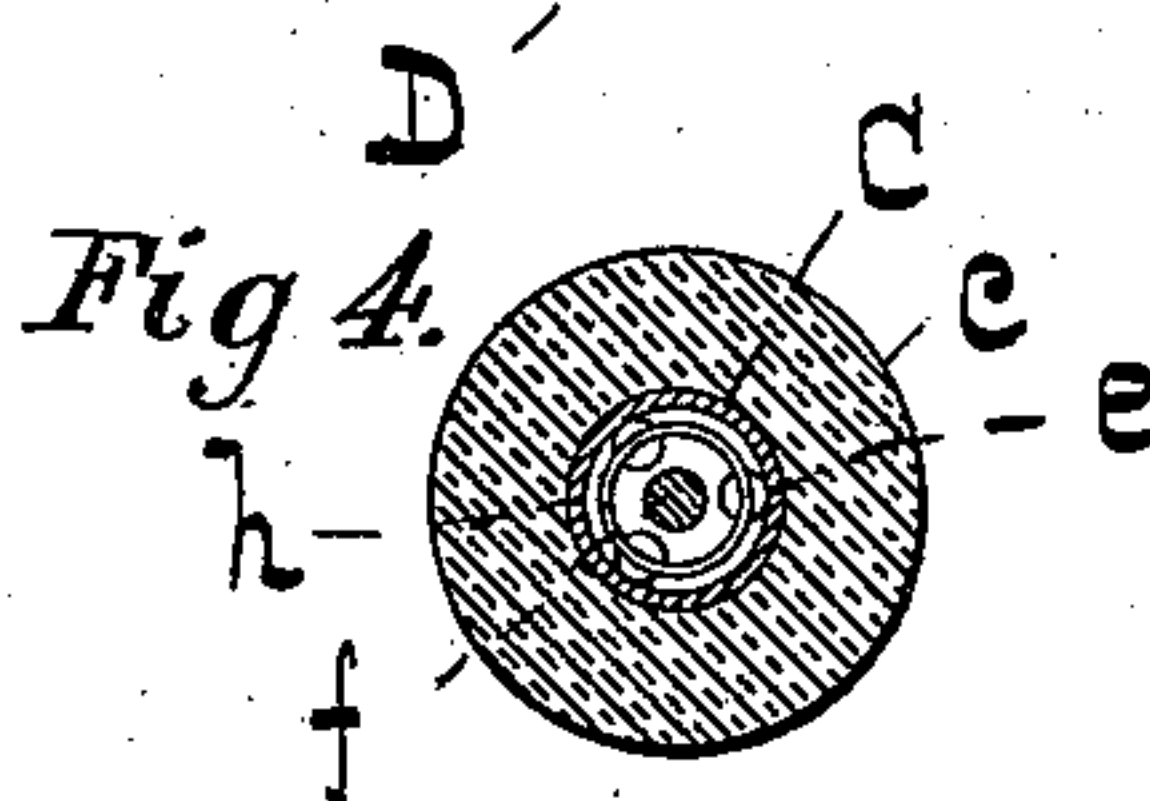
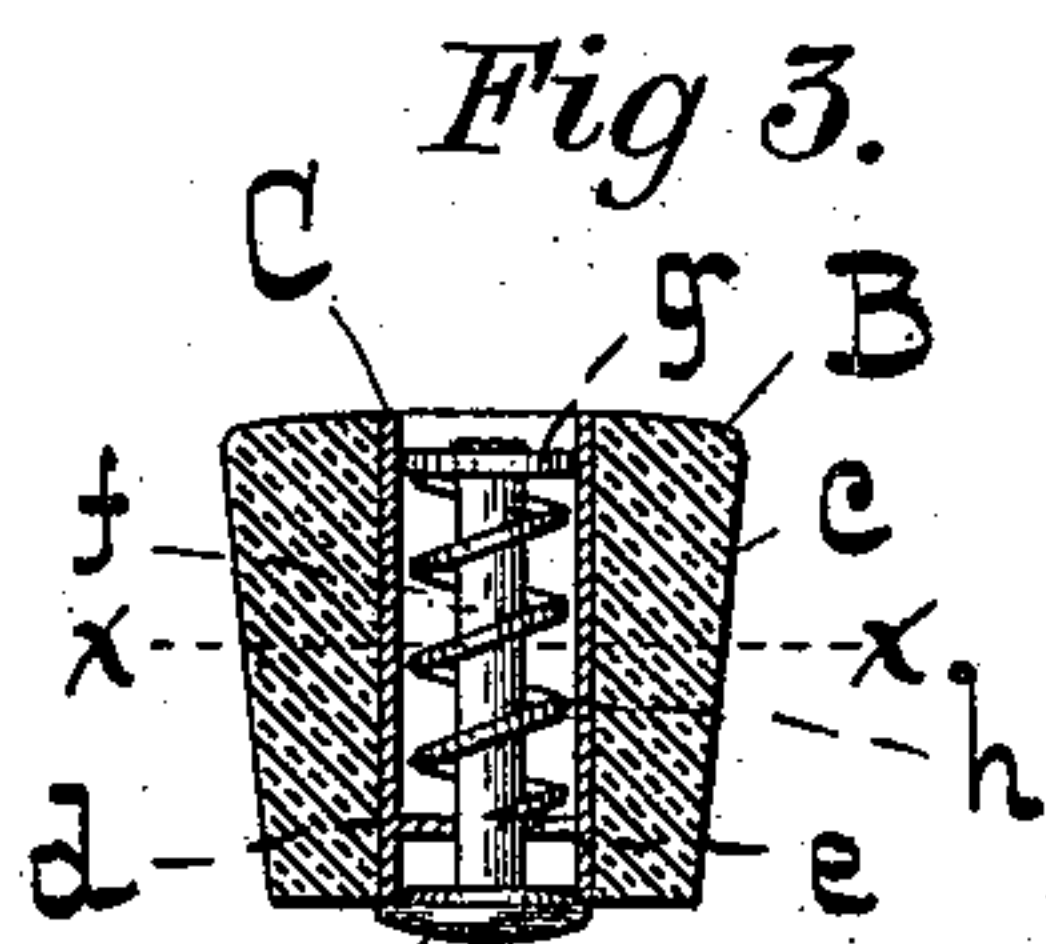
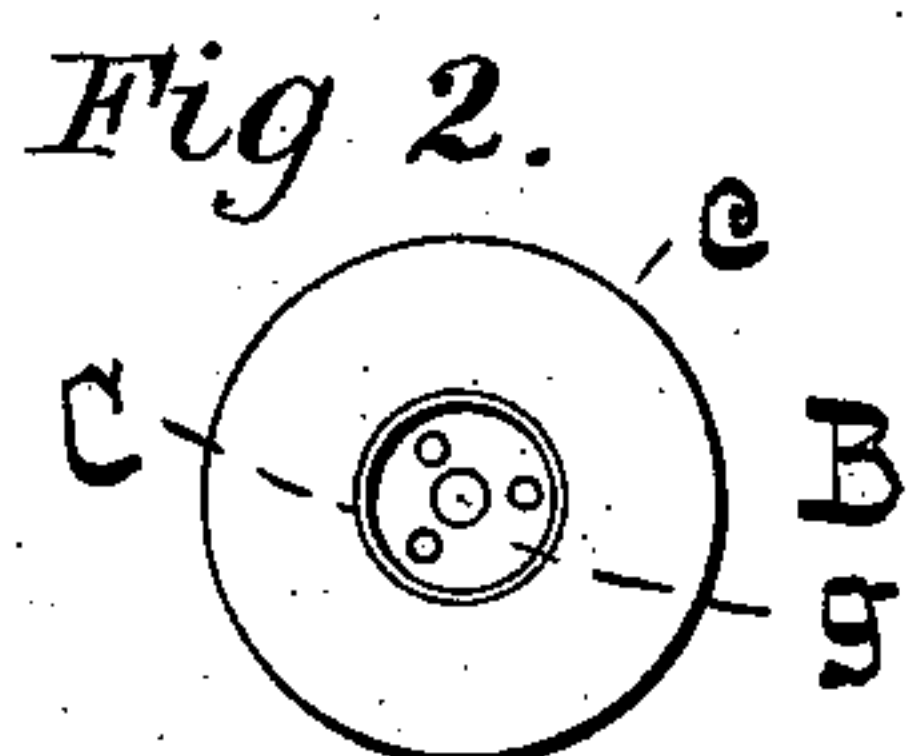
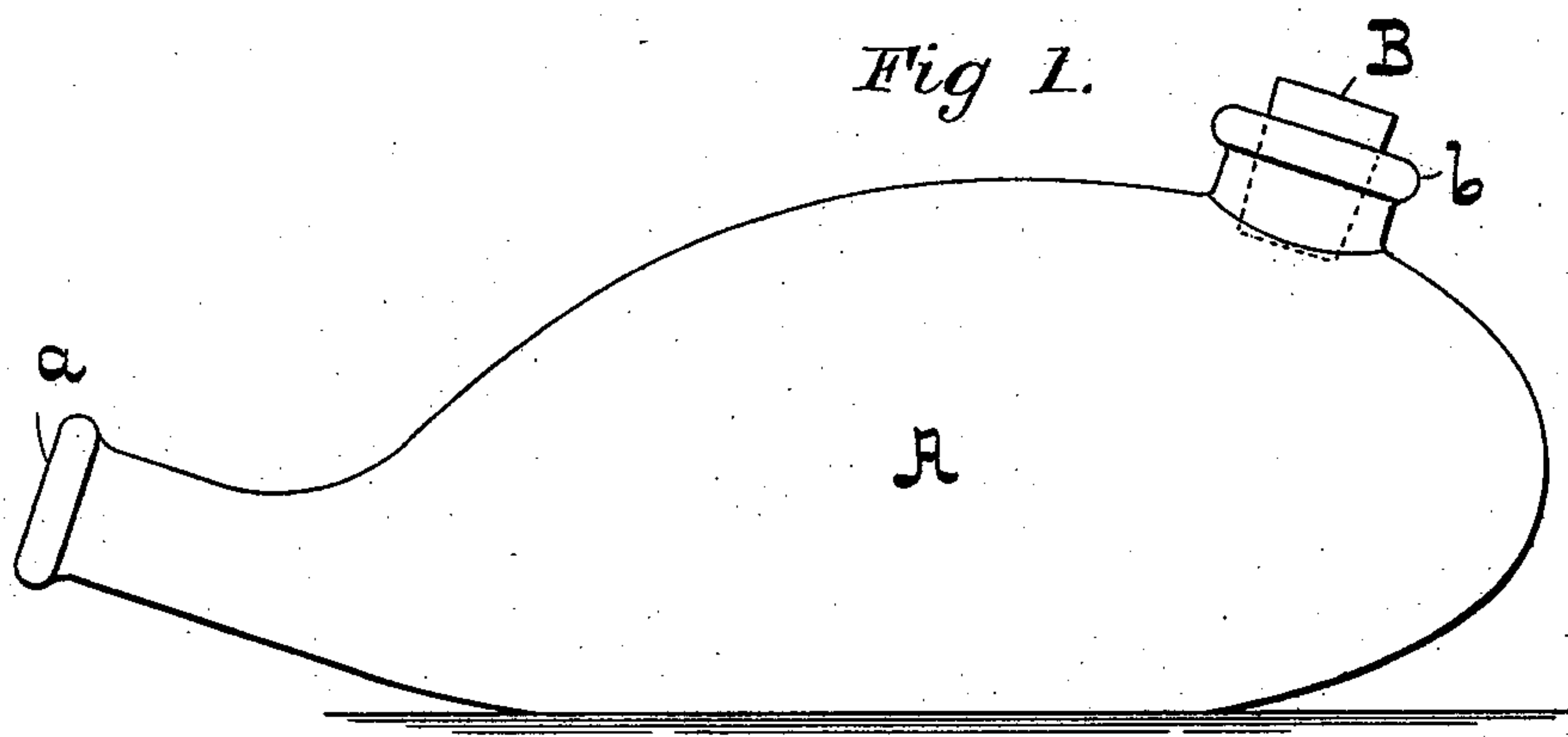


(No Model.)

G. WASHINGTON & C. B. ROBERTS.
VALVE FOR NURSING BOTTLES.

No. 564,416.

Patented July 21, 1896.



-WITNESSES-

Sam'l Fisher
Harry Constantine

-INVENTORS-

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UNITED STATES PATENT OFFICE.

GEORGE WASHINGTON AND CHARLES B. ROBERTS, OF BALTIMORE,
MARYLAND.

VALVE FOR NURSING-BOTTLES.

SPECIFICATION forming part of Letters Patent No. 564,416, dated July 21, 1896.

Application filed March 7, 1896. Serial No. 582,179. (No model.)

To all whom it may concern:

Be it known that we, GEORGE WASHINGTON and CHARLES BASCOMB ROBERTS, of the city of Baltimore and State of Maryland, have
5 invented certain Improvements in Air-Admitting Stoppers for Nursing-Bottles, of which the following is a specification.

The object of this invention is to produce a stopper for a nursing-bottle in which cheap and effective means are provided for the ad-
10 mittance of air to take the place of milk withdrawn, as will hereinafter fully appear.

In the further description of the said invention which follows, reference is made to
15 the accompanying drawings, forming a part thereof, in which—

Figure 1 is an exterior side view of a nursing-bottle provided with the improved stopper. Fig. 2 is an enlarged top view of the
20 stopper alone. Fig. 3 is a central section of Fig. 2. Fig. 4 is a section of Fig. 3, taken on the dotted line $x x$.

Referring now to the drawings, A is a nursing-bottle having the usual mouthpiece
25 a and filling-nozzle b .

B is the stopper, the major portion c of which is made of rubber.

C is a metallic thimble secured within the rubber c , and extending from end to end.
30 The lower end of the thimble is adapted as a valve-seat.

Near the lower end of the thimble C is a partition-disk d , having a central hole for the stem of a valve hereinafter described, and
35 around this hole are perforations e to admit air, as will be described.

D is a valve arranged to rest on the valve-seat at the lower end of the thimble, provided
40 with a stem f , which passes through the hole in the partition-disk d . This stem is shorter

than the thimble, and at its upper end is fitted with a perforated collar g of the same diameter as the interior of the thimble C. This collar serves as a guide for the upper
45 end of the stem, and between it and the partition-disk d is a light coiled spring h , which retains the valve D yieldingly on its seat.

The stopper, constructed as described, is forced tightly into the filling-nozzle b , and while it prevents leakage of milk from the
50 bottle, it admits air thereto to take the place of milk withdrawn.

By having the end of the stem f somewhat below the upper end of the thimble C the valve cannot be accidentally opened and the
55 milk wasted by handling the bottle or overturning it.

When the bottle is in use, the valve D admits air whenever the pressure in the bottle becomes sufficiently reduced to allow the outer
60 air to overcome the tension of the spring h .

We claim as our invention—

A stopper for a nursing-bottle, which consists of a plug of some compressible material such as rubber, combined with an interior
65 rigid thimble wholly within the compressible plug, having a valve-seat at its lower end, a partition-disk within the thimble, a valve adapted to rest against the seat of the thimble,
70 having a stem which passes through the partition-disk, with a guiding-collar at its upper end, and a spring confined endwise between the partition-disk and the guiding-collar on the stem, substantially as specified.

GEORGE WASHINGTON.
CHARLES B. ROBERTS.

Witnesses:

WM. T. HOWARD,
DANL. FISHER.