June 2, 1936. W. A. O'DETTE 2,043,186

NURSING BOTTLE

Original Filed May 2, 1934

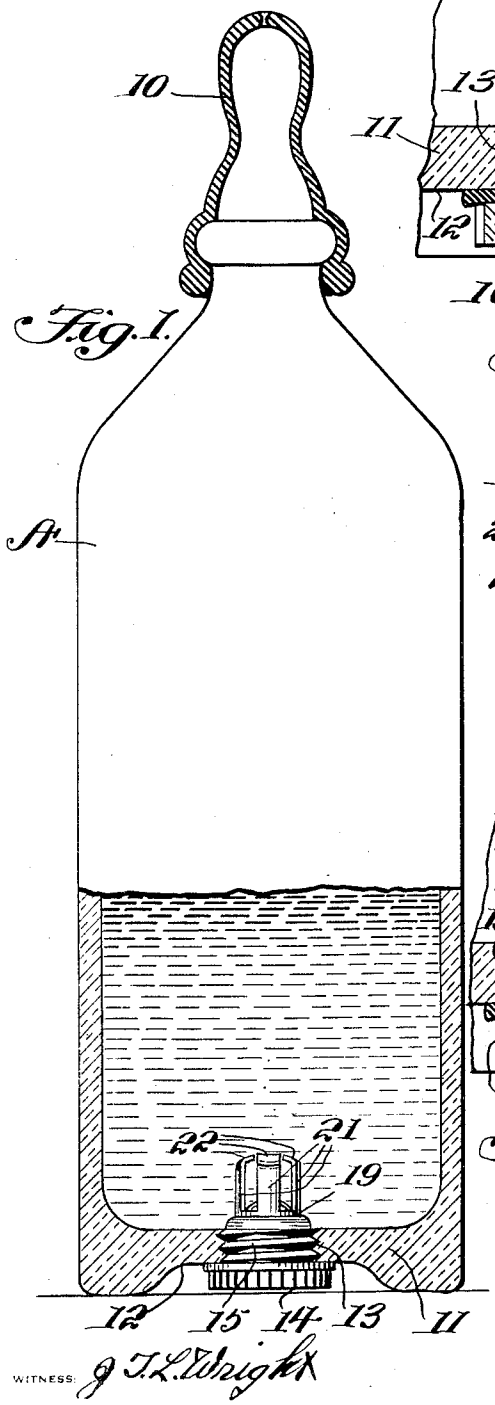


Fig. 1.

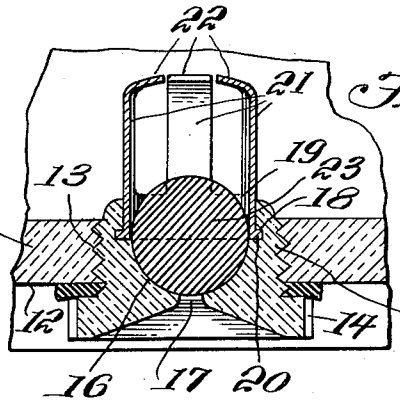


Fig. 2.

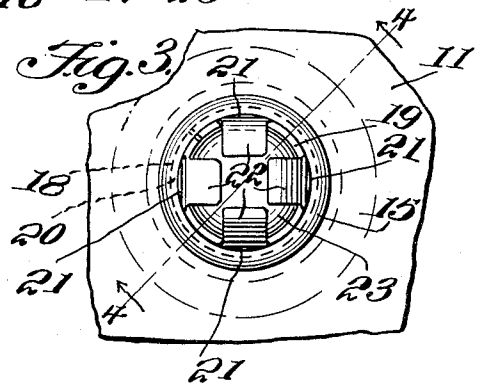


Fig. 3.

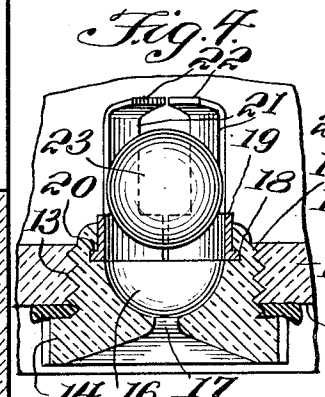


Fig. 4.

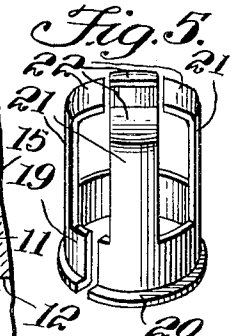


Fig. 5.

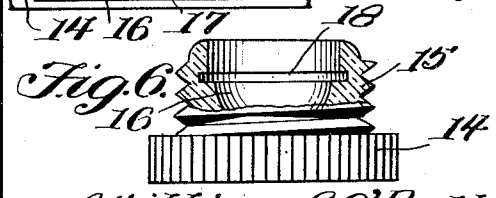


Fig. 6.

WITNESS: J. T. L. Wright

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UNITED STATES PATENT OFFICE

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NURSING BOTTLE

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Refiled for abandoned application Serial No. 723,599, May 2, 1934. This application January 4, 1936, Serial No. 57,600

1 Claim. (Cl. 215—11)

The invention relates to bottles and more especially to nursing bottles.

This application is filed in place of abandoned application No. 723,599, allowed October 31, 1934.

The primary object of the invention is the provision of a bottle of this character, wherein the same has fitted within its bottom a vented valve plug so as to permit the passage of air into the bottle, while at the same time preventing the escape of liquid therefrom, whereby the pressure of the air in the bottle is equalized and the formation of a vacuum prevented, the plug being of novel construction.

Another object of the invention is the provision of a bottle of this character wherein the plug is of a kind to permit convenient cleaning thereof to assure a sanitary condition.

A further object of the invention is the provision of a bottle of this character which is extremely simple in its construction, thoroughly reliable and efficient in its purpose, durable, and inexpensive to manufacture.

With these and other objects in view, the invention consists in the features of construction, combination and arrangement of parts as will be hereinafter more fully described in detail, illustrated in the accompanying drawing, which discloses the preferred embodiment of the invention, and pointed out in the claims hereunto appended.

In the accompanying drawing:

Figure 1 is an elevation partly in section of a bottle constructed in accordance with the invention.

Figure 2 is a fragmentary vertical sectional view through the lower portion of the bottle and the plug and being on an enlarged scale.

Figure 3 is a plan view looking toward the inner end of the plug.

Figure 4 is a sectional view on the line 4—4 of Figure 3 looking in the direction of the arrows.

Figure 5 is a perspective view of the valve cage detached from the plug.

Figure 6 is a side elevation partly in section of the plug with the cage and valve removed.

Similar reference characters indicate corresponding parts throughout the several views in the drawing.

Referring to the drawing in detail, A designates generally a bottle of the nursing type having fitted to the open mouth end thereof a nursing nipple 10, this being of standard construction, and in the opposite bottom end 11 of said bottle A is formed an external countersink 12 and a central threaded opening 13 for accommodating a vented valve plug hereinafter fully described.

The plug is formed with a peripherally knurled outer head end 14 and a reduced externally threaded screw portion 15, the latter having interiorly thereof a valve seat 16 intersected by a vent 17 opening through the head end. The screw portion 15 is engaged in the threaded opening 13 in the bottom end 11 and the outer head end 14 of the plug is countersunk, as is clearly shown in Figure 1 of the drawing.

Formed in the wall of the seat 16 in the screw portion 15 of the plug is an annular channel or groove 18 for the detachable fitting of a valve cage with the said plug and this cage comprises a longitudinally split cylinder or shell 19 having the outturned flanged end 20 adapted to occupy the channel or groove 18, the cylinder or shell 19 being inherently resilient and formed with the elongated extensions 21, these having the inturned ends 22 to retain within the cylinder or shell 19 a spherical or ball valve 23 preferably made from rubber and adapted to close the vent 17 in the plug, the valve 23 being adapted to normally rest in the seat 16 provided therefor and thus close the said vent 17. The valve 23 becomes unseated on the tilting of the bottle and when the same is active for nursing purposes, so that vacuum is broken within the bottle A during the exhaustion of milk, and preventing the closing of the nipple by such vacuum, as air will be permitted to enter the vent 17 on the opening thereof upon the valve leaving the seat 16.

The split characteristic of the cylinder or shell 19 permits the convenient assembly of the cage with the plug or the removal of the cage from the plug and thus facilitates the cleaning of these parts to assure sanitation or a sanitary condition in the handling and use of the bottle.

What is claimed is:

In a nursing bottle having an opening in its bottom and an externally flanged mouth at its top, a nursing nipple engaged with the flanged mouth, a plug removably threaded in the opening in the bottom and having a center vent, a longitudinally split inherently resilient valve cage separably engaged with the plug concentrically of the vent, the said plug having an annular channel, an outturned flange on the cage and received in the channel for the separable interfitting of the cage and plug, and a ball valve loose within the cage and controlling said vent.

WILLIAM A. O'DETTE.