P. J. O'BRIEN.

BOTTLE AND JAR CLOSURE.

APPLICATION FILED FEB. 23, 1910.

970,538.

Patented Sept. 20, 1910.

Fig. 1.

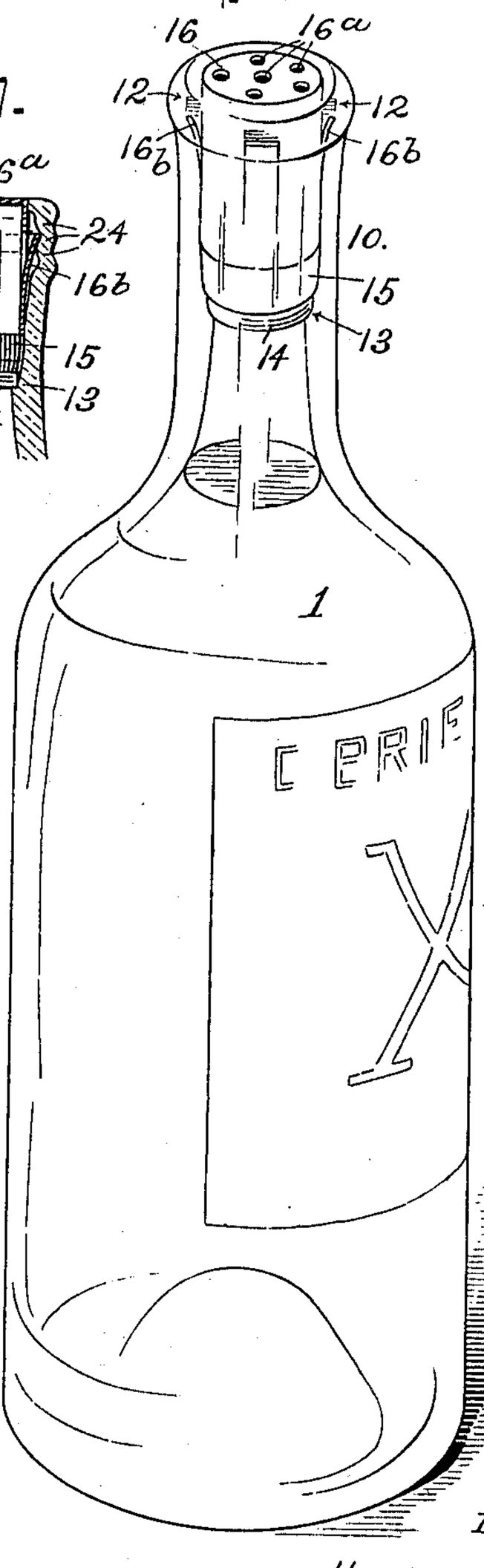


Fig. 7.

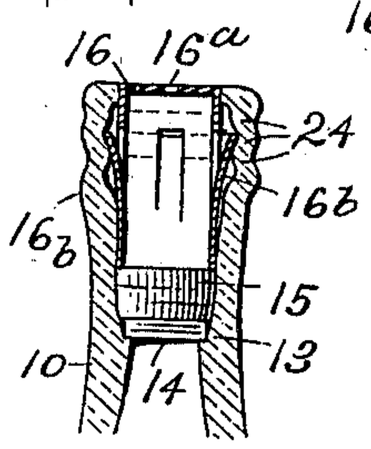


Fig. 2.

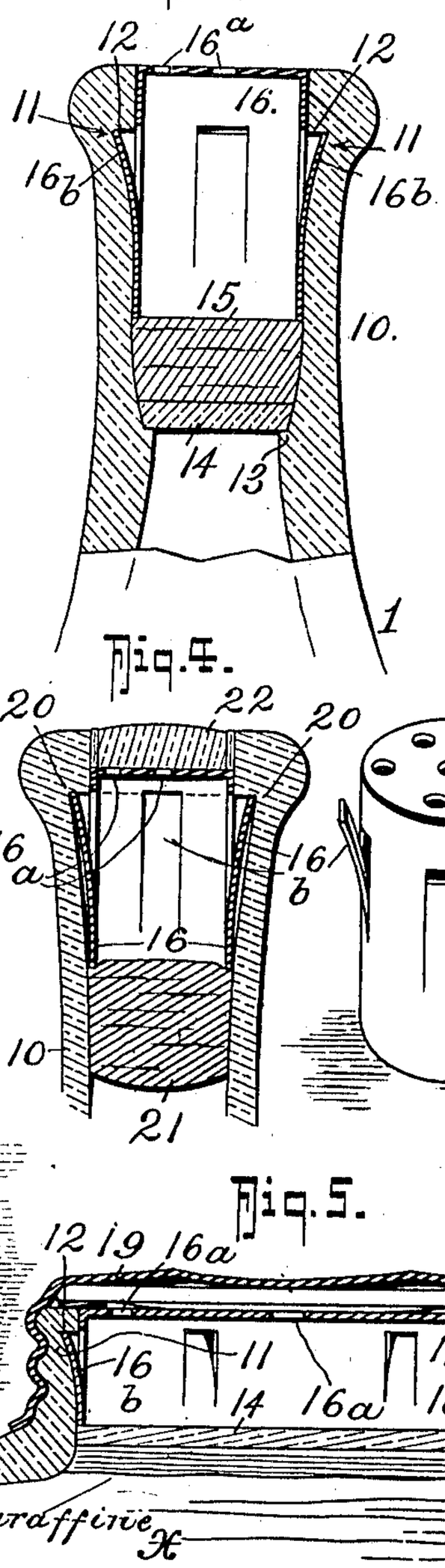


Fig. 4.

Fig. 3.

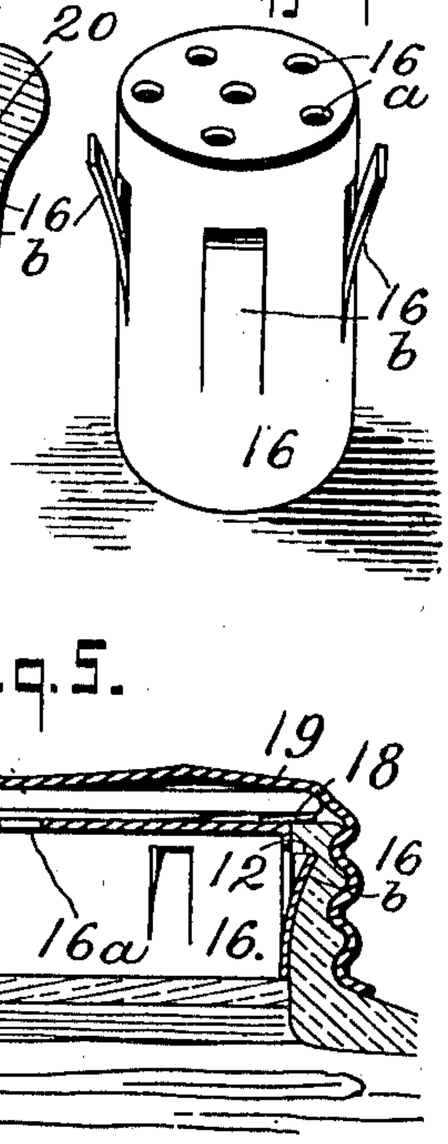
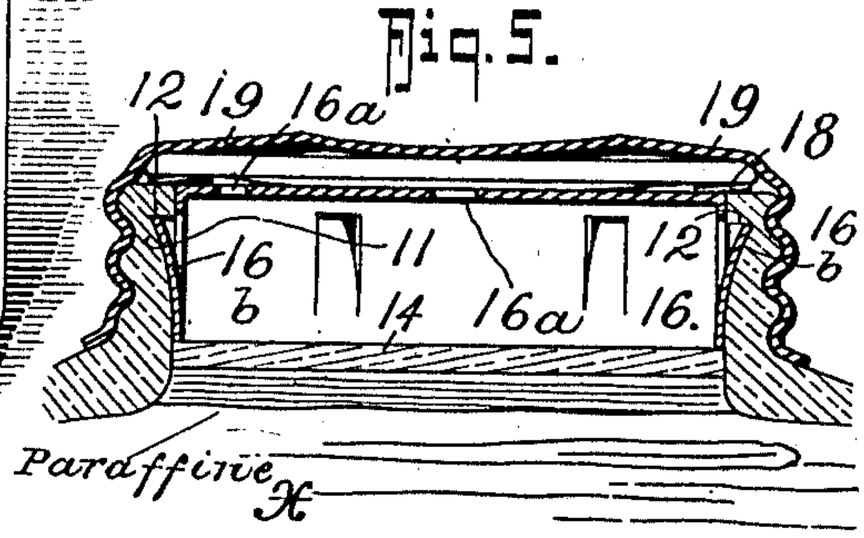
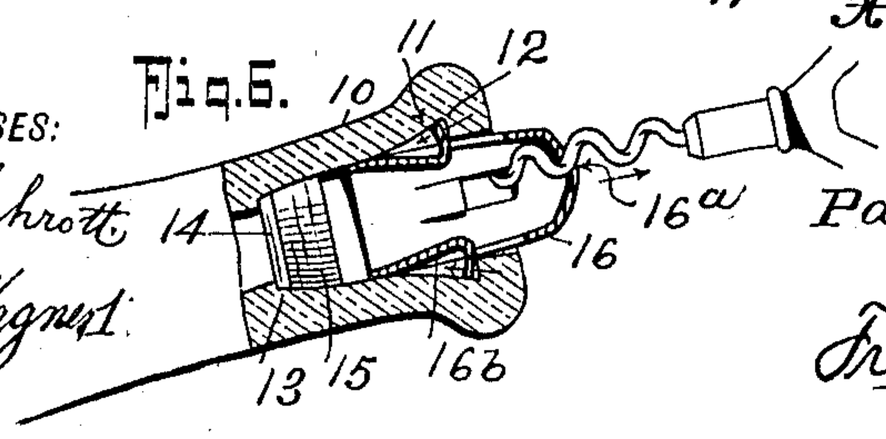


Fig. 5.



Paraffine

Fig. 6.



WITNESSES:

John T. Schrott.

Charles H. Wagner.

INVENTOR

Patrick J. O'Brien

BY

Fred G. Dieterich & Co

ATTORNEYS

UNITED STATES PATENT OFFICE.

PATRICK J. O'BRIEN, OF TORRIS COVE, NEWFOUNDLAND.

BOTTLE AND JAR CLOSURE.

970,538. Specification of Letters Patent. **Patented Sept. 20, 1910.**

Application filed February 23, 1910. Serial No. 545,482.

To all whom it may concern:

Be it known that I, PATRICK J. O'BRIEN, residing at Torris Cove, Newfoundland, have invented a new and Improved Bottle and Jar Closure, of which the following is a specification.

My invention, which, in its general nature relates to improvements in that type of vessels known as non-refillable bottles, more particularly has for its purpose to provide a simple, inexpensive and effective means adapted for acting as a closure for bottles, jars, cans or other packing and storing vessels and it comprehends, in its generic sense, a capsule like member, adapted to be slipped into and held within the mouth of a bottle or jar and for being forcibly withdrawn from the bottle or jar without injury to the said vessel so that the bottle or jar may be re-used by the original distributer of the vessel or jar to again receive other of the capsule like closure members, or re-used by the first user for ordinary purposes.

My invention, in its more complete nature, embodies a special type of capsule or filler, constructed for being slipped into a bottle or jar neck to interlock therewith combined with means for effecting an air tight closure, other detailed arrangement of coöperating parts being also included, all of which will be hereinafter fully described, particularly pointed out in the appended claims, and illustrated in the accompanying drawing, in which:—

Figure 1, is a perspective view of a bottle that embodies my invention, in its preferred form. Fig. 2, is a vertical section of the neck end of the bottle with my invention applied. Fig. 3, is a perspective view of the capsule or closure member. Fig. 4, is a section of a bottle neck and shows a slightly modified arrangement of my invention. Fig. 5, shows how my invention may be applied to a fruit jar. Fig. 6, shows the manner in which the capsule or filler is removed to gain access to the bottle or jar. Fig. 7, is a view of a further modification hereinafter explained.

In the practical construction and the preferred form, my invention embodies the features best shown in Fig. 2, in which the bottle 1, of the ordinary type, is shown with the neck 10 formed with a plurality of undercut portions 11 to provide retaining shoulders 12, the purpose of which will presently appear.

At a suitable point below the shoulders 12 the throat of the bottle is restricted to form an annular seat 13 for supporting a glass stopper 14 which is held air tight by a cork stopper 15 forced down into the neck in any convenient way.

To insure a firm grip of the cork 15, the lower part of the neck toward the seat is made slightly tapering so the cork will firmly wedge as it is forced home.

While I have shown and described the stopper portion of cork it may be of rubber or other elastic material that will effect an air tight closure when compressed and which can be readily pulled out of the bottle neck by a cork screw or other implement.

For forcing the cork 15 home and also for protecting it from being withdrawn without disorganizing the complete arrangement of the closure devices for the bottle, I have provided what I term a capsule-like filler, which in the form shown in Figs. 1, 2 and 3 is composed of a rigid but flexible material, spring steel for example. The filler 16, in the preferred form, is of an inverted cup shape and is of a diameter slightly less than the largest diameter of the bottle neck, so it can be pushed freely into the bottle neck with its lower edge bearing on the cork stopper 15. The upper end of the filler 16 is closed but has one or more apertures 16^a whereby the point of a cork screw or other similar implement can be hooked into the said upper end when it is desired to forcibly withdraw the filler.

The filler or capsule 16 has tangs 16^a cut in the sides that are bent outwardly and which have enough spring tension to bend outwardly when they pass down the bottle neck in line with the cut out portions and under the seats 12, said tangs forming the means for holding the filler in the bottle neck under ordinary handling of the bottle.

By reason of forming the filler in the manner stated, it forms a simple and inexpensive means for retaining the cork in the bottle and from being tampered with, and as it is composed of a rigid, but flexible, metal, it follows that when it is desired to gain access to the bottle by using a cork screw or other hook-like implement and hooking same into any of the apertures in the top of the member 16, and applying force, the said member 16 will break away after which the cork and the glass stoppers may be readily removed in the usual manner.

In Fig. 5, I have shown my invention as adapted for use on fruit jars and the like, the common type of Mason jar neck being shown, with the undercut or seat portions 12. In this figure the contents of the jar may be covered with the usual paraffin skim designated *x*, and run up into the neck. When thus filled the glass stopper may also be used, after which the capsule or filler is inserted. To insure a tight fitting of the metal cap, a rubber disk 18 is placed over the top of the jar and the filler 16 after which the cap 19 is screwed on as usual. In the form just described when the paraffin skim is used, the glass stopper may be omitted.

In Fig. 4 I have shown a further modification of my invention, more especially adapted for use on bottle necks. In this last form the bottle neck is of the usual tapering type and the mouth is formed with an annular integral shoulder 20. In this form, a cork 21 is used, that is forced down tightly in the tapering neck when the capsule 16 is pushed down, the lugs or tangs 16^a in this case spreading under the internal shoulder 21. In this form a seal in the nature of a glass or metal plug 22 is put into the mouth of the bottle on top of the filler 16 and held by friction, paraffining or otherwise, it being understood that in this last form the plug 22 must be removed before access can be had to the filler 16.

Instead of forming the bottle neck with internal undercut or shouldered portions, the neck may be horizontally corrugated as at 24, see Fig. 7. This makes sufficient internal projections for the tangs of the filler to interlock with, to hold the filler 16 from accidentally dropping out of the bottle, or being pulled out without spoiling it for re-use.

Having thus described my invention, what I claim is:

1. As a new article, a closure for bottle necks comprising a cylindrical body open at one end and having an apertured diaphragm at its other end, said cylindrical body having its external diameter uniform throughout its length and having resilient tangs stamped out of said body to engage recesses in a bottle neck and lock said body in said bottle neck.

2. The combination with a bottle neck having a passage therethrough, of a closure plug held in said bottle neck, a destructively removable capsule held wholly in said bottle neck above said closure plug, said capsule being composed of a cylindrical body of uniform diameter throughout its length and having one end open and the other end provided with a diaphragm, said body having tangs stamped out of the same to engage recesses in said bottle neck to lock the capsule in said bottle neck with its diaphragm wholly within the bottle neck substantially as shown and for the purposes described.

PATRICK J. O'BRIEN.

Witnesses:
PATRICK J. FORTUNE,
LAURENCE A. FORTUNE.