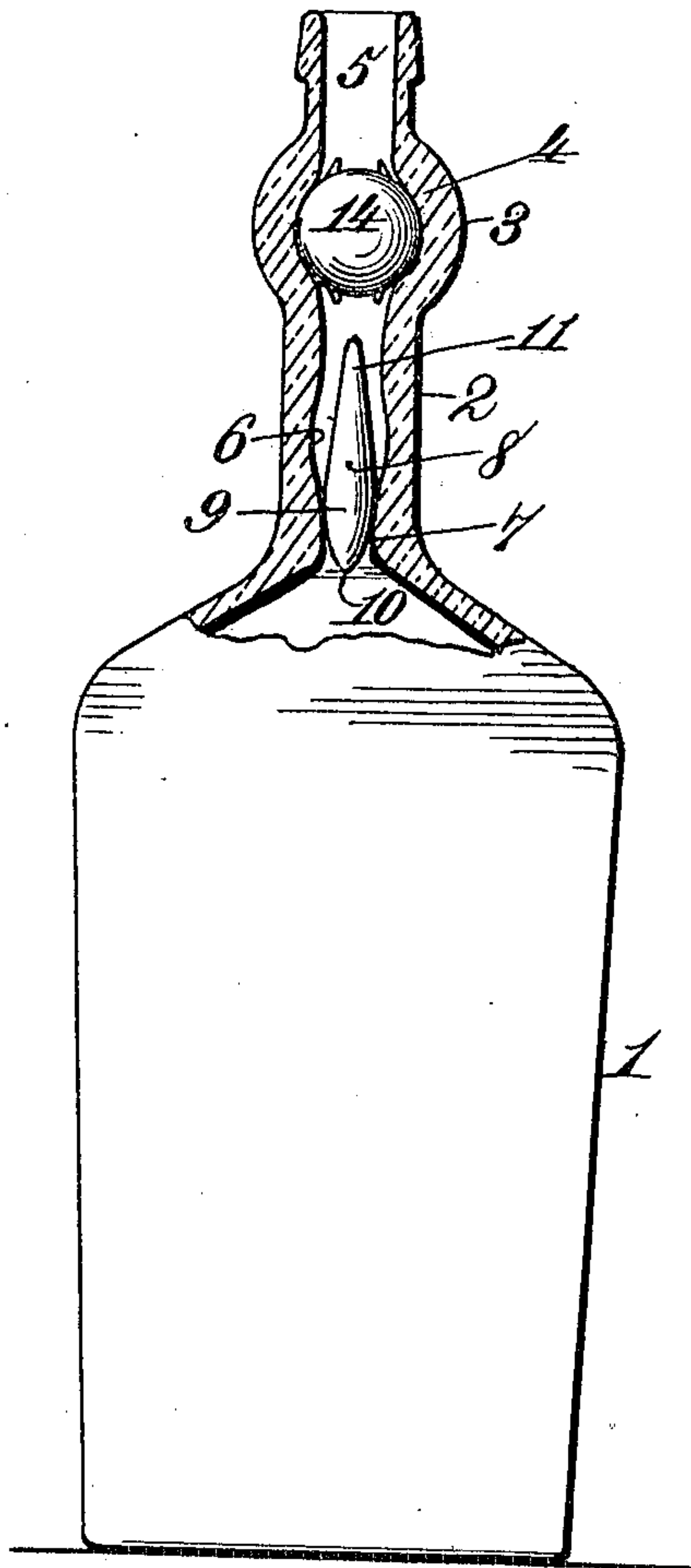
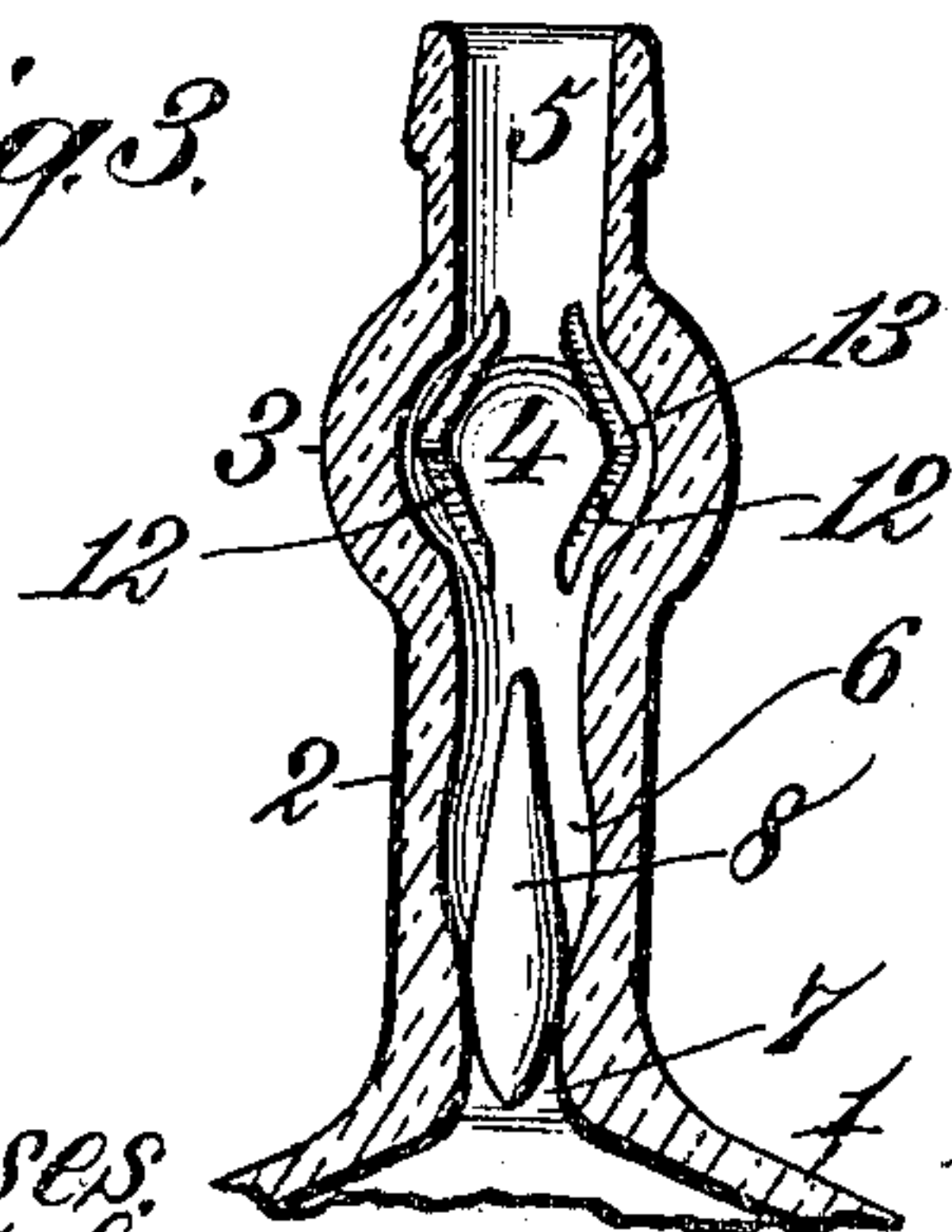
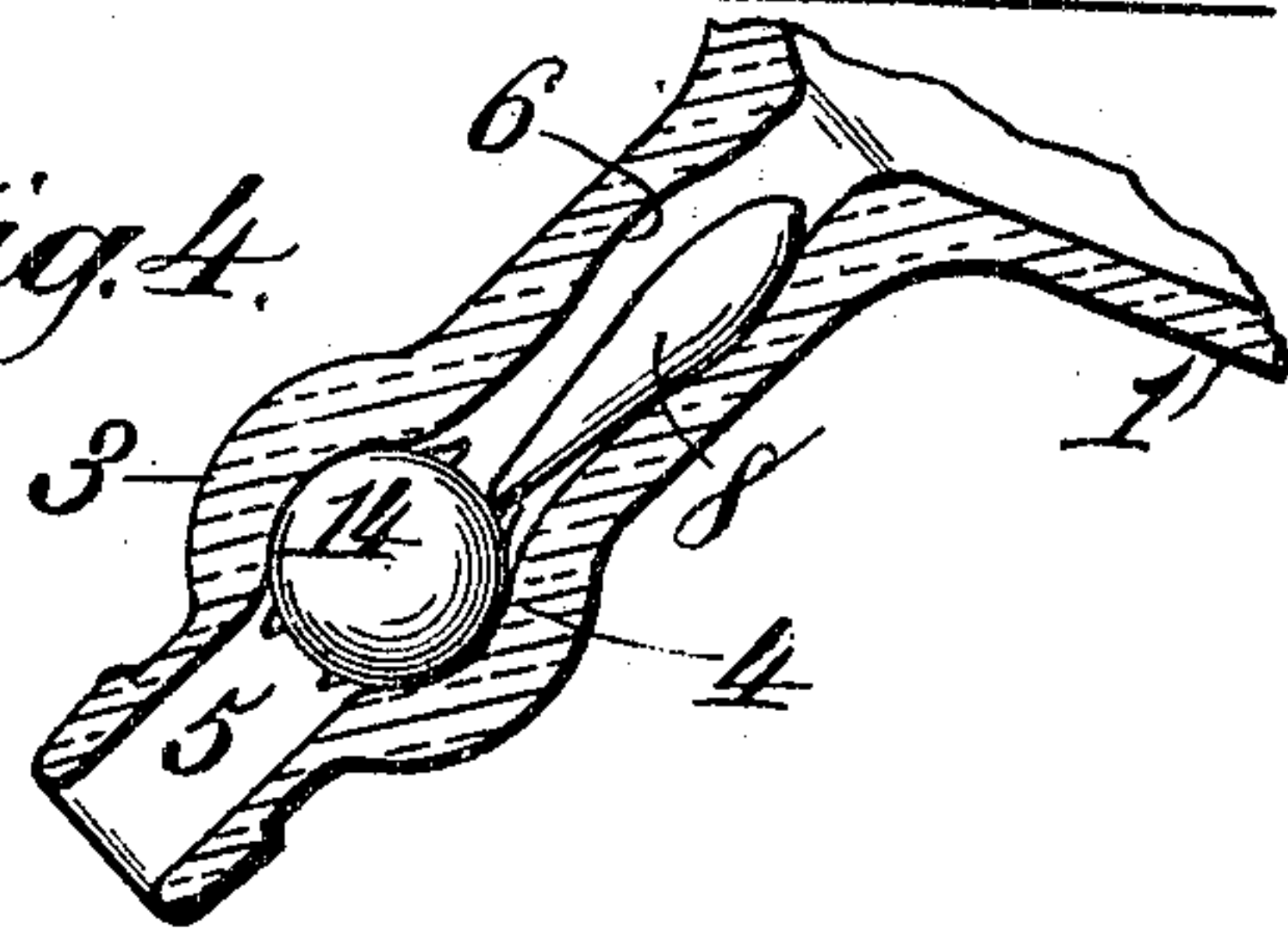


Fig. 3.



Witnesses:
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Fig. 4.



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UNITED STATES PATENT OFFICE.

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BOTTLE OR RECEPTACLE.

No. 837,089.

Specification of Letters Patent.

Patented Nov. 27, 1906.

Application filed April 7, 1906. Serial No. 310,503.

To all whom it may concern:

Be it known that I, JOHN W. MADDOX, a citizen of the United States, residing at Tulls Corner, in the county of Somerset and State of Maryland, have invented new and useful Improvements in Bottles or Receptacles, of which the following is a specification.

This invention relates to a bottle of that type having means in the neck thereof for preventing refilling of the same, but automatically operative to permit the outflow of the original contents.

The primary object of the invention is to simplify the construction of devices of this class and render them practical within the meaning of commercial introduction without in the least detracting from the efficiency of the non-refillable characteristics thereof.

A further object of the invention is to prevent the introduction in the body of a bottle of a liquid or material after the original contents thereof have been dispensed.

The invention consists in the construction and arrangement of the several parts, which will be more fully hereinafter set forth.

In the drawings, Figure 1 is an elevation of a portion of a bottle embodying the features of the invention. Fig. 2 is a transverse vertical section through the neck thereof. Fig. 3 is a view similar to Fig. 2 with a part of the closing means removed. Fig. 4 is a view similar to Fig. 2 tilted to illustrate the opening movement of the main controlling-valve in the neck.

Similar numerals of reference are employed to indicate corresponding parts in the several views.

The numeral 1 designates a bottle or jar-body or the body of any other containing receptacle to which the improved features may be applicable. Rising from this body, as in ordinary bottle constructions, is a neck 2, which in the present instance has an intermediate bulge or spherical protuberance 3, providing a circular chamber 4, with which the upper mouth portion 5 of the neck connects and has communication. The upper mouth portion 5 of the neck is adapted to receive a cork stopper or other temporary closure which is readily removable. Below the chamber 4 the neck 2 has an internal enlarged portion 6 to provide a valve-chamber,

which converges toward a reduced opening 7, communicating with the interior of the body 1, and within the said valve-chamber 6 and opening 7 an elongated valve 8 is gravitationally mounted and has a lower enlarged body 9 with a pointed terminal 10 and an upper elongated tapering neck 11. The chamber 4 has grooves 12 formed in the outer wall portion thereof at opposite points and disposed in pairs on opposite sides of one vertical diametrical central plane of the said chamber, each of the grooves being centrally deflected at an angle, as at 13, and having their terminals outletting, respectively, in the upper portion 5 of the neck and also communicating with the opening through the neck below the said chamber 4. When the neck is formed as set forth, a glass ball 14 is blown into and snugly fits the chamber 4, the said ball being inserted in position and the non-refillable sealing of the device completed after the body 1 is filled.

The ball and chamber 4 of the present construction differ from analogous arrangements as heretofore devised in that the ball has no movement or does not roll in its chamber and the grooves 11 are on opposite sides of the center of the chamber, and therefore do not interfere with the snug fit of the ball in the space between said grooves. This particular construction has been devised to obstruct any attempts to insert a wire or other implement into the bottle-neck to displace or open the valve 8 by persons having nefarious designs and desiring to introduce a substitute or spurious liquid into the bottle after the original contents have been dispensed. This obstruction to the introduction of a wire or implement is also obviated by the intermediate angular deflection of the grooves 13 without in the least interfering with the flow of the liquid through the said grooves when it is desired to dispense the contents of the bottle.

When the bottle is tilted or canted to cause the contents thereof to flow through the upper outlet portion 5 of the neck, the valve 8 moves outwardly, and the reduced terminal of the elongated tapering stem 11 strikes the ball 14, and the opposite enlarged extremity of said valve then rests in the valve-chamber 6, and the liquid from the body 1 is permitted to flow around the valve

and through the grooves 13 into the outlet portion 5 of the neck. When the bottle is restored to normal position, the valve 8 gravitates and closes the opening 7. The advantage of the elongated neck of the valve is to limit the movement thereof and always maintain it in positive position for closing the outlet between the body 1 and the neck 2 or the opening 7 and obviate any displacement or irregular movement of the valve. It is proposed to modify the proportions and dimensions of the several parts of the invention to compensate for variations in the bottle or receptacle necks with which they are used.

Having thus fully described the invention, what is claimed is—

1. In a receptacle of the class set forth, the combination of a body having a neck with a closing-valve slidably mounted therein, a spherical chamber in advance of the position of the valve and provided with pairs of intermediately-deflected grooves on opposite sides of one central vertical plane of the chamber, and a ball snugly fitting in the chamber and obstructed against rolling.

2. In a receptacle of the class set forth, the combination of a body having a neck with an automatically-operating closing-valve therein, a spherical chamber in advance of the valve, and a ball snugly fitted in the spherical chamber and prevented from rolling movement, the said chamber being provided

with means for permitting the flow of liquid therethrough.

3. In a receptacle of the class set forth, the combination of a body having a neck, a valve gravitatingly disposed in the said neck to close communication between the latter and the body and provided with an elongated tapering extremity, a spherical chamber in the neck in advance of the valve, and a ball snugly fitted in the said chamber and with which the tapered extremity of the valve is adapted to contact, the spherical chamber having means to permit the passage of liquid therethrough and the ball prevented from having rolling movement therein.

4. In a receptacle of the class set forth, the combination of a body having a neck, a gravitating device to automatically close communication between the neck and body, a spherical chamber in the neck in advance of the valve provided with angular grooves in the inner portion of the surrounding wall, and a ball snugly fitted in the chamber between the grooves, the said ball being prevented from having rolling movement.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

JOHN W. MADDUX.

Witnesses:

CHAS. S. HYER,
JAMES L. NORRIS.