S. W. FRANCE.
Nursing-Bottle.

No. 216,734. Patented June 24, 1879.

Fig. 1

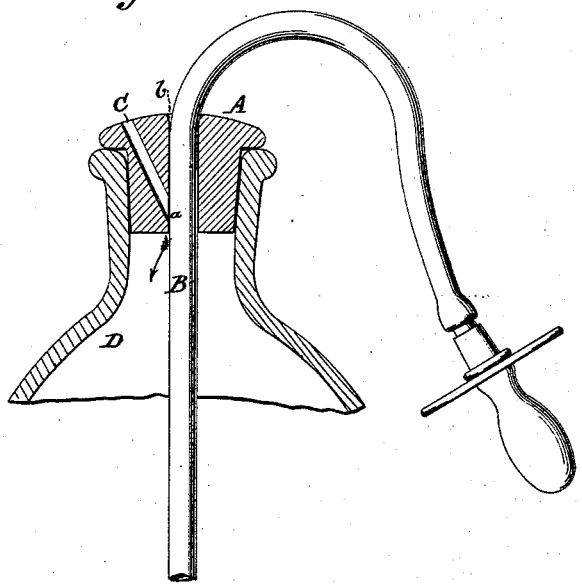
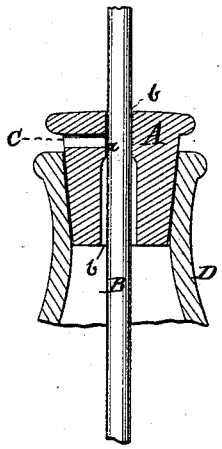


Fig. 2



Witnesses
C Dourcesseley
Sigfrid Linthagen.

Inventor.
S. W. France
by A. W. Almqvist
Attorney

UNITED STATES PATENT OFFICE.

SIMON W. FRANCE, OF BROOKLYN, NEW YORK.

IMPROVEMENT IN NURSING-BOTTLES.

Specification forming part of Letters Patent No. **216,734**, dated June 24, 1879; application filed April 9, 1879.

To all whom it may concern:

Be it known that I, SIMON W. FRANCE, of Brooklyn, in the county of Kings and State of New York, have invented a new and useful Improvement in Stopples for Nursing-Bottles, of which the following is a specification.

The object of my invention is to provide a simple and effective means of admitting air into a nursing-bottle to replace the vacuum caused by the child's sucking, without liability of spilling the milk or other liquid contained in the bottle.

The invention consists in the combination of a stopple having a lateral air-hole communicating with the central hole, (in which the suction-pipe is inserted,) and a flexible suction-pipe arranged to close by its expansion the said air at the junction of the latter with the central hole at the instant when the suction ceases and equilibrium in pressure is restored.

In the accompanying drawings, Figure 1 represents a vertical section of a nursing-bottle provided with my improvement. Fig. 2 is a vertical section of a modification of the same.

Similar letters of reference indicate like parts.

A is the stopple, and *b* the central hole in the same, through which the nursing-pipe or suction-pipe B passes. C is a small hole bored through the stopple A at the side of the central hole from some point of the stopple above the mouth of the bottle D, and ending into the hole *b*, so as to form a communication to admit air to the central hole, *b*, and thence into the bottle D, in direction of the arrow, when the inner end of the hole C is not tightly closed by the rubber pipe B.

The pipe B, when in its normal condition, keeps the inner end of the hole C closed, as shown in the drawings; but when the pipe is ever so little flattened at the point *a*, in consequence of the vacuum caused by the sucking of the child, and aided by the air-pressure through the hole C, space enough will be left below the hole C at the point *a* to admit the necessary amount of air. When the sucking ceases the pipe expands to its normal size and closes the air-hole.

The hole C may be bored at an inclination to the central hole, as shown in Fig. 1, or at right angles thereto, as shown in Fig. 2, so long as precaution is taken not to leave larger space below the hole C at *a*, to be closed by the lateral expansion of the pipe, than can be uncovered by a flattening of the pipe, due to the ordinary sucking of the child, without extra exertion. Therefore, when the hole C is bored at right angles to the hole *b*, the latter hole should be enlarged slightly to within the proper distance of the hole C to fulfill this condition, as shown in Fig. 2.

This device may be advantageously applied also for other purposes.

I am aware that a stopple has been made in which an air-hole bored at right angles to the central hole is covered on the outside by a special valve, (see Patent No. 120,575,) and I do not claim any such device.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

The stopple A, having an air-hole, C, communicating with the central hole, *b*, in combination with a flexible suction-pipe, B, accurately fitting said hole *b* below the entrance of the air-hole, and acting in the central hole, *b*, as a valve to close by expansion the air-hole C at the junction of the latter with the central hole, *b*, when the suction ceases.

SIMON W. FRANCE.

Witnesses:

A. W. ALMQVIST,

SIGFRID LINDHAGEN.