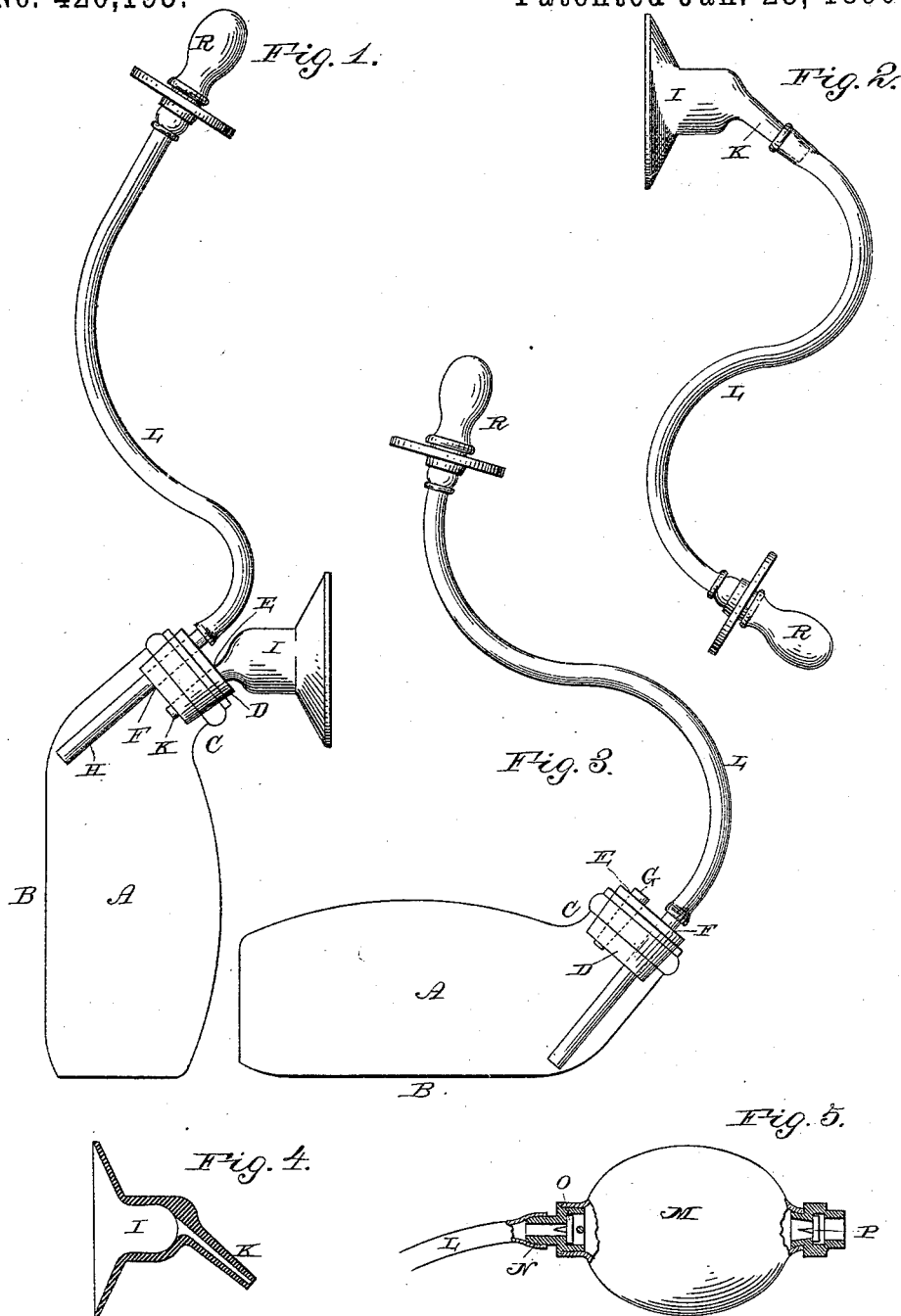


(No Model.)

H. N. GRAVES & R. S. HYER.
NURSING BOTTLE.

No. 420,195.

Patented Jan. 28, 1890.



Witnesses

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UNITED STATES PATENT OFFICE.

HENRY NORTH GRAVES AND ROBERT STEWART HYER, OF GEORGETOWN,
TEXAS.

NURSING-BOTTLE.

SPECIFICATION forming part of Letters Patent No. 420,195, dated January 28, 1890.

Application filed August 6, 1889. Serial No. 319,943. (No model.)

To all whom it may concern:

Be it known that we, HENRY NORTH GRAVES and ROBERT STEWART HYER, citizens of the United States, residing at Georgetown, in the county of Williamson and State of Texas, have invented certain new and useful Improvements in Nursing-Bottles and Breast-Pumps; and we do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

Our invention relates to an improvement in combined breast-pumps, feeding-tubes, nursing-bottles, and nipple-shields; and it consists in the peculiar construction and combination of devices, that will be more fully set forth hereinafter, and particularly pointed out in the claim.

In the accompanying drawings, Figure 1 is an elevation of our improved devices arranged to form a breast-pump. Fig. 2 is a similar view of our improved devices arranged to form a feeding-tube. Fig. 3 is a similar view of our improved devices arranged to form a nursing-bottle. Fig. 4 is a detached view of the nipple-shield. Fig. 5 is a detailed sectional view of the bulb for exhausting the bottle when used as a breast-pump.

The bottle A has the flat side B, and has its neck C arranged at a slight angle, as shown. A stopper D, which should preferably be made of glass or hard rubber, is adapted to fit tightly in the neck of the bottle, and has a pair of openings E F extending through it. A plug G is adapted to be inserted in the opening E to close the same, and a tube H, preferably of glass, is adapted to be inserted in the opening F and to extend into the bottle.

The nipple-shield I is of the form shown, and adapted thereby to fit tightly on the mother's nipple, and has a nozzle K extending from its outer end at an angle of about forty-five degrees and of suitable diameter to fit snugly in the opening E. The nipple-

shield may be made of glass, hard rubber, or other suitable material. A flexible tube L of suitable length is provided, as is also a bulb M, having the nozzle N and the valves O P.

The operation of our invention is as follows: When the nipple-shield is inserted in the opening E, the flexible tube attached to the outer end of the pipe H, and the nipple R attached to the outer end of the flexible tube, the apparatus is arranged for use as a breast-pump, as shown in Fig. 1. To operate the same the nipple-shield is placed on the nipple of the mother, and she applies her lips to the rubber nipple R and by suction creates a partial vacuum in the bottle, and hence causes the milk to be drawn from her breast into the bottle, as will be readily understood. Of course the nurse or other person can perform this service for her.

The utility of this apparatus is apparent. It will enable mothers to empty their breasts when away from their infants, and when traveling and on other occasions, thus securing their comfort and preserving the healthy condition of the breast.

By applying the flexible tube to the nipple R and to the nipple-shield, as shown in Fig. 2, the same may be used for the purposes of a feeding-tube to enable the infant to nurse the breast without applying its lips to the mother's nipple. This will be found of great utility when the mother's nipple is sore, or when the child contracts the habit of biting the mother's nipple, as it enables the child to be fed without having the mother's nipple in its mouth.

When the nipple-shield is removed from the opening E and the plug G inserted in said opening while the flexible tube is applied to the bottle, as shown in Fig. 3, the invention is arranged for use as a nursing-bottle. It will be apparent that the mother, if she has occasion to leave her infant for a considerable length of time, may cause the contents of her breasts to be drawn into the bottle by the breast-pump arrangement before described, and then arrange the bottle for nursing, as shown in Fig. 3, and leave the same for the child to suck during her absence.

The bulb shown in Fig. 5 is adapted for use for exhausting the bottle when the invention is used as a breast-pump.

Having thus described our invention, we
5 claim—

The combined breast-pump, feeding-tube, nursing-bottle, and nipple-shield, comprising the bottle, the stopper having the openings E
F, the tube H, the plug, the flexible tube, and
10 the nipple-shield having the nozzle adapted

to be inserted in opening E and attached to the flexible tube, substantially as described.

In testimony whereof we affix our signatures in presence of two witnesses.

HENRY NORTH GRAVES.
ROBERT STEWART HYER.

Witnesses:

ROBT. O. JOHN,
JAS. F. TAULBEE.