

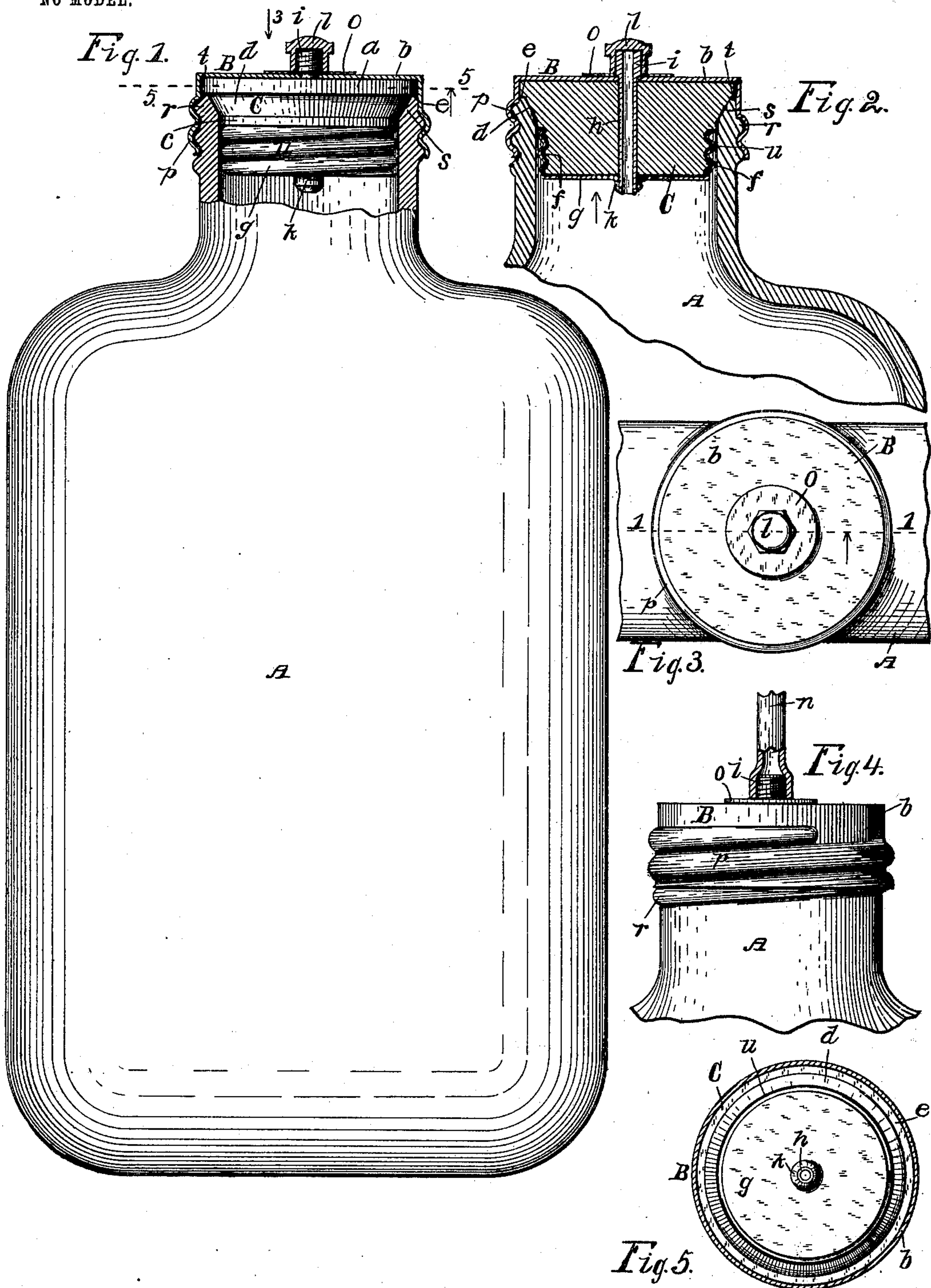
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PATENTED JAN. 27, 1903.

G. G. CAMPBELL.  
CLOSING HEAD OR STOPPER FOR BOTTLES.

APPLICATION FILED MAY 2, 1902.

NO MODEL.



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# UNITED STATES PATENT OFFICE.

GEORGE G. CAMPBELL, OF ROCHESTER, NEW YORK.

## CLOSING-HEAD OR STOPPER FOR BOTTLES.

SPECIFICATION forming part of Letters Patent No. 719,184, dated January 27, 1903.

Application filed May 2, 1902. Serial No. 105,678. (No model.)

*To all whom it may concern:*

Be it known that I, GEORGE G. CAMPBELL, of Rochester, in the county of Monroe and State of New York, have invented a new and useful Improvement in Closing-Heads or Stoppers for Bottles, which improvement is fully set forth in the following specification and shown in the accompanying drawings.

My invention is an improved closing-head or stopper for bottles, jars, and similar vessels, the same being hereinafter fully described and more particularly pointed out in the claims, reference being had to the accompanying drawings, forming part of this specification.

Figure 1 is a side elevation of a jar or bottle with my improved closing-head or stopper in place thereon, parts being broken away and diametrically sectioned as on the dotted line 1 1 in Fig. 3. Fig. 2 is a sectional elevation of the closing-head and upper part of the bottle, the section being on the dotted line 1 1 in Fig. 3. Fig. 3 is a plan of the closing-head and adjacent part of the bottle seen as indicated by arrow 3 in Fig. 1. Fig. 4 is a side elevation of the closing-head and associated parts seen in the direction in which Fig. 1 is seen. Fig. 5 is a view of the closing-head or stopper detached seen as indicated by arrow in Fig. 2, the metal case being horizontally sectioned as on the dotted line 5 5 in Fig. 1.

Referring to the parts shown in the drawings, A is a flask, jar, bottle, or like device, and B my improved closing-head or stopper therefor. This head or stopper consists of a circular body C, Figs. 1, 2, and 5, preferably of india-rubber, inclosed in a circular sheet-metal case or cup b, Fig. 4, the body C and the inclosing case b being secured permanently together by some simple means, as cement or metal pins, or both. The body C is circular and otherwise of novel form—that is to say, it is formed with cylindrical parts a c of different diameters—between which is a conical part d, Figs. 1 and 5, three faces being thus provided for meeting corresponding faces of the bottle or jar A. The part a is larger in diameter than the base of the conical part d, there being a flat annular ledge or ring e of the cylindrical part a outside of the part d, as shown. Below or adjacent to

the part c the body C is reduced in diameter and formed with a thread or spiral f, Fig. 2, upon which is threaded an inverted sheet-metal cap g.

The india-rubber body C and the metallic parts b and g are pierced at the middle by a tube h, preferably of metal, having an enlarged threaded part or head i projecting above or outside of the case b. The opposite end of the tube also projects from the surface of the cap g, being provided with a small screw-nut k to bear against the cap g, serving to aid in holding the parts firmly together. Normally the outer end i of the tube h is covered or closed by a screw-cap l, as shown in Figs. 1 and 2; but this screw-cap may be removed and a tube or pipe n, Fig. 4, as of india-rubber, substituted for it in a different use of the device. The screw-cap l, when on the tube h, bears at its lower end against a disk o, Figs. 1 and 3, of soft material, as india-rubber, to prevent leaking of the water or liquid in the bottle A, said disk o being made to adhere to the surface of the cap b by means of cement.

The metal case b is formed with a spiral or thread p, Figs. 1, 2, and 4, to cooperate with a corresponding spiral or thread r of the neck of the bottle. The bottle is also formed with an inclined or conical part s to cooperate with the conical part d of the body C and also with a flat surface t at the end of the neck to receive the annular shoulder e of the india-rubber body C. When the case b is screwed firmly down upon the bottle, the joints between the opposing parts e t and d s are rendered close and tight and effectually prevent the outflow of water from the bottle. Also the inner cylindrical part c of the part C is designed to closely fit the inner surface of the neck of the bottle to aid in further forming a tight joint between the closing head and the bottle. The threads or spiral part u of the cap g, meeting the threads f of the body C, are designed to pass just easily within the neck of the bottle, as shown in Fig. 1, the use of the cap g being to keep the contents of the bottle or jar A, which may be preserved fruit or some similar substance, away from the india-rubber body C.

By removing the cap-screw l the threaded end or head i of the tube h is susceptible of



receiving upon it the end of a pipe or india-rubber tube *n*, Fig. 4, so that the bottle may be put to other uses—as, for example, held at an altitude to act as a fountain-syringe.

5 What I claim as my invention, and desire to secure by Letters Patent, is—

1. A closing-head or stopper for bottles or similar devices, consisting of a body of soft material, as india-rubber, having two cylindrical parts with conical part between, and  
10 a metallic case to inclose the rubber body and adapted to engage with the neck of the bottle, substantially as shown and described.

2. A closing-head or stopper for bottles, consisting of a body of india-rubber having cylindrical parts and a conical part between the cylindrical parts, and a threaded part to enter the neck of the bottle, a metallic cap on  
15 said threaded part, and an inclosing case for the india-rubber body adapted to engage with the neck of the bottle, substantially as and for the purpose specified.

3. A closing-head or stopper for bottles, consisting of a metallic case formed with a spiral,

a body of yielding material held by said case, 25 and an inverted cap on the inner end of said yielding body, and a tube piercing both said caps and the yielding body, with threaded end projecting, and a cap upon said threaded end of the tube, substantially as and for the 30 purpose specified.

4. A stopper or closing-head for bottles, comprising a circular body of yielding material, as india-rubber, having an annular face, a cylindrical face and a conical face in the or- 35 der named, to meet corresponding faces of the bottle, and a metallic inclosing case for said circular body, to engage with the neck of the bottle, substantially as shown and described. 40

In witness whereof I have hereunto set my hand this 28th day of April, 1902, in the presence of two subscribing witnesses.

GEORGE G. CAMPBELL.

Witnesses:

ENOS B. WHITMORE,  
MINNIE SMITH.