

No. 830,903.

PATENTED SEPT. 11, 1906.

J. G. KLEE.
BOTTLE CLOSURE.

APPLICATION FILED DEC. 20, 1905.

Fig. 1.

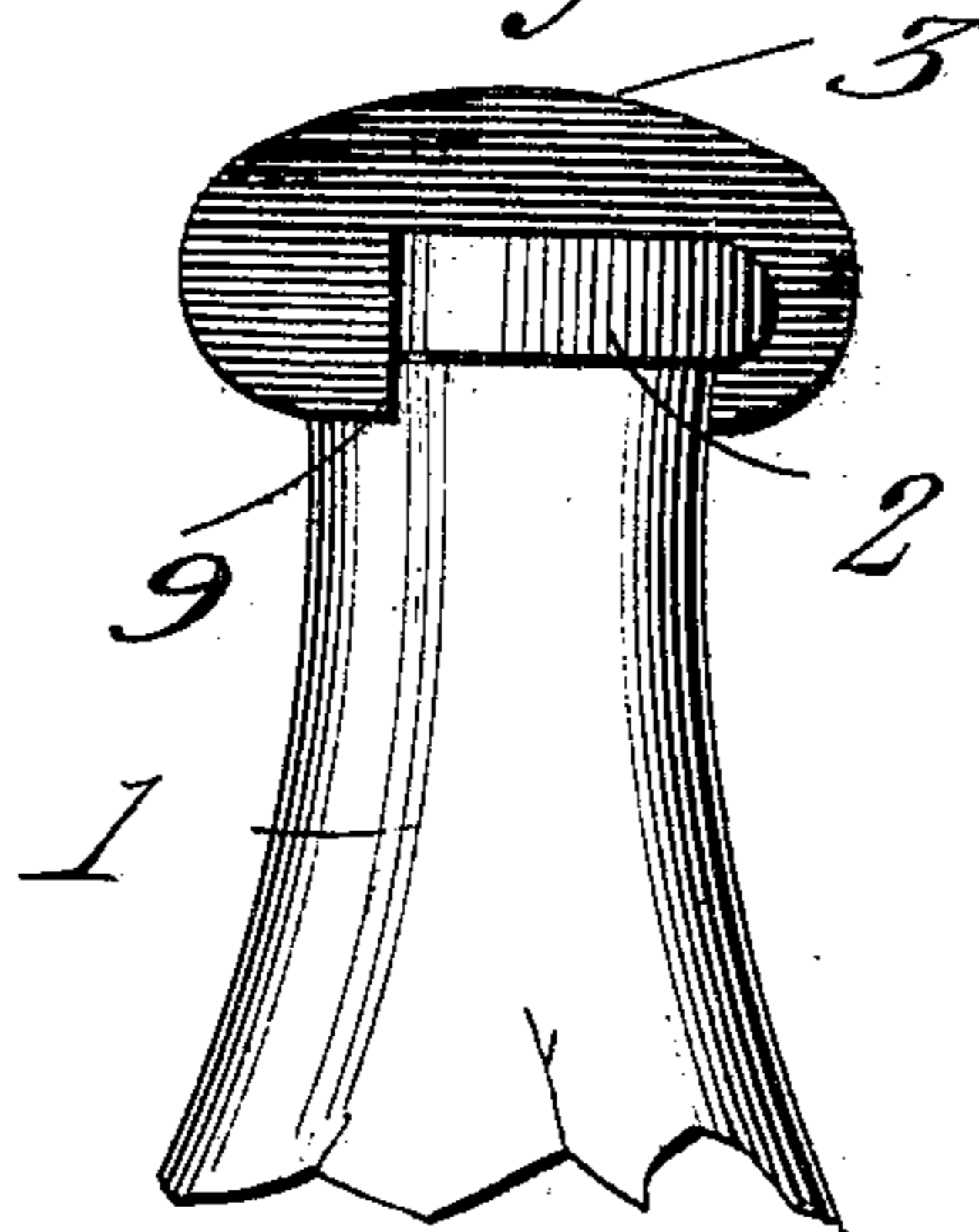


Fig. 3.

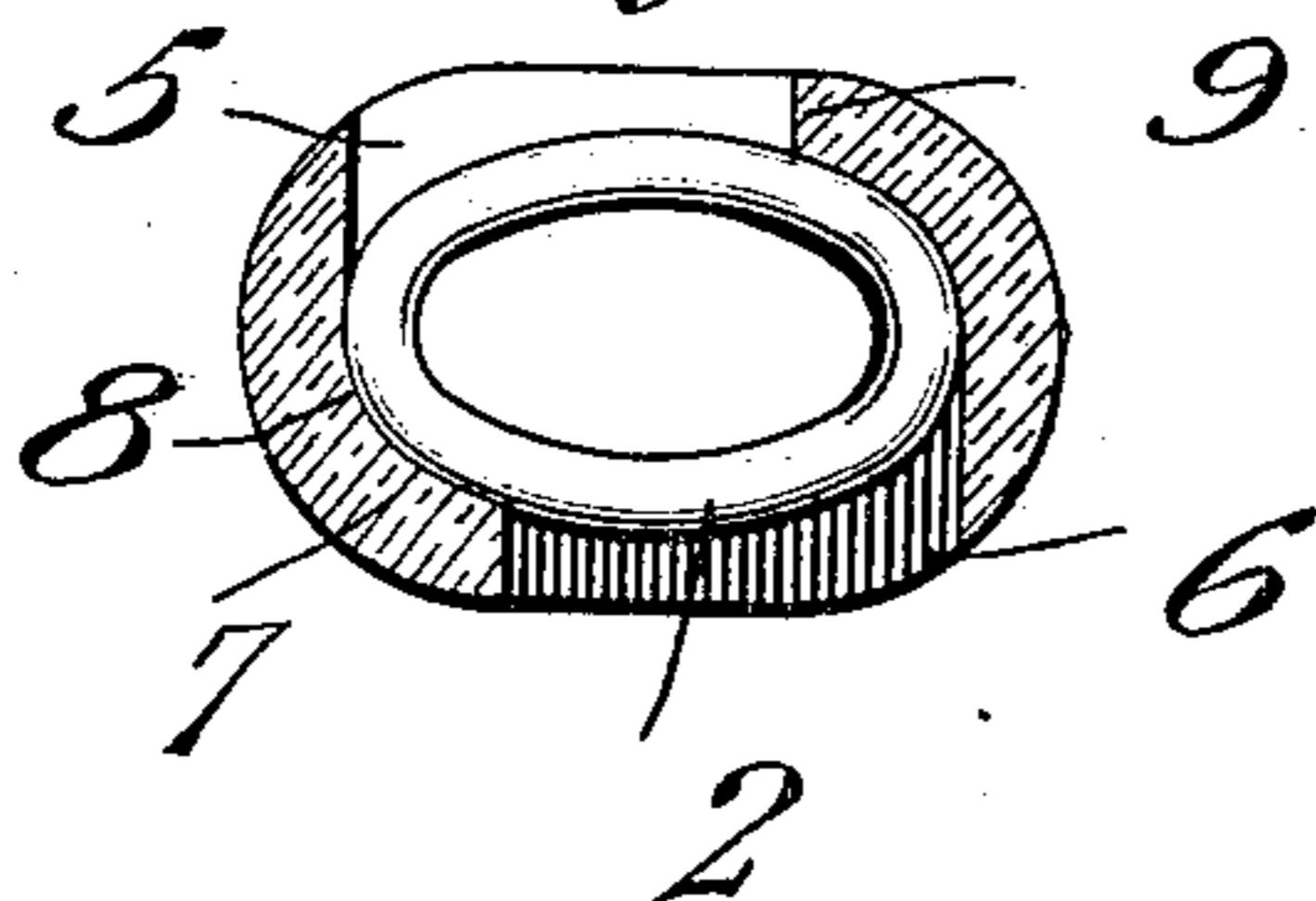


Fig. 4.

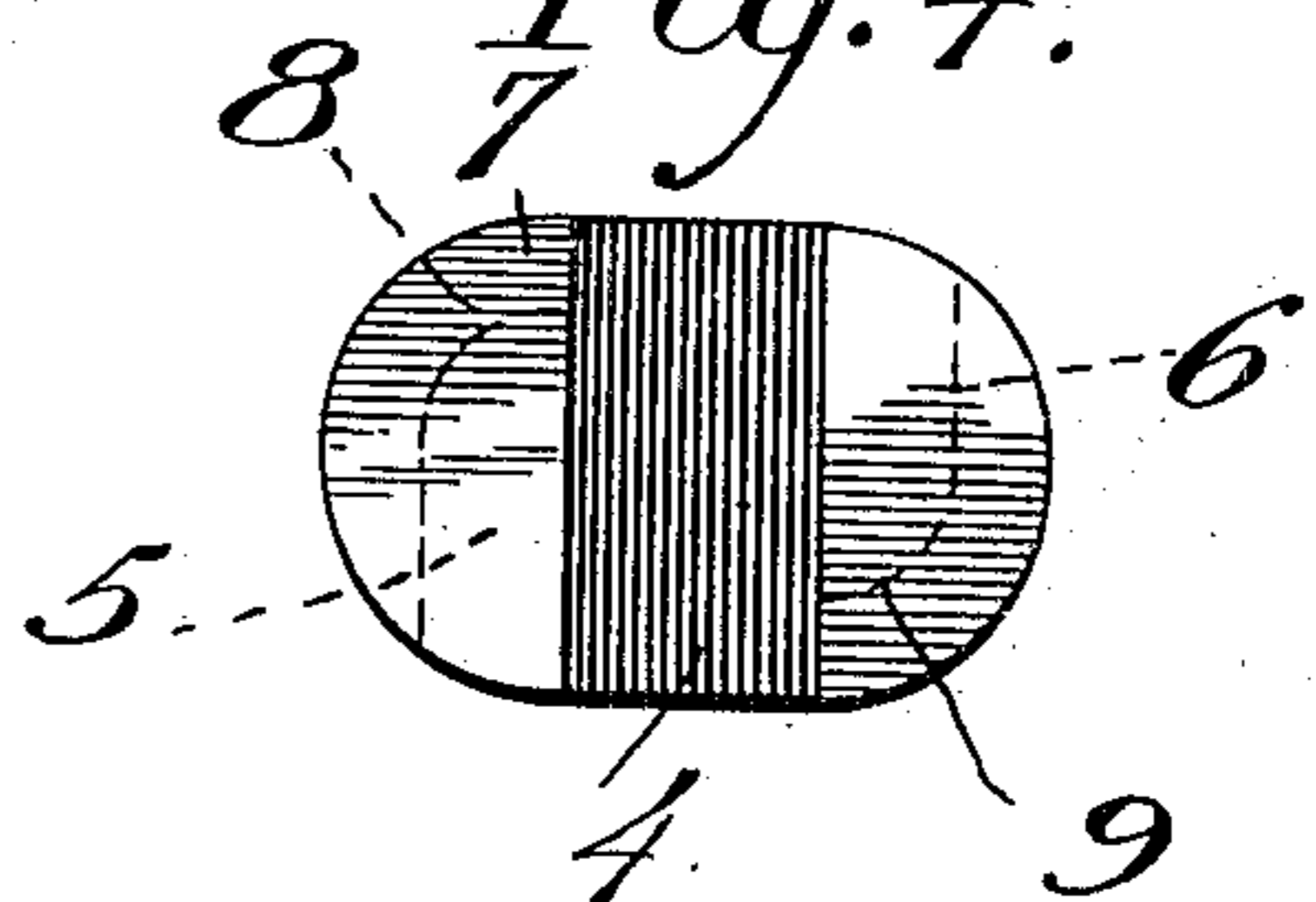
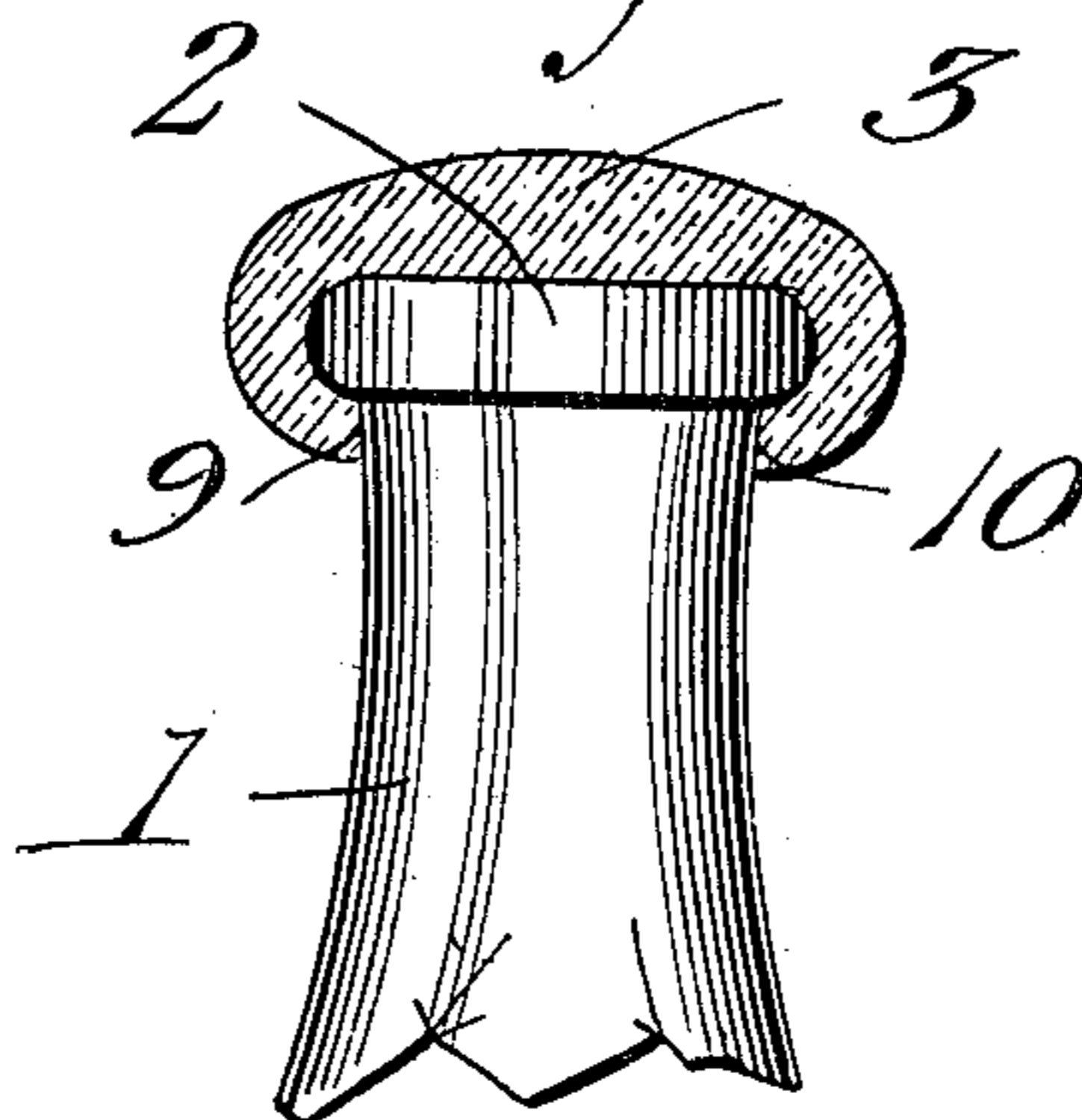


Fig. 2.



Witnesses

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JOHN GEORGE KLEE, OF TURNERS FALLS, MASSACHUSETTS, ASSIGNOR
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BOTTLE-CLOSURE.

No. 830,903.

Specification of Letters Patent.

Patented Sept. 11, 1906.

Application filed December 20, 1905. Serial No. 292,618.

To all whom it may concern:

Be it known that I, JOHN GEORGE KLEE, a citizen of the United States, residing at Turners Falls, in the county of Franklin and State of Massachusetts, have invented new and useful Improvements in Bottle-Closures, of which the following in a specification.

This invention relates to improvements in bottle-closures, and contemplates a novel construction of bottle-neck and stopper whereby a closure is provided which is air and liquid tight and embodies a stopper member which may be conveniently applied to and removed from the bottle and adjusted by a partial rotary movement in one direction or the other into and out of locking engagement with the neck.

The preferred embodiment of the invention is illustrated in the accompanying drawings, in which—

Figure 1 is a view in side elevation of a bottle-neck and stopper applied thereto constructed in accordance with my invention. Fig. 2 is an elevational view of the neck and a longitudinal section through the stopper applied thereto. Fig. 3 is a horizontal section through the stopper and a plan view of the bottle-mouth, showing the stopper in locking engagement therewith. Fig. 4 is a bottom plan view of the stopper.

Referring now more particularly to the drawings, the numeral 1 designates the neck of a bottle or other similar container, the body of which may be of any preferred form. The neck, however, is of oval form in plan and horizontal section and is provided at its upper end or mouth portion with an annular rim, flange, or shoulder 2, corresponding in contour to said neck.

The stopper 3, which is preferably made of the same material as the bottle, is of oval or elliptical form and of suitable depth or thickness for the purpose and is provided in its under side with a transverse slot or passage 4 of sufficient depth and width to receive the ring 2 and permit the stopper, when turned at right angles to the neck or with its minor axis parallel with the major axis of the neck, to be slid into and out of engagement with the rim portion.

In the stopper are formed transverse cavities or recesses 5 and 6, which open at their inner sides into the slot or passage 4 and extend in opposite directions parallel with said

passage and open at their outer ends at the opposite sides of the stopper-body, each cavity or recess being closed at its inner end by a shoulder 7, the two shoulders being located at diagonally opposite points with reference to the plane of the passage 4 and respectively closing the cavities or recesses at the opposite sides of the stopper. The side and end walls of the cavities are properly curved or shaped to provide cam portions 8 and 9, constituting wedging-surfaces to frictionally engage opposite sides of the end portions of the rim 2, while the bottom walls of the cavities form flanges 9 and 10 to engage under the rim, as shown in Figs. 1 and 2.

In the operation of applying the stopper to close the bottle-mouth the stopper is turned to a position at right angles to the rim 2, with one of the ends of the rim inserted into one of the ends of the passage 4, and then the stopper is applied by a sliding movement onto the rim until the central portions of the sides of the rim project into the cavities 5 and 6 and the end portions of the rim are brought substantially into alinement with the sides of the stopper. The stopper is then given a quarter-rotation in one direction or the other to bring the sides of the end portions of the rim at diagonally opposite points in frictional engagement with the cam-surfaces 8 and 9, whereupon the stopper will be firmly adjusted into locking engagement with the rim and the upper side of the top portion thereof seated securely against the upper face of the rim to form an air and liquid tight joint. To disconnect the stopper, the latter is turned back to the applying position and slipped off the rim in a manner readily understood. By this means a construction of closure is provided which will permit of the stopper being made of the same material as the bottle, such as glass, and adjusted to tightly seal the bottle-neck, while by a simple partial rotary movement and sliding movement the stopper may be easily applied and removed at any time. The necessity of employing extracting devices to remove the stopper and complicated fastening means to retain the same in engaging position will thereby be effectually overcome.

Having thus described my invention, what I claim is—

1. In a bottle-closure, the combination of a bottle-neck provided with an elliptical rim,

and a stopper of corresponding form having a transverse passage and oppositely-extending recesses communicating therewith and having cam-walls adapted to engage the sides of the rim when the stopper is applied thereto to hold the stopper in position.

2. In a bottle-closure, the combination of a bottle having its neck formed with an elliptical rim, and a stopper of corresponding form provided with a transverse passage and recesses or cavities at the opposite sides thereof and communicating at their inner sides therein, said cavities opening at their ends respectively through the opposite sides of the stopper and having their opposite ends closed, the walls of the closed end forming cam-surfaces to interlock with the rim.

3. In a bottle-closure, a bottle-neck having an elliptical rim, and an elliptical stopper, said stopper being chambered to engage the

rim so as to be adjusted by a sliding movement on and off the same when turned to a position at right angles to the rim, and having binding portions to engage the rim when the stopper is adjusted to lie longitudinally of the rim.

4. A bottle-stopper comprising a body of elliptical form provided in its under side with a transverse passage and communicating recesses in the side walls thereof opening through opposite sides of the body at their outer ends and closed at their inner ends and having cam-surfaces upon the walls thereof.

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

JOHN GEORGE KLEE.

Witnesses:

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JOHN F. POLLOCK.