J. BRIERE.

NURSING-BOTTLE.

No. 189,691. Patented April 17, 1877.

Fig. 1.

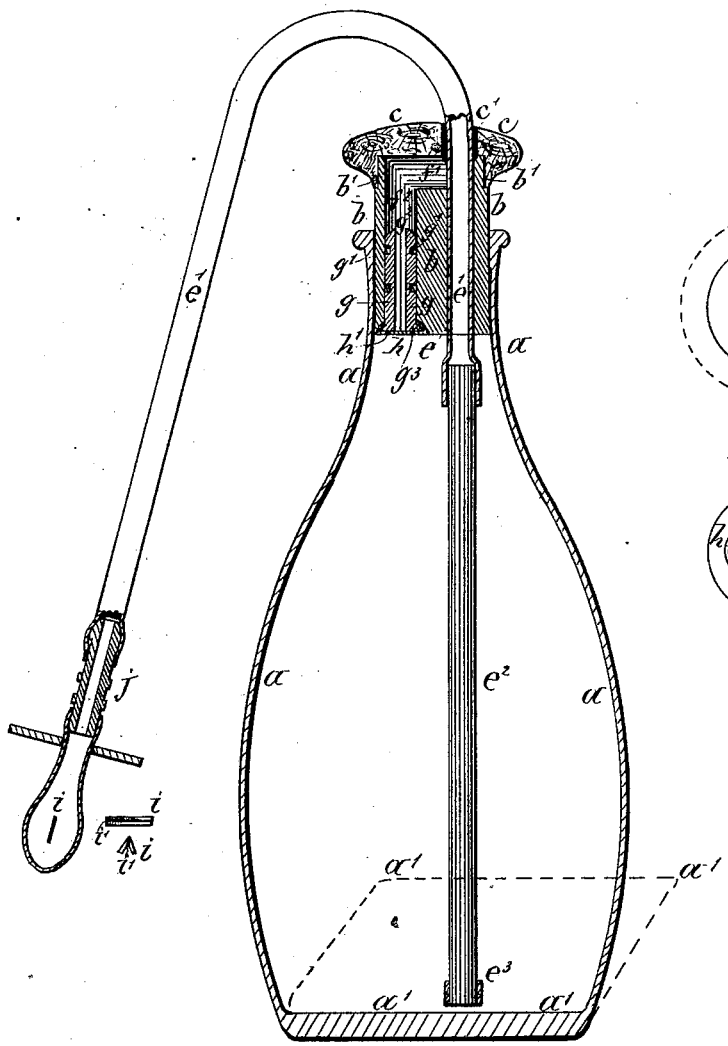


Fig. 2.

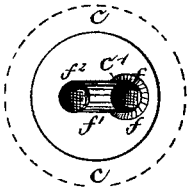
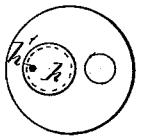


Fig. 3



Witnesses

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UNITED STATES PATENT OFFICE.

JULES BRIERE, OF ALENÇON, FRANCE.

IMPROVEMENT IN NURSING-BOTTLES.

Specification forming part of Letters Patent No. **189,691**, dated April 17, 1877; application filed October 28, 1876.

To all whom it may concern:

Be it known that I, JULES BRIERE, of the city of Alençon, in the Department of the Orne and Republic of France, have invented a new and Improved Feeding-Bottle, of which the following is a specification:

My invention has for its object the construction of a nursing-bottle which shall, in all its essential parts, perform the functions of the mother's breast; and consists, first, in providing the stopper with a peculiarly-arranged air-chamber and passage connecting said chamber with the valve-chamber; secondly, in the combination, with the stopper, having an air-chamber, a valve-chamber, and a suitable passage connecting the two, and a passage-way for the suction-tube, of a cap or capsule, through which the suction-tube passes, the orifice in said capsule being of a slightly-greater diameter than that of the suction-tube, to form an annular passage around said tube, through which the air passes to the air-chamber and valve; and, thirdly, my invention consists in the construction of the valve, the orifice of which is eccentric to its central aperture and is flush with the base of the stopper, all as hereinafter fully described.

In the accompanying drawings, Figure 1 is a vertical transverse section of a nursing-bottle illustrating my invention. Fig. 2 is a top-plan view of the stopper, with the capsule or cap removed; and Fig. 3 is a bottom-plan view of said stopper.

a represents a nursing-bottle of any ordinary or convenient shape; but I prefer to make them with a broad and heavy base, as shown at *a'*, Fig. 1, so as to prevent their being tipped over, and thus render them less liable to break. *b* is the stopper, made of cork, and slightly conical, having its upper periphery sufficiently recessed or cut away, as shown at *b'*, Fig. 1, to receive the capsule or protecting cap C, which is thus set flush with the periphery of the cork, to which it is glued or otherwise secured. The stopper or cork *b* has two vertical perforations or passages passing through its whole length. The perforation *e* serves to receive the suction-tube e^1, to one end of which a glass tube, e^2, having at its lower end a rubber ring, e^3, is fitted, as is the case in most nursing-bottles, to prevent said glass tube from breaking when brought in contact with the walls of the bottle. The suction-tube passes through the cap or capsule *c*, the aperture *c'* for this purpose being of a slightly-greater diameter than that of the suction-tube, to form an annular space around the tube, through which the air, when suction takes place, may pass into the air-chamber *f*, formed in the upper part of the stopper *b* by recessing or countersinking the face of said stopper around the suction-tube, as plainly shown by Fig. 2. By this arrangement and construction air is freely admitted to the chamber *f*, while, at the same time, the objections to an open aperture, through which dust and insects, which latter are generally attracted by milk, may enter the valve-chamber and choke it up or impair the functions of the valve, are effectually overcome.

The air, when drawn in by suction, passes into the channel f^1, and thence into the valve-chamber f^2, and to the valve, said channel connecting the chamber *f* with the valve-chamber. The valve consists of a tube, *g*, preferably made of box-wood, though any other wood or material may be used. The periphery of this tube is provided with a wide or coarse thread, g^1, to fit or screw it into the perforation f^2, the lower part of which perforation is also countersunk to receive the head or enlarged portion of the valve-tube *g*, while the upper end of said tube is conical, as shown at g^2, Fig. 1, to facilitate its introduction into the perforation or valve-chamber f^2. The valve proper *h* consists of a film or diaphragm of very flexible rubber stretched over the head of the tube *g*, and is provided with a valve-aperture, *h'*, formed on one side or eccentric to the central aperture of the tube *g*, so as to lie in close contact with the lower face of the head or enlargement of said valve-tube *g*, until the film of rubber is depressed by suction creating a vacuum in the bottle, and the consequent pressure of the inflowing air passing through the aperture *c'* around the suction-tube into the chamber *f*, thence through f^1 into f^2, and the valve, to replace the air drawn from the bottle. If, therefore, no air can penetrate into the bottle through the suction-tube the column of fluid will be permanently maintained in said tube, and to pre-

vent this ingress of air whenever suction has ceased, I employ a nipple, having lineal slits *i* formed in its sides, which not only answer the purpose of a valve, closing at the instant suction has ceased, but also serve to distribute the nourishment upon the tongue and palate, to permit of the mixing with said nourishment of a sufficient quantity of saliva before deglutition takes place, and thus promote the digestion of such nourishment.

The nipple may be connected with the suction-tube in any usual or preferred manner, and is provided at its junction with said tube with the usual guard or shield to prevent the nipple from being drawn too far into the mouth of the child.

The suction-tube e^1 should be fitted tightly into the aperture *e* to prevent all access of air along said tube to the interior of the bottle.

In the construction of the capsule and valve-tube I prefer to employ hard wood, preferably box-wood, as well as for the nipple-connection with the suction-tube or coupling *j*, owing to its hardness and greater impermeability, rendering it less liable to speedy saturation and souring.

The cleansing of the suction-tube and the glass tube is effected by means of a brush attached to a flexible wire, such as are used with most all the nursing-bottles.

Having now described my invention, what I claim, and desire to secure by Letters Patent, is—

1. The stopper *b*, provided with perforations *e* f^2, and an air-chamber, *f*, substantially as described, for the purpose specified.

2. The stopper *b*, having perforations f^2 *c*, the air-chamber *f*, and a valve, in combination with a capsule, *c*, having enlarged aperture c^1, and a suction tube, substantially as described, for the purpose specified.

3. The valve consisting of a valve-tube, *g*, constructed as described, the rubber film *h*, and a valve-aperture, *h'*, placed eccentric to the central aperture of the valve-tube, substantially as described.

In testimony that I claim the foregoing I have hereunto set my hand this 23d day of June, 1875.

JULES BRIERE.

Witnesses:
J. W. GIRARD,
ROBT. M. HOOPER.