M. C. COOMBS.

NURSING BOTTLE CAP.

APPLICATION FILED APR. 2, 1921.

1,435,214. Patented Nov. 14, 1922.

Fig. 1.

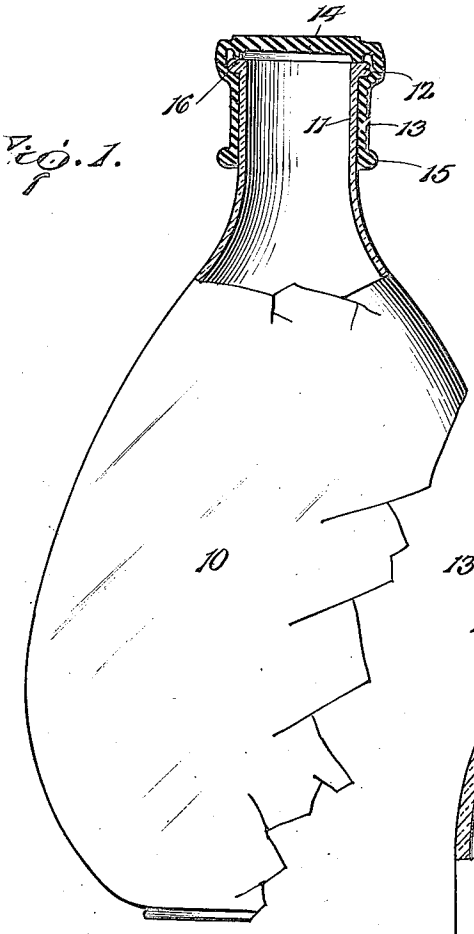


Fig. 3.

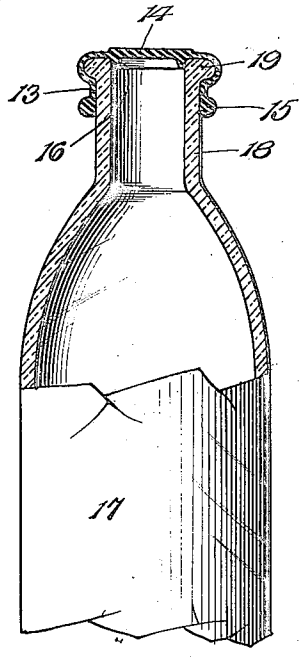
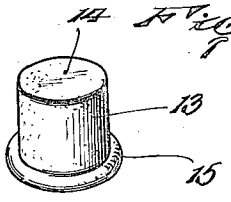


Fig. 2.



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UNITED STATES PATENT OFFICE.

MILTON C. COOMBS, OF BROOKLYN, NEW YORK, ASSIGNOR TO FRASER TABLET COMPANY, OF BROOKLYN, NEW YORK, A CORPORATION OF NEW YORK.

NURSING-BOTTLE CAP.

Application filed April 2, 1921. Serial No. 457,902.

To all whom it may concern:

Be it known that I, MILTON C. COOMBS, citizen of the United States, residing at Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Nursing-Bottle Caps, of which the following is a specification.

This invention relates to an improved nursing bottle cap and has as one of its principal objects to provide a simple and effective device of this character for closing a nursing bottle when stored in a refrigerator or other place so that the contents of the bottle may be kept clean and uncontaminated.

The invention has as a further object to provide a cap adapted to seal the bottle to which it is applied so that the bottle will be closed air-tight.

And the invention has as a still further object to provide a cap which may be readily applied and as easily removed.

Other and incidental objects will appear hereinafter.

In the drawing:

Figure 1 is a fragmentary side elevation showing my improved cap applied to a nursing bottle of conventional design, the neck of the bottle, as well as the cap, being illustrated in section.

Figure 2 is a perspective view showing the cap in detail, and

Figure 3 is a view similar to Figure 1, showing the use of the cap in connection with a nursing bottle of slightly different design.

In most instances where an infant is bottle fed, as it is generally termed, the practice is usually followed of preparing enough food at one time for a whole day's feeding, several nursing bottles being filled and set away in a refrigerator or other cool place, when the bottles are brought out and heated one by one as each successive feeding time arrives. As will be readily appreciated, the necessity for keeping the food stored in the bottles clean and uncontaminated is imperative and the need for some effective sealing means therefore arises. The present invention accordingly seeks to fill this need as well as to provide a cap which may be readily cleansed and used over and over again.

Referring more particularly to the drawing, I have, for convenience, shown my improved cap in connection with a nursing bottle 10 of conventional design. As is quite usual, the bottle is formed with a neck 11 which is provided at its upper end with an annular overhanging lip 12 surrounding the mouth of the bottle. The cap of the present invention is preferably of rubber and comprises a cylindrical cap body 13 closed at its upper end by a flat top wall 14 while at its opposite end the body is open. Formed on the cap body to surround the open end thereof is an annular reinforcing rib 15, it being observed that the cap body is of uniform diameter throughout its length while the top wall 14 lies at substantially right angles to the axis of the cap body. Further, the wall of the cap body is of uniform thickness and this is also true of the top wall, which latter wall is preferably of the same thickness as the wall of the cap body. Formed on the top wall at its inner side is an annular depending sealing rib 16 which is concentric to the axis of the cap body and is spaced inwardly with respect to the wall thereof. This rib is integral with the top wall and, preferably, the entire cap is a one piece structure.

Attention is now directed to the fact that the cap body is of a diameter somewhat less than the diameter of the neck 11 of the bottle so that when the cap is applied, as shown in Figure 1, the cap will be stretched so as to grip the bottle neck and cling thereto, providing a closed joint between the cap body and the neck of the bottle. However, in order to effect the sealing of the bottle so that all contamination may be excluded therefrom, I have provided the sealing rib 16. As will be observed, this sealing rib is of a diameter somewhat greater than the mouth of the bottle so that by moving the cap downwardly over the bottle neck, in the operation of applying the cap, said rib may be seated upon the lip 12 and compressed in binding engagement therewith, the wall of the cap contracting beneath said lip to coact therewith for holding the rib in engagement with the lip. Accordingly, the rib will, under all normal conditions, form a sealed joint between the cap and the neck of the bottle so that air will be excluded from the bottle. The contents of the bottle will accordingly be maintained pure and clean and, as will be at once ap-

preciated, the cap may be readily applied and as easily removed. Further, the cap may, without difficulty, be turned inside out so that the interior surface of the cap may be scrubbed and otherwise cleansed.

In Figure 3 of the drawing, I have shown my improved cap in connection with a cylindrical nursing bottle 17, bottles of this design being very prevalent. The bottle is provided with a neck 18 at the upper end of which is an annular lip 19 surrounding the mouth of the bottle. As will be observed, the cap is applied to the bottle neck in a manner similar to that illustrated in connection with the bottle shown in Figure 1 of the drawing, the wall of the cap body 13 being stretched around the neck and accordingly adhering closely thereto to provide a tight joint between the cap and the neck. When the cap is employed in conjunction with a bottle as shown in Figure 3, it will be noted that the sealing rib 16 will, when the cap is properly applied, ride into the mouth of the bottle to contact the bottle neck at its inner side. Accordingly, the tension upon the top wall of the cap will serve to hold said rib in binding engagement with the neck of the bottle at the mouth thereof to provide a sealed joint between the cap and the bottle. I accordingly provide a cap of highly efficient design and a device which will prove thoroughly convenient for the purpose indicated.

Having thus described the invention, what is claimed as new is:

A bottle cap including a cap body closed at one end by a top wall having an annular depending sealing rib at its inner side disposed to coact with a bottle neck, the inner face of said wall within the lines of the rib lying above the lower edge of the rib whereby the cap may be fitted over a bottle neck having the rib entering the neck or may be fitted over a bottle neck having the rib surrounding the rim of the neck.

In testimony whereof I affix my signature.

MILTON C. COOMBS. [L. S.]