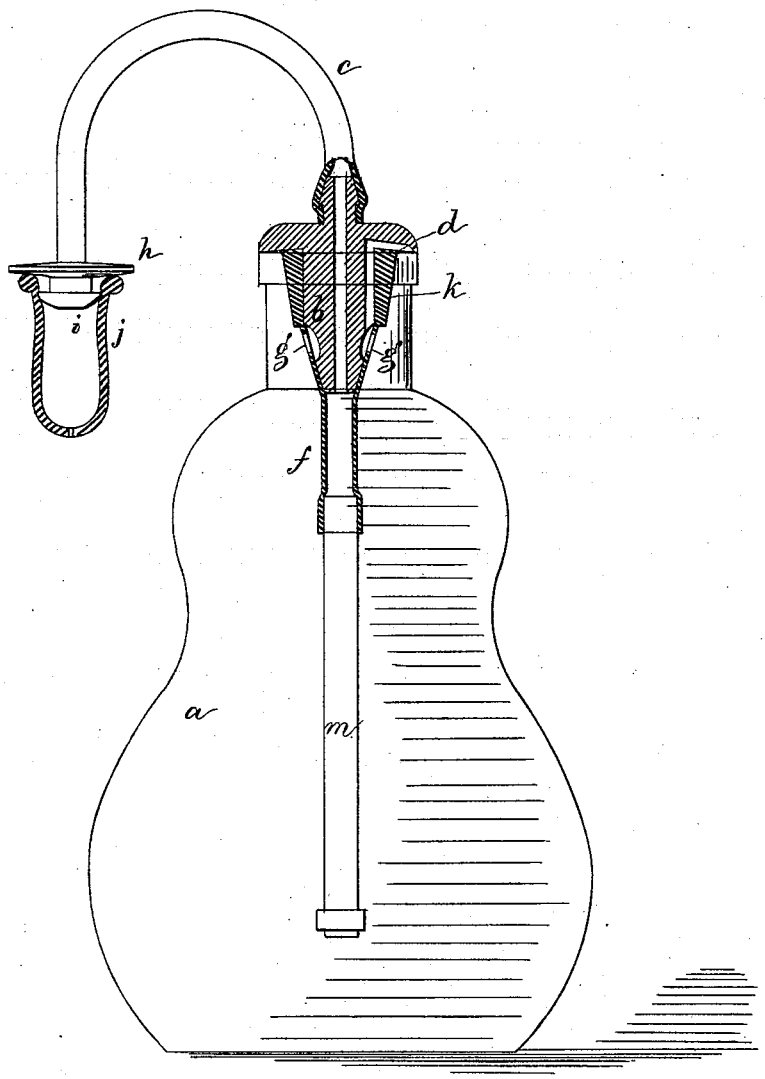
I. BULLARD.

NURSING-BOTTLES.

No. 194,859. Patented Sept. 4, 1877.



Witnesses.

L. H. Latimer.

W. A. Pratt.

Inventor.

Isaac Bullard.

per Crosby & Gregory, Att'ys.

UNITED STATES PATENT OFFICE.

ISAAC BULLARD, OF READVILLE, ASSIGNOR TO HIMSELF AND ALFRED HALE & CO., OF BOSTON, MASSACHUSETTS.

IMPROVEMENT IN NURSING-BOTTLES.

Specification forming part of Letters Patent No. **194,859**, dated September 4, 1877; application filed October 12, 1875.

To all whom it may concern:

Be it known that I, ISAAC BULLARD, of Readville, in the county of Norfolk and State of Massachusetts, have invented an Improved Nursing-Bottle, of which the following is a specification:

This invention relates to nursing-bottles; and consists in the combination, with the bottle-stopper, provided with an air-passage, of a surrounding india-rubber covering interposed between the stopper and bottle-neck, the india-rubber covering having a slit or slits communicating with the air-passage, to act as a valve or valves for the introduction of air into the bottle, whereby, as the contents of the bottle are exhausted, a vacuum will not be formed, but air will be supplied, so that the liquid in the bottle can all be removed without removing the stopper from time to time for the admission of air, as is now commonly done in most nursing-bottles as ordinarily made.

The drawing represents a nursing-bottle provided with my improvements, a portion thereof being in section.

In the drawing, *a* represents the bottle. It may be made of any desired shape. *b* is the stopper, preferably a piece of wood, turned and bored as shown, it having a central passage for the fluid, a projection at top, over which the end of rubber pipe *c* is fitted, and an air-passage, *d*, extending from the flange of the stopper down its side.

About the stopper *b* is placed a soft india-rubber gasket, *k*, to pack the space between the stopper and bottle-neck.

The lower portion of the gasket is provided with one or more slits, *g*, to permit air entering the air-passage *d* to pass through each slit into the bottle-chamber above the milk or other liquid.

A tubular prolongation, *f*, of the gasket is connected directly with the glass tube *m* in the bottle.

As the fluid is drawn from ordinary bottles not provided with valve or air passages, the surface of the fluid as it is lowered acts to form a vacuum above the fluid in the bottle, and the fluid cannot be drawn properly therefrom. To obviate this I provide the slits *g*, and as the level of the fluid falls the air passes into the channel *d*, and out through valves or openings *g* into the bottle.

The pipe *c* is of india-rubber, and made in one piece with it is a mouth-guard, *h*, and a projection, *i*, to which the nipple *j* is attached.

Heretofore the mouth-guard and projection have always been made separate from the tube, and usually of wood, and a rubber pipe has been fitted over a projection thereon.

A mouth-guard of rubber is always soft and pleasant to the touch, and it cannot be broken, as can one of wood or bone.

A guard made in one piece with the tube cannot be pulled therefrom by the child when handling it.

I do not broadly claim air-passages to admit air above the surface of the fluid in the bottle.

I claim—

1. The stopper and air-passages, in combination with the soft-rubber gasket interposed next the bottle-neck, and provided with a valve or valves to admit air into the bottle, substantially as described.

2. The bottle, and the india-rubber gasket, provided with a valve or valves, and fitted over the tube, in combination with the stopper, provided with the air-passage *d*.

3. The india-rubber pipe *c*, and the mouth-guard *h*, made in one piece with it, all substantially as described.

4. The india-rubber pipe *c*, mouth-guard *h*, and nipple-holder *i*, all made of india-rubber, and in one piece, in combination with a nipple and bottle, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

ISAAC BULLARD.

Witnesses:

G. W. GREGORY,

L. H. LATIMER.