

No. 639,832.

Patented Dec. 26, 1899.

H. C. SHEARMAN.

ELASTIC CAP OR COVER FOR BOTTLES, JARS, OR OTHER VESSELS.

(Application filed Dec. 26, 1895.)

(No Model.)

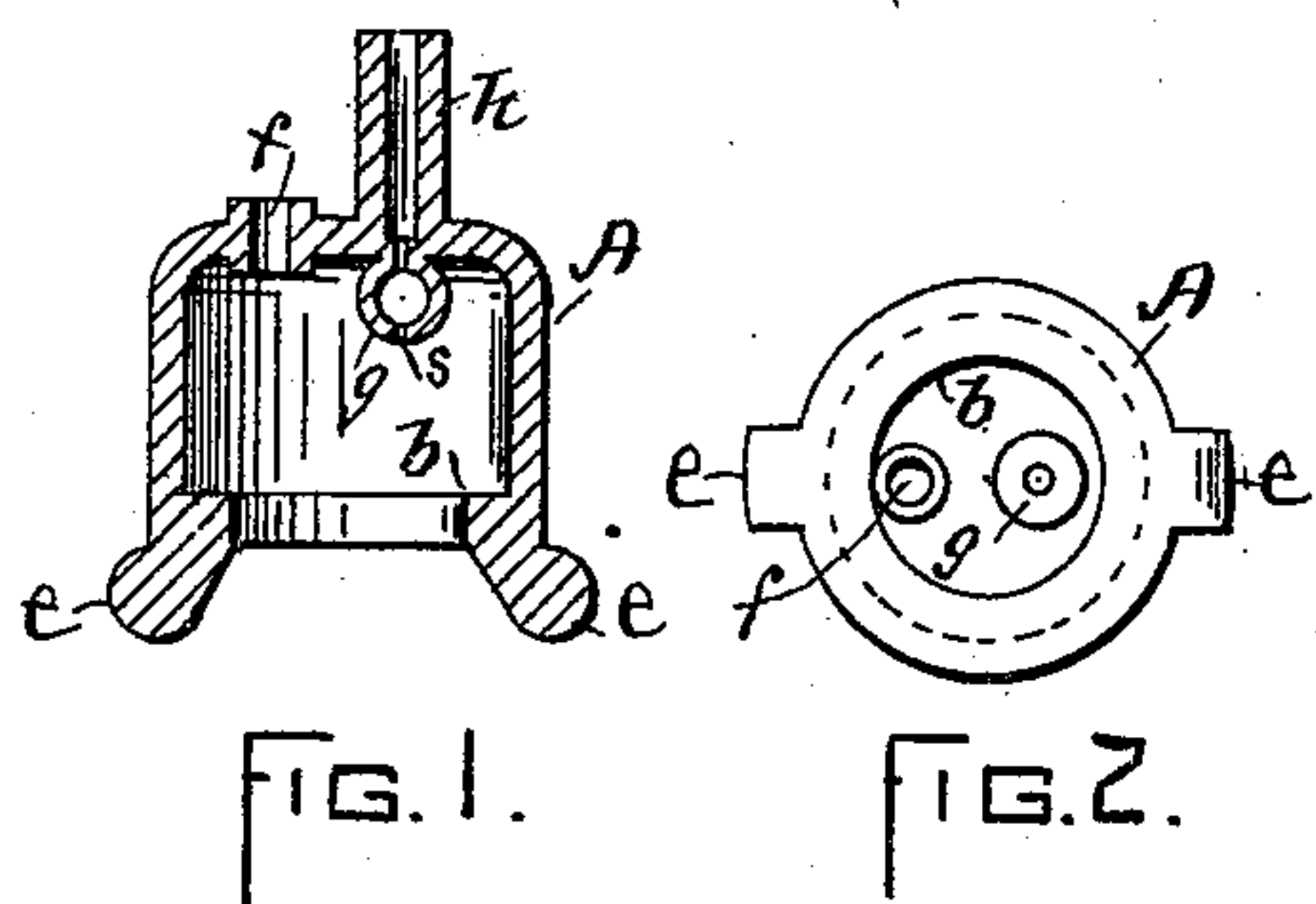


FIG. 2.

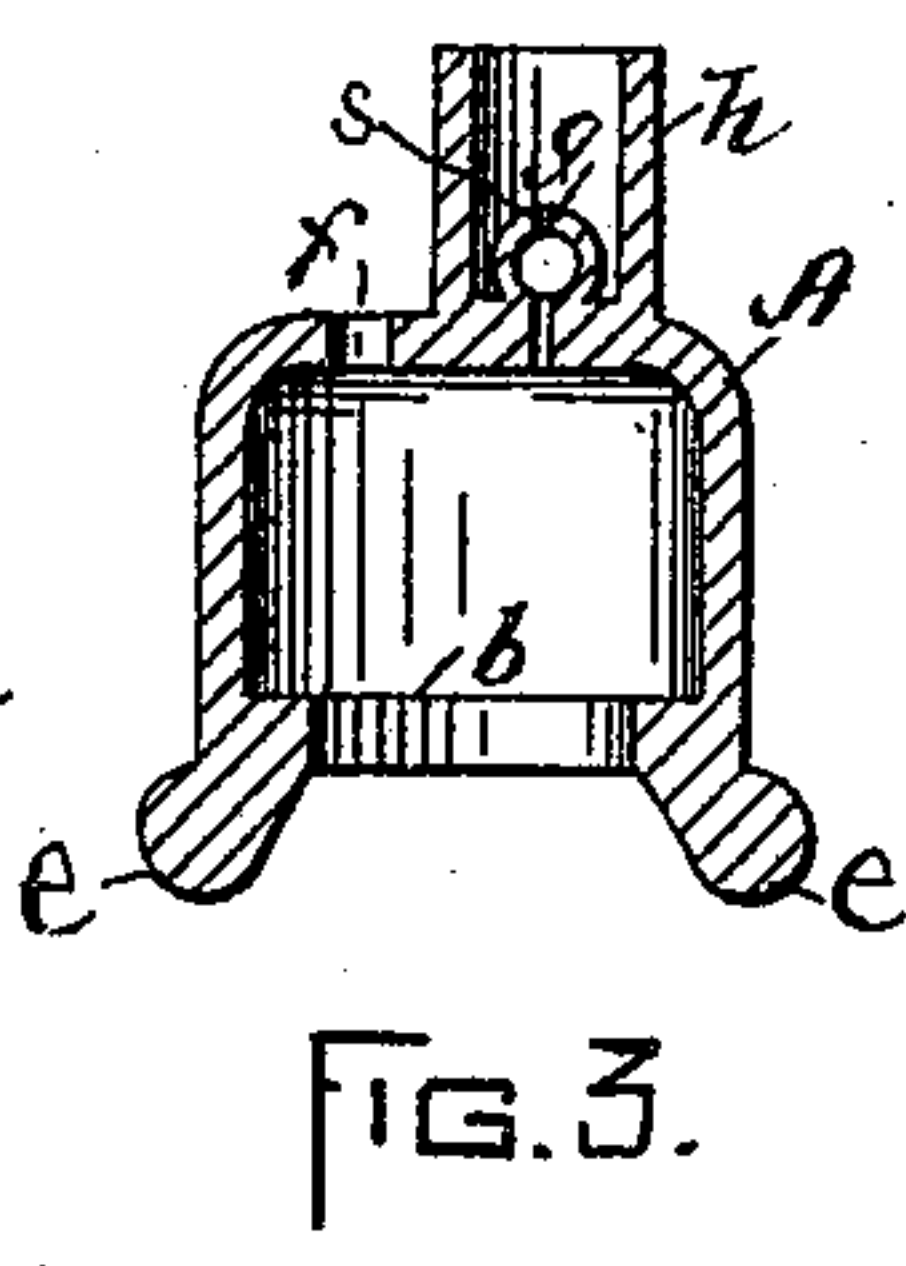


FIG. 4.

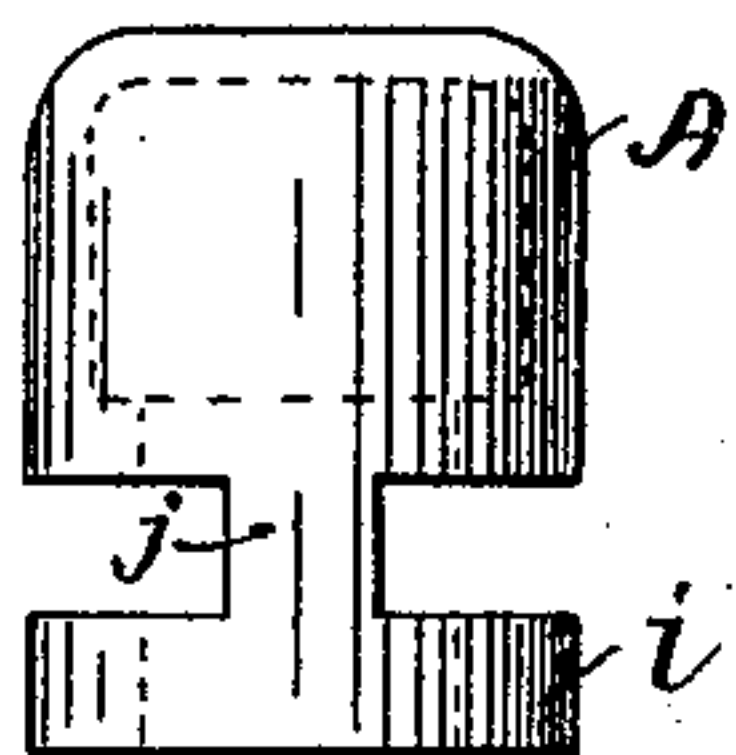


FIG. 5.

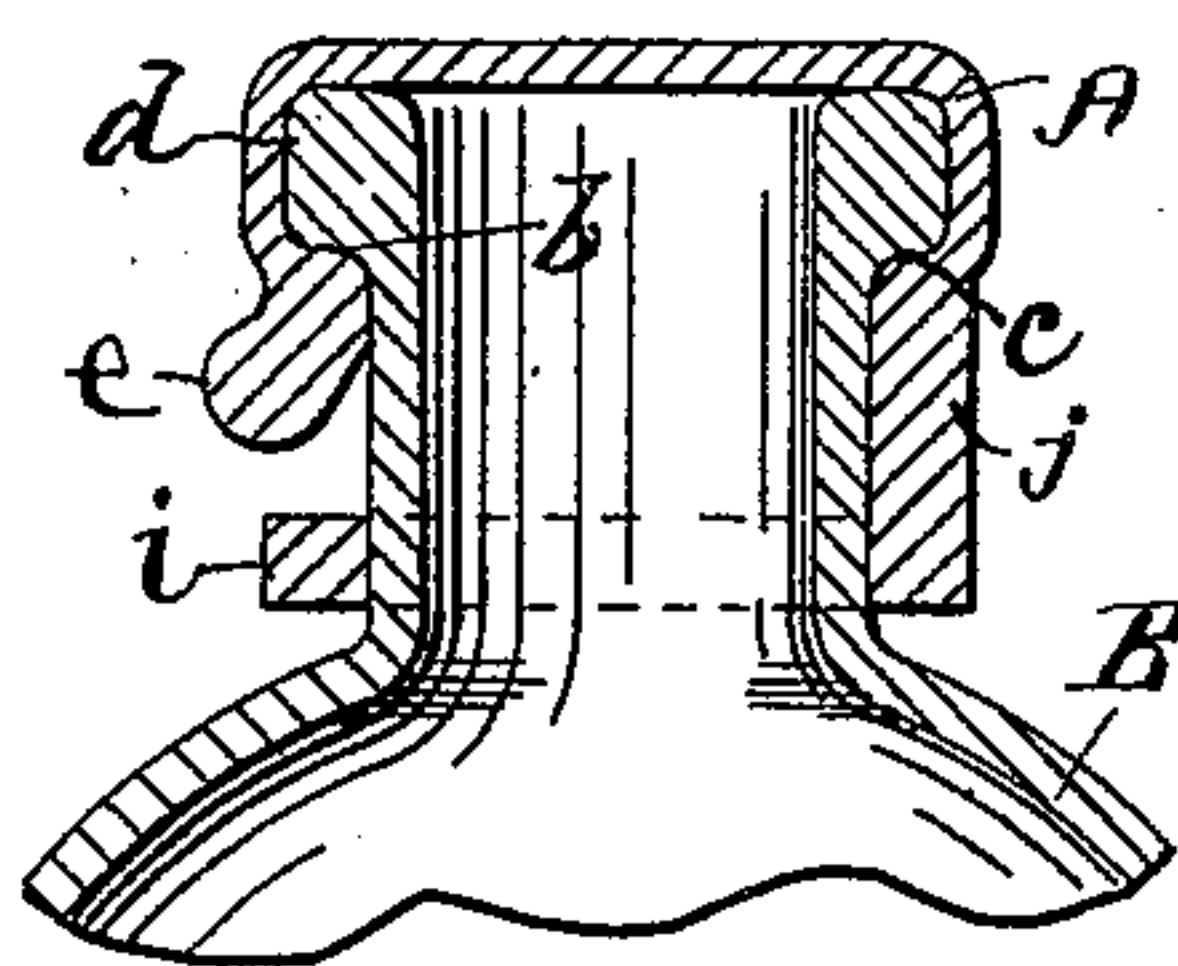


FIG. 6.

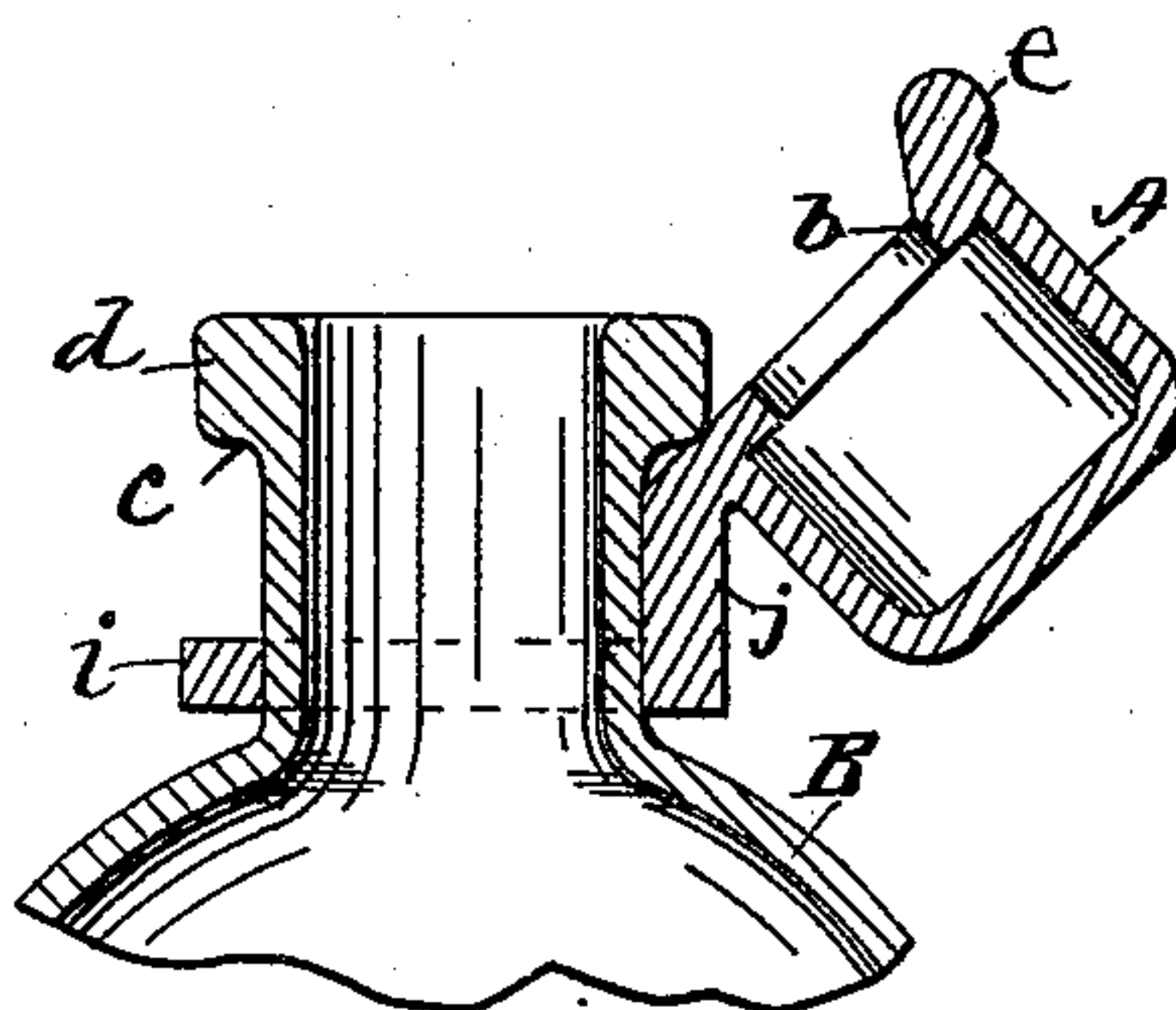


FIG. 7.

WITNESSES:

Harry J. Garceau
John S. Lynch

INVENTOR:

Harry C. Shearman

BY

S. Scholfield

ATTY.

UNITED STATES PATENT OFFICE.

HENRY C. SHEARMAN, OF PROVIDENCE, RHODE ISLAND.

ELASTIC CAP OR COVER FOR BOTTLES, JARS, OR OTHER VESSELS.

SPECIFICATION forming part of Letters Patent No. 639,832, dated December 26, 1899.

Application filed December 26, 1895. Serial No. 573,385. (No model.)

To all whom it may concern:

Be it known that I, HENRY C. SHEARMAN, a citizen of the United States, residing at Providence, in the State of Rhode Island, have invented a new and useful Improvement in Elastic Caps or Covers for Bottles, Jars, or other Vessels, of which the following is a specification.

The object of my invention is to provide a substitute for the ordinary stoppers of cork, glass, rubber, or other material, which substitute may be used for closing or use upon vessels of any description for which the device is adapted.

My invention consists of a cap made of a flexible and elastic substance, such as rubber or other similar and suitable material, and provided with an inwardly-extending molded shoulder or reinforcement and with one or more ears, whereby it is rendered capable of being easily and quickly drawn over the mouth of the bottle or other vessel, the elasticity of the said cap serving to hold it firmly upon the neck of the vessel, thus preventing the leakage of the contents and also preventing access of air thereto.

It also consists in the combination of the elastic cap with an air-valve and a projecting tube and with a retaining-band; and my invention includes the application of said improvements to flexible elastic tubing, bulbs, nipples, and other caps.

In the accompanying drawings, Figure 1 represents an axial section of the cap provided with an opening and with a valve at the inner side of the cap. Fig. 2 represents an under view of the same. Fig. 3 represents an axial section of the cap provided with a valve located within a tube at the outer side of the cap. Fig. 4 represents an axial section of the cap provided with a band for retaining the cap upon the neck of the vessel. Fig. 5 represents a back view of the same. Fig. 6 represents a section showing the elastic cap of Fig. 4 as attached to the bottle. Fig. 7 represents a section showing the said elastic cap when removed and held at the neck of the bottle by means of the band.

In the drawings, A represents the improved elastic cap, which is preferably made of rubber formed in a mold, so as to have an internal diameter considerably less than the di-

ameter of the neck of the bottle or vessel to which it is applied, the said cap being provided with the inwardly-extending annular reinforcement *b*, which forms a shoulder adapted to close under the shoulder *c* of the collar *d* of the neck of the bottle or vessel B, thus preventing the cap from slipping off of the neck and effectually preventing the leakage of the contents of the vessel and the access of air thereto.

In order to provide for the ready removal of the elastic cap A from the neck of the vessel to which it is applied, the said cap may be provided with one or more ears *e*, extending outward or downward below the retaining-shoulder *b* of the cap, and where only one ear or projection is used it may extend at an angle outwardly from and around the rim of the cap, forming a projecting flange, which may have its outer periphery thickened in such manner as to furnish a firm hold for the thumb and finger at any part of its circumference in adjusting and removing the said cap from the mouth of the vessel, and the said cap may be provided with an opening *f*, adapted for the insertion of a metallic or other tube, by means of which the contents may be discharged without the removal of the cap, or a rod may be inserted in the opening *f*, if desired, for any purpose. In addition to the opening *f* a valve *g*, as shown in Fig. 1, may be employed to admit the air to the vessel while the contents are being withdrawn through the said opening or through a pipe inserted therein, the said valve being formed of the same molded material as that of the cap and made in hollow spherical form and having a slit *s* made therein for the passage of air or other fluid in one direction, the pressure upon the convex side of the valve serving to prevent the passage of the same in the opposite direction. A valve adapted to prevent the ingress of air or other fluid into the vessel is shown in Fig. 3, and in case it is desirable to connect a pipe or tube with the said valve a tubular reinforcement *h* of the same material of the cap is provided, as shown in Figs 1 and 3, to which the said pipe or tube may be attached.

My improved cap or cover for bottles and other vessels may be provided with an annular band *i*, preferably of the same flexible and elastic material as that of the cap, the said

annular band being joined with the cap by means of the flexible connection *j*. I prefer to mold these parts in one piece with the cap, and when the cap and band are secured to the bottle or vessel, as shown in Figs. 6 and 7, the cap may be readily removed from the mouth of the said vessel and still be connected with its neck by means of the flexible connection *j*, which will act as a hinge and allow the vessel to be filled or decanted and the cap readjusted without the removal of the band *i* from the neck.

I claim as my invention—

1. A flexible and elastic cap or cover of rubber or other suitable material, provided with a projecting tube, molded in the material of the cap or cover, and adapted for the attachment of a pipe or tube thereto, and a hollow spherically-formed valve provided with a slit-opening, arranged in connection with the molded tube, substantially as described.

2. A flexible and elastic cap or cover, of rubber or other suitable material, provided with an inwardly-extending molded shoulder, or reinforcement, adapted to clasp the neck of the vessel, and the connected annular band, whereby the removed cap will be held in connection with the neck of the vessel, substantially as described.

3. A flexible and elastic cap or cover of rubber or other suitable material, provided with a projecting tube molded in the material of the cap or cover, and adapted for the attachment of a pipe or tube thereto, and a hollow spherically-formed valve provided with a slit-opening arranged in connection with the molded tube, and an opening in the cap or cover, through which a tube or rod may be inserted substantially as described.

4. A flexible elastic cap or cover of rubber

or other suitable material, provided with a projecting tube molded in the material of the cap or cover, and adapted for the attachment of a pipe or tube thereto, and a hollow spherically-formed valve, provided with a slit-opening arranged in connection with the molded tube, said cap or cover being provided with one or more ears, extending outwardly from the thickened rim of the cap, to facilitate the attachment or detachment of the cap, substantially as described.

5. A flexible and elastic cap or cover of rubber or other suitable material, provided with an inwardly-extending molded shoulder or reinforcement, adapted to clasp the neck of the vessel, and one or more ears extending outwardly from the thickened rim of the cap, to facilitate the attachment or detachment of the cap, and the connected retaining-band whereby the removed cap will be held in connection with the neck of the vessel, substantially as described.

6. A flexible and elastic cap or cover of rubber or other suitable material, provided with a projecting tube molded in the material of the cap or cover, and adapted for the attachment of a pipe or tube thereto, and a hollow spherically-formed valve provided with a slit-opening, arranged in connection with the molded tube, and an opening in the cap or cover through which a tube or rod may be inserted, said cap or cover being provided with one or more ears extending outwardly from the thickened rim of the cap, to facilitate the attachment or detachment of the cap, substantially as described.

HENRY C. SHEARMAN.

Witnesses:

SOCRATES SCHOLFIELD,
ANNIE B. SHEARMAN.