

No. 667,738.

Patented Feb. 12, 1901.

J. M. ROSEGRANT.
NIPPLE FOR NURSING BOTTLES.

(Application filed July 9, 1900.)

(No Model.)

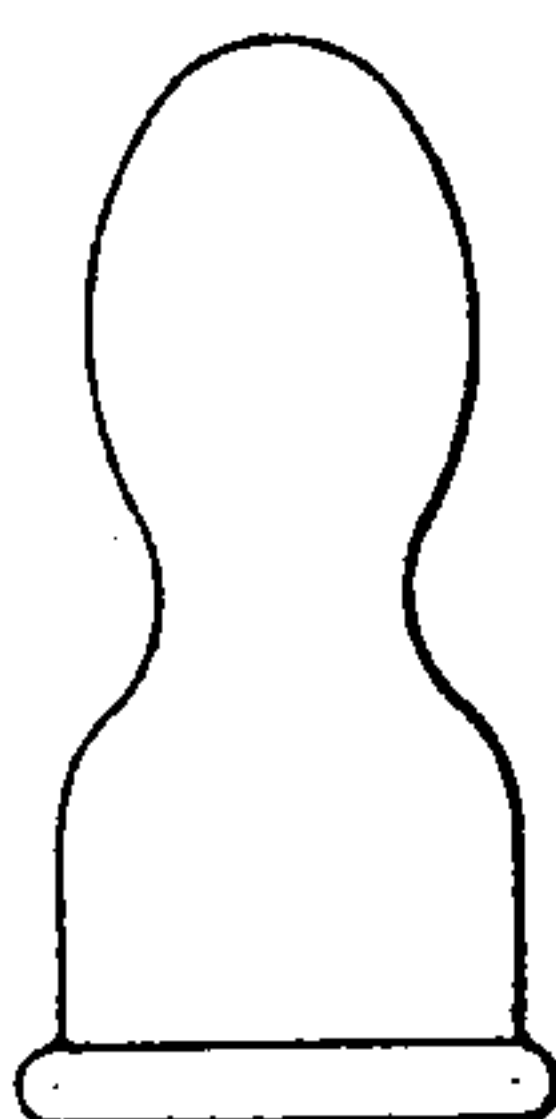


Fig. 1

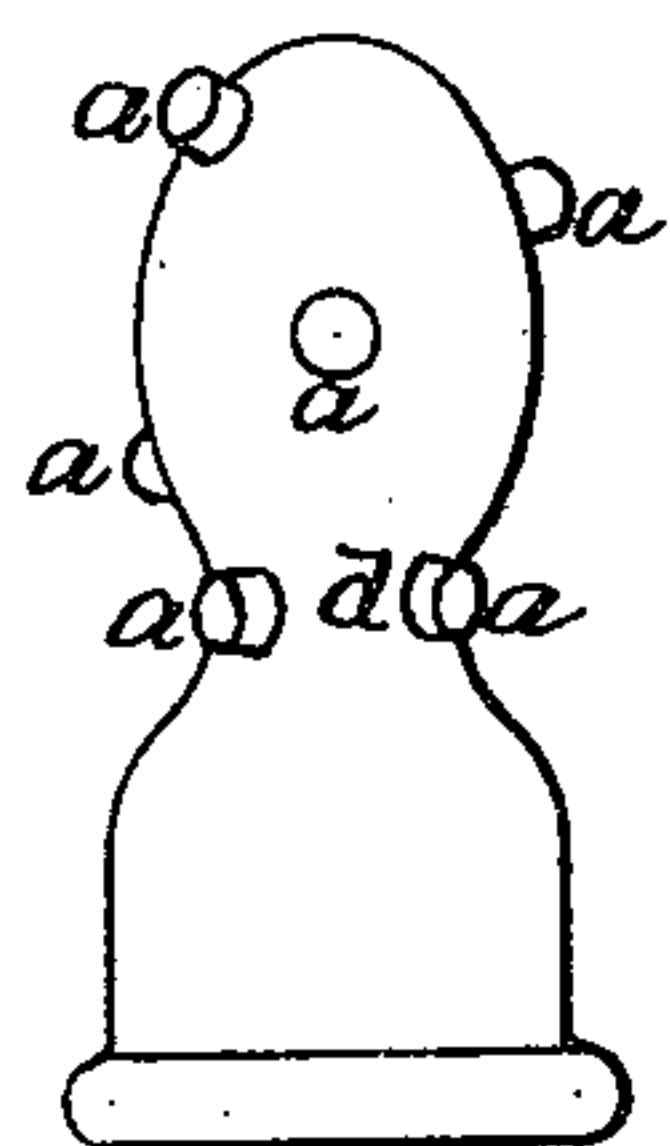


Fig. 2

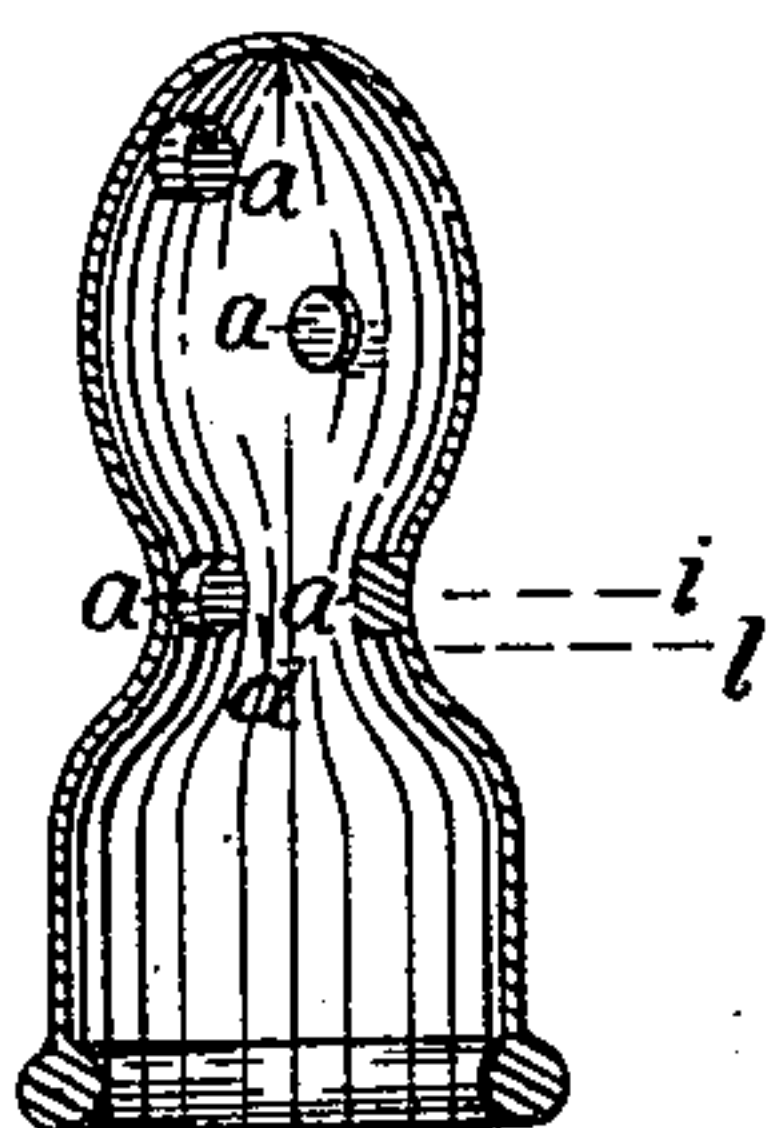


Fig. 3

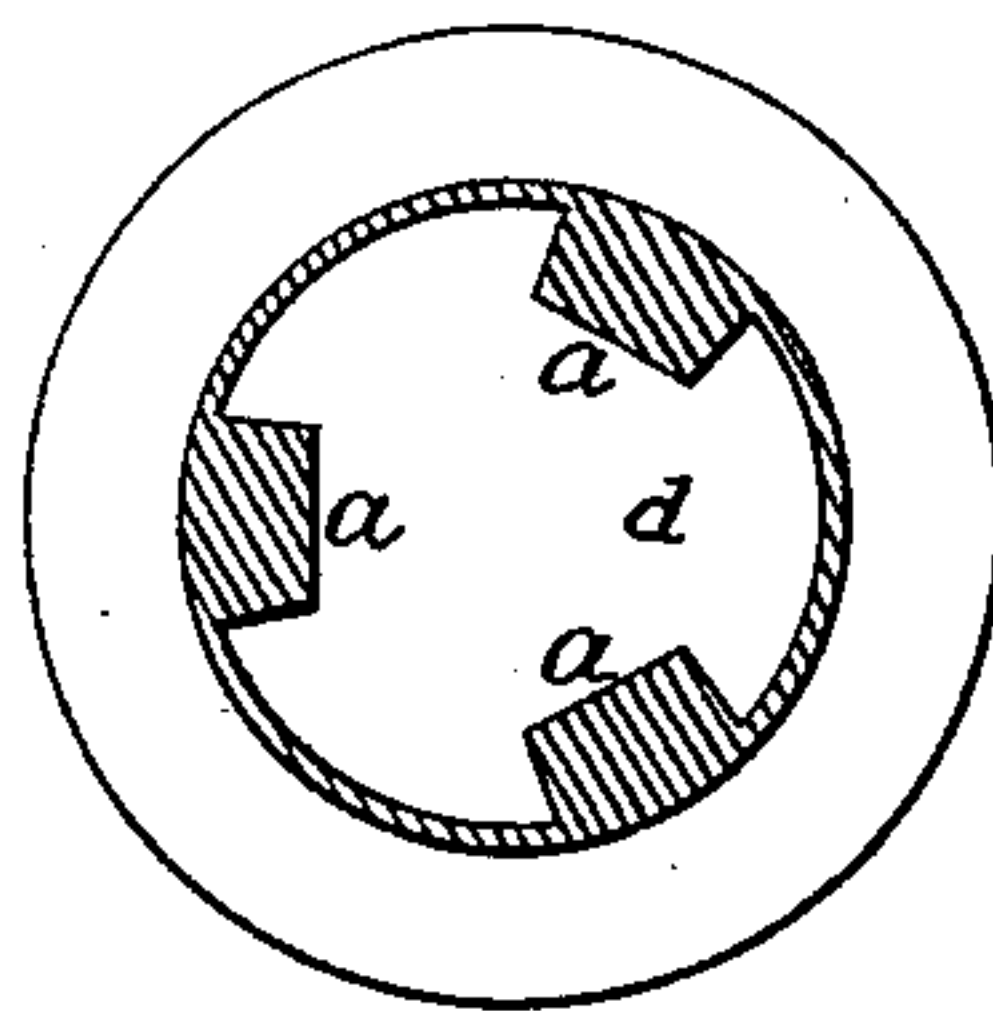


Fig. 4

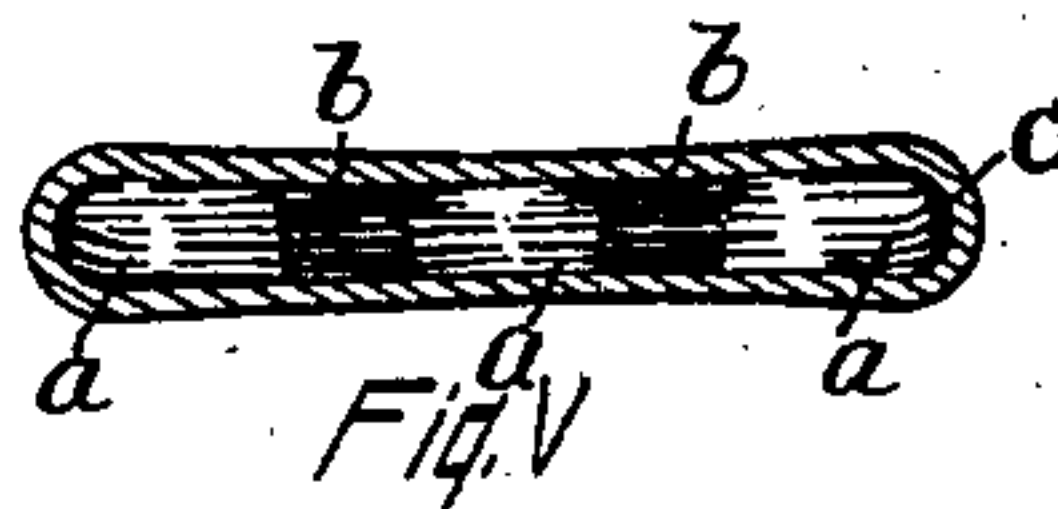


Fig. 5

Witnesses
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UNITED STATES PATENT OFFICE.

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NIPPLE FOR NURSING-BOTTLES.

SPECIFICATION forming part of Letters Patent No. 667,738, dated February 12, 1901.

Application filed July 9, 1900. Serial No. 22,893. (No model.)

To all whom it may concern:

Be it known that I, JAMES M. ROSEGRANT, a citizen of the United States, and a resident of the city of New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Nipples for Nursing-Bottles, of which the following is a specification.

This invention relates to nipples for nursing-bottles for infants, and has for its object a nipple that shall be absolutely non collapsible.

The object is attained by the means set forth in the accompanying drawings and this specification.

Figure I of the drawings represents a rubber nipple of the full size and usual form, from which I make no material departure exteriorly. Fig. II shows the nipple made after my invention turned inside out. Fig. III is a vertical cross-section of Fig. I, showing its internal construction. Fig. IV is a cross-section through the line *i*, Fig. III, in exaggerated size. Fig. V represents a cross-section through line *l* of Fig. III on the same scale as Fig. IV, showing the throat of the nipple in a compressed state.

Various means have been resorted to for making nipples that will not so completely collapse as to prevent the passage of fluid through them. The construction I have adopted consists of providing the interior of the nipple with solid projections, which are preferably made cylindrical, as though they were pieces cut from a slightly-tapering round rod, or, considering an amount of taper given them as "draft" for molding, they may be likened to frustums of cones, as shown at *a*, Fig. III. These projections are integral with the material of which the nipple is composed, are flat on their tops, and should have considerable body as compared with the walls of the nipple. A thickness several times greater than the walls of the nipple and a diameter double the thickness of the projections are good proportions.

In Fig. II, I have shown one of the nipples

turned inside out, and all but one of the projections with which it is provided are visible. The one invisible is the third one that occupies the throat *d* of the nipple, the throat being provided with three in the same horizontal plane, as shown in cross-section in Fig. IV.

It will be observed in Fig. II that only four projections are provided within the mouthpiece and that they are irregularly distributed over the surface in such relation to each other that compression of the mouthpiece cannot cause one projection to close in contact with another, nor can any normal pressure bring the sides of the nipple in close contact. Although the projections are compressible, they contain such a quantity of rubber that when they are crushed down as soon as the pressure is relieved they at once expand with considerable force and to a substantial length, so that if in compression the walls of the nipple should be brought in contact and they should incline to stick together (as they do very often) the expansive force of the projection would push them apart.

It is plain that whatever excellent results may be obtained for the mouthpiece there might still be danger of the collapsing of the throat *d* of the nipple, and a particularly advantageous feature of my invention is the placing of a row of these large solid projections within the throat of the nipple. They are arranged in the same plane as in Figs. IV and V. The effect of these three projections is illustrated in Fig. V. A compression of the throat will cause spaces to be left, as at *b b* and *c*. A pressure that may partly mash down the projections may close the openings *c*, but no compression to which a nipple is subject can completely close the space *b*. This figure also illustrates the action of the projections throughout the mouthpiece of the nipple.

Having described my invention, what I claim, and desire to secure by Letters Patent of the United States, is—

1. A nipple for a nursing-bottle having cylindrical projections on the inside, said projections having several times the thickness

of the walls of the nipple and a flat top in diameter greater than the thickness of the projections, substantially as herein set forth.

5 2. A nipple for a nursing-bottle, with a contracted throat, having three projections of the form herein shown disposed at equal distances apart in the same horizontal plane within the said throat, substantially as herein set forth.

Signed at Sing Sing, in the county of Westchester and State of New York, this 2d day 10 of July, A. D. 1900.

JAMES M. ROSEGRANT.

Witnesses:

ELLIOT WILLIAMS,

ALBERT W. HENDRICKSON, Jr.