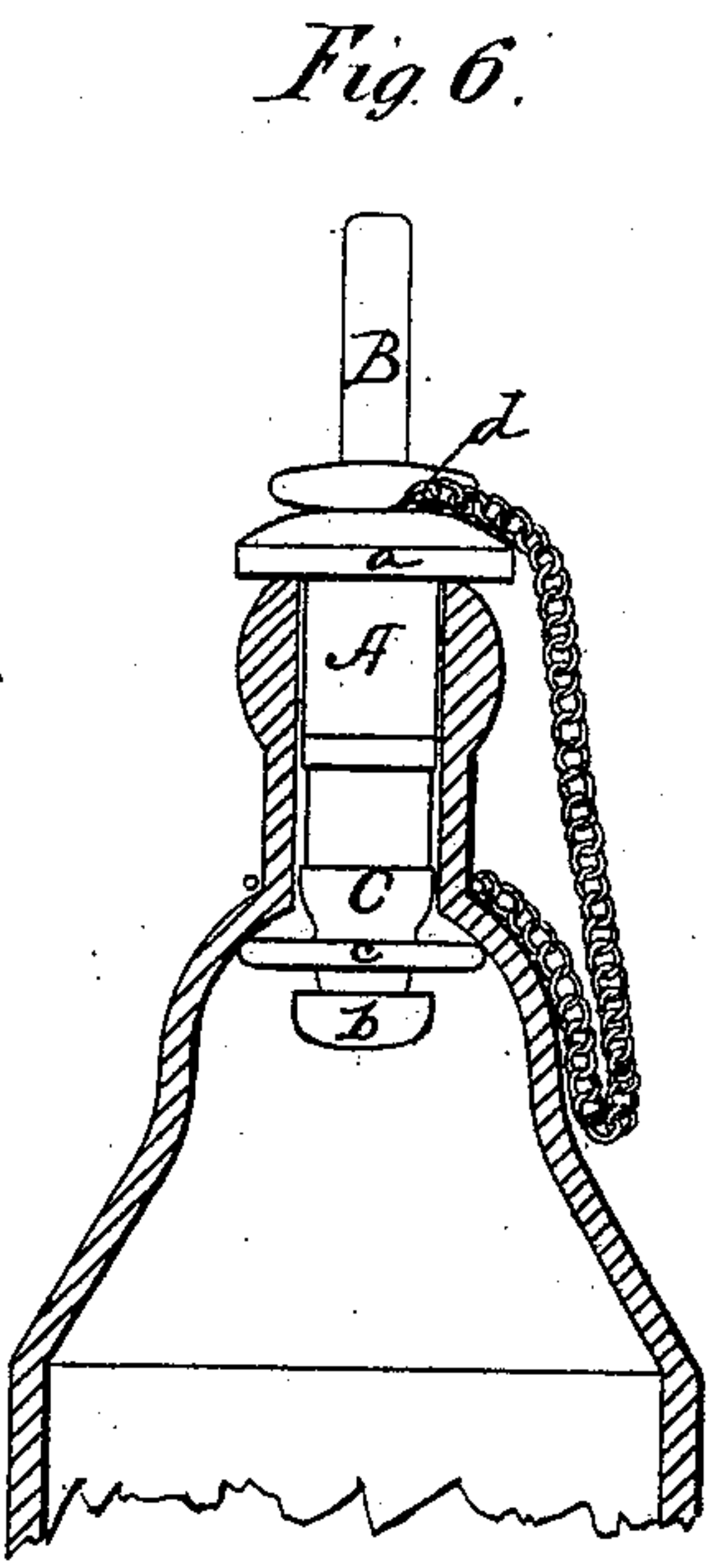
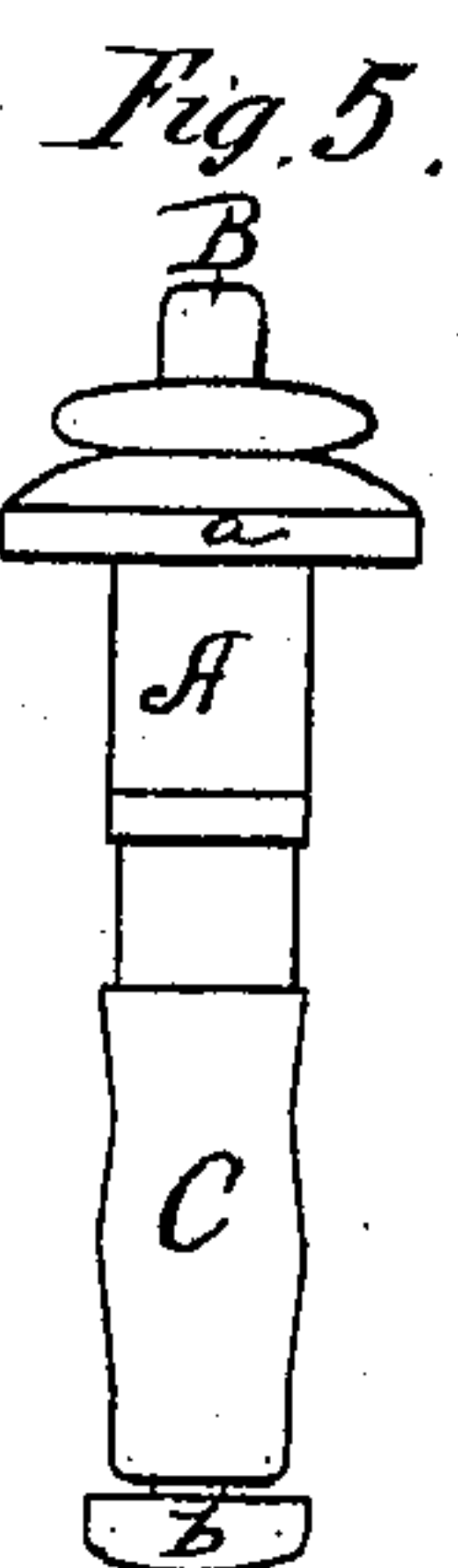
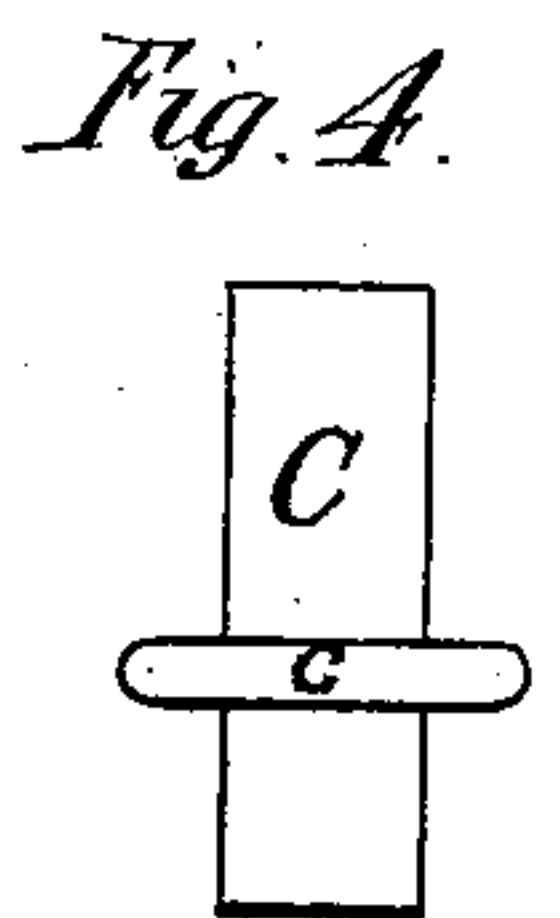
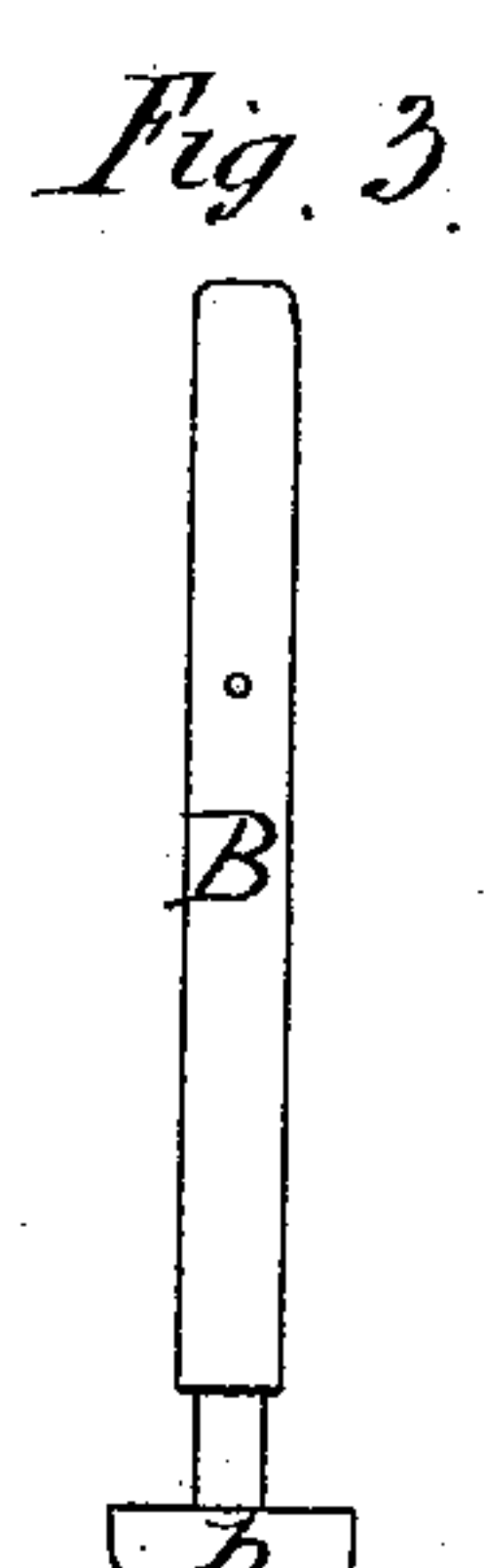
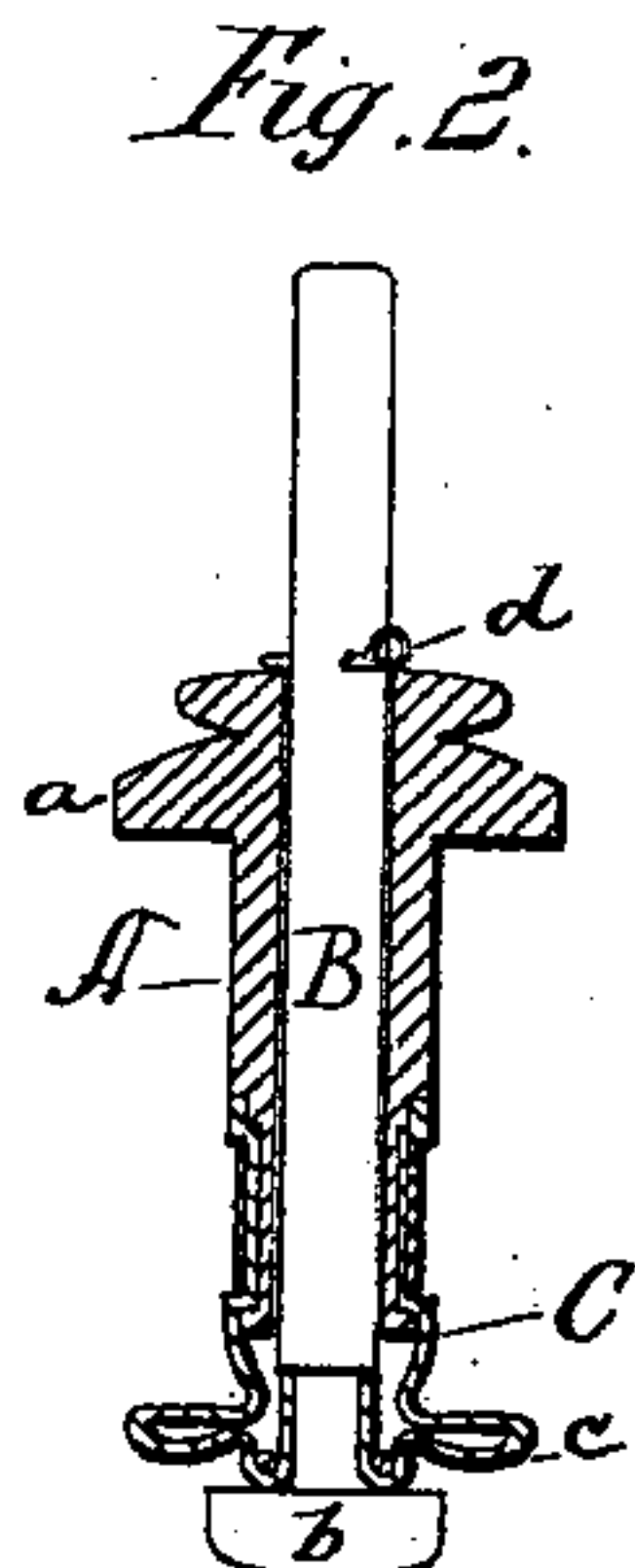
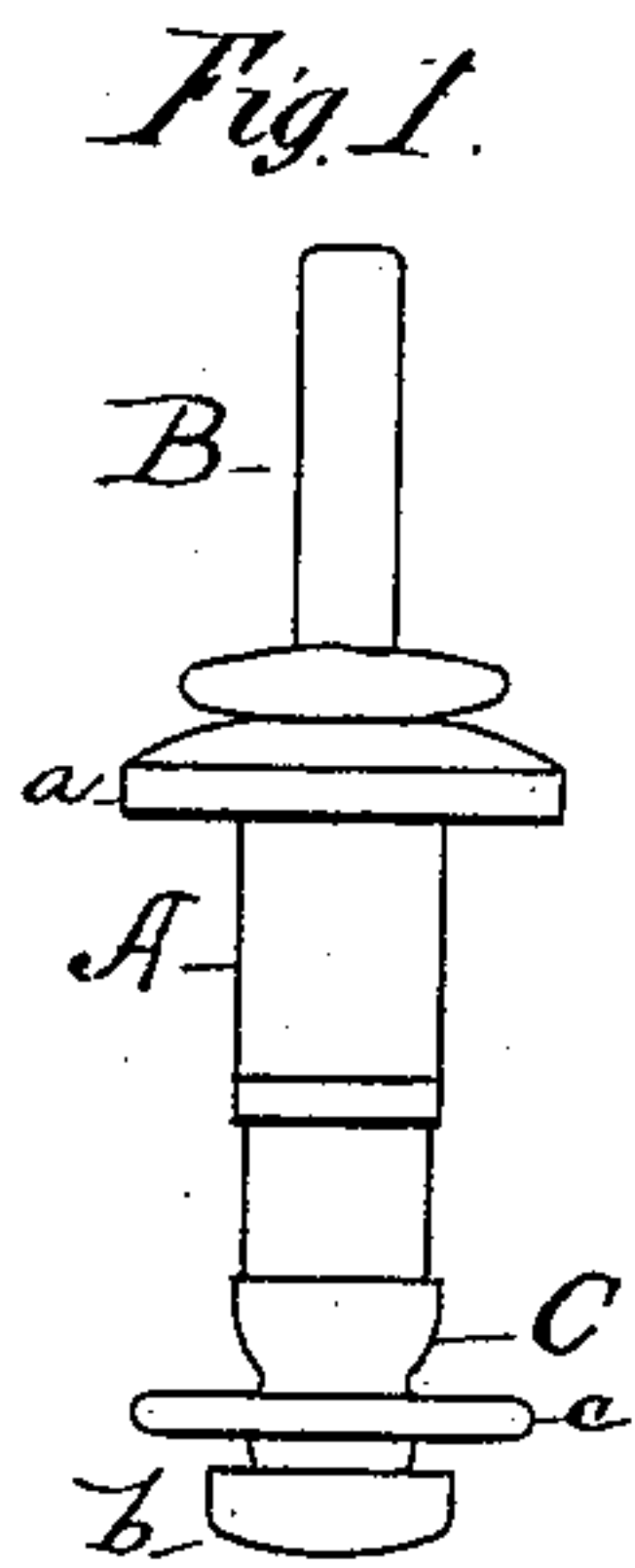


J. L. BESNARD.
Apparatus for Stoppering Bottles, &c.
No. 196,867. Patented Nov. 6, 1877.



Witnesses:
R. T. Dyer.
L. W. Seely.

Inventor:
John L. Besnard
by Geo. W. Dyer.
Atty.

UNITED STATES PATENT OFFICE.

JOHN L. BESNARD, OF ISLAND OF GUERNSEY, GREAT BRITAIN.

IMPROVEMENT IN APPARATUS FOR STOPPERING BOTTLES, &c.

Specification forming part of Letters Patent No. **196,867**, dated November 6, 1877; application filed May 22, 1877.

To all whom it may concern:

Be it known that I, JOHN LÉON BESNARD, of the Island of Guernsey, in the Dominion of Great Britain and Ireland, have invented Improvements in Apparatus for Stoppering Bottles or Jars for containing aerated or other liquids, of which the following is a specification:

My said invention consists in certain improvements in the construction of apparatus for stoppering bottles, the same being especially, but not exclusively, applicable to bottles or jars containing aerated liquids.

A cylindrical plug is formed, which is capable of fitting the neck of the bottle, the same having a collar or shoulder at the upper portion thereof, for the purpose of resting upon the upper portion of the neck of the bottle. An aperture is formed through the said plug, in which is inserted a spindle or rod provided with a button or disk at the lower end thereof. A short tube, of india-rubber or other suitable elastic material, having at or near the central portion thereof a bulge or enlargement, formed by well-known means, and as well understood, is connected with and attached to the lower portion of the spindle or rod above the button or disk, at the end thereof, and also attached to the lower end of the cylindrical plug before mentioned. The said elastic tube is attached to the spindle and cylindrical plug, respectively, by means of cement, thread, silk, wire, or in any other suitable and convenient manner.

The several particulars before described constitute the essential parts of the apparatus which forms the subject of my said invention, and the application of which is as follows: The stopper, when in its normal state, has the spindle or rod resting within the cylindrical plug, the bulged or enlarged portion of the elastic tube being between the button or disk at the end of the spindle or rod and the lower end of the cylindrical tube, and in a state of collapse. When it is desired to introduce the stopper into the bottle or jar, the upper end of the spindle or rod is depressed, and thereby the bulged or enlarged portion of the elastic tube is elongated and rendered capable of being passed through the neck of the bottle or jar. Upon the tube having been thus passed through the neck of the bottle or jar, and the

pressure being removed from the spindle or rod, the bulged or enlarged portion of the elastic tube returns to its normal condition and shape, and abuts against the shoulder formed by the junction of the larger portion of the interior of the bottle or jar with the neck thereof, or against a shoulder specially constructed for that purpose, in which position it is kept, in the case of bottles or jars containing gaseous or aerated liquids, by the pressure of the liquid or gas or compressed air, the entrance to the bottle or jar being thus rendered perfectly air-tight. The spindle or rod is fixed, when desired, by means of a transverse pin, which is passed through the same above the cylindrical plug and the top of the neck of the bottle or jar.

As a modification of my said invention, the upper portion of the spindle or rod is jointed, so as to be capable, upon the bulged or enlarged portion of the elastic tube being collapsed or brought into its normal condition, of being turned at right angles above the upper portion of the cylindrical plug and the top of the neck of the bottle, thus dispensing with the transverse pin before mentioned, while the action of the remainder of the apparatus remains as before described.

In either of the methods of construction above described, the stopper is rendered capable of being readily withdrawn by simply depressing the spindle or rod, and thus elongating the elastic tube.

The cylindrical plug and spindle or rod may be formed of glass, metal, earthenware, or of any other suitable material or materials.

I will now proceed to refer to the annexed drawings, from which the nature of my said invention will be more clearly understood.

Figure 1 shows the cylindrical plug in elevation, Fig. 2 being a vertical section of the same. Fig. 3 represents the spindle or rod which is passed through the plug. Fig. 4 is the elastic tube with the bulge or enlargement therein in its normal condition. Fig. 5 shows the plug and spindle or rod with the tube attached thereto, respectively, and the bulge or enlargement extended for the purpose of inserting the stopper into the neck of the bottle or jar. Fig. 6 is a sectional view of the bottle or jar with the stopper inserted in the neck

thereof, and showing the bulge or enlargement in the tube in its normal condition, thus effectually preventing any egress of the liquid or gas or air contained in the bottle or jar therefrom, and ingress of the external air thereto.

A is the cylindrical plug; *a*, the shoulder on its upper end; B, the spindle; *b*, the head on the lower end of such spindle; C, the india-rubber tube; *c*, the bulge found on the central portion of the rubber tube, which it retains in a normal condition; and *d*, the transverse pin passed through the spindle B.

I claim as my invention—

The bottle-stopper described, consisting of the cylindrical plug A, having shoulder *a*, the rod B, provided with head *b*, the india-rubber tube C, formed with the bulge *c*, and the pin *d* or its equivalent, all constructed and arranged substantially as described and shown.

JOHN LÉON BESNARD.

Witnesses:

GEO. E. VAUGHAN,

67 Chancery Lane, London.

T. W. LAINE,

3 Stadden Terrace, Plymouth.