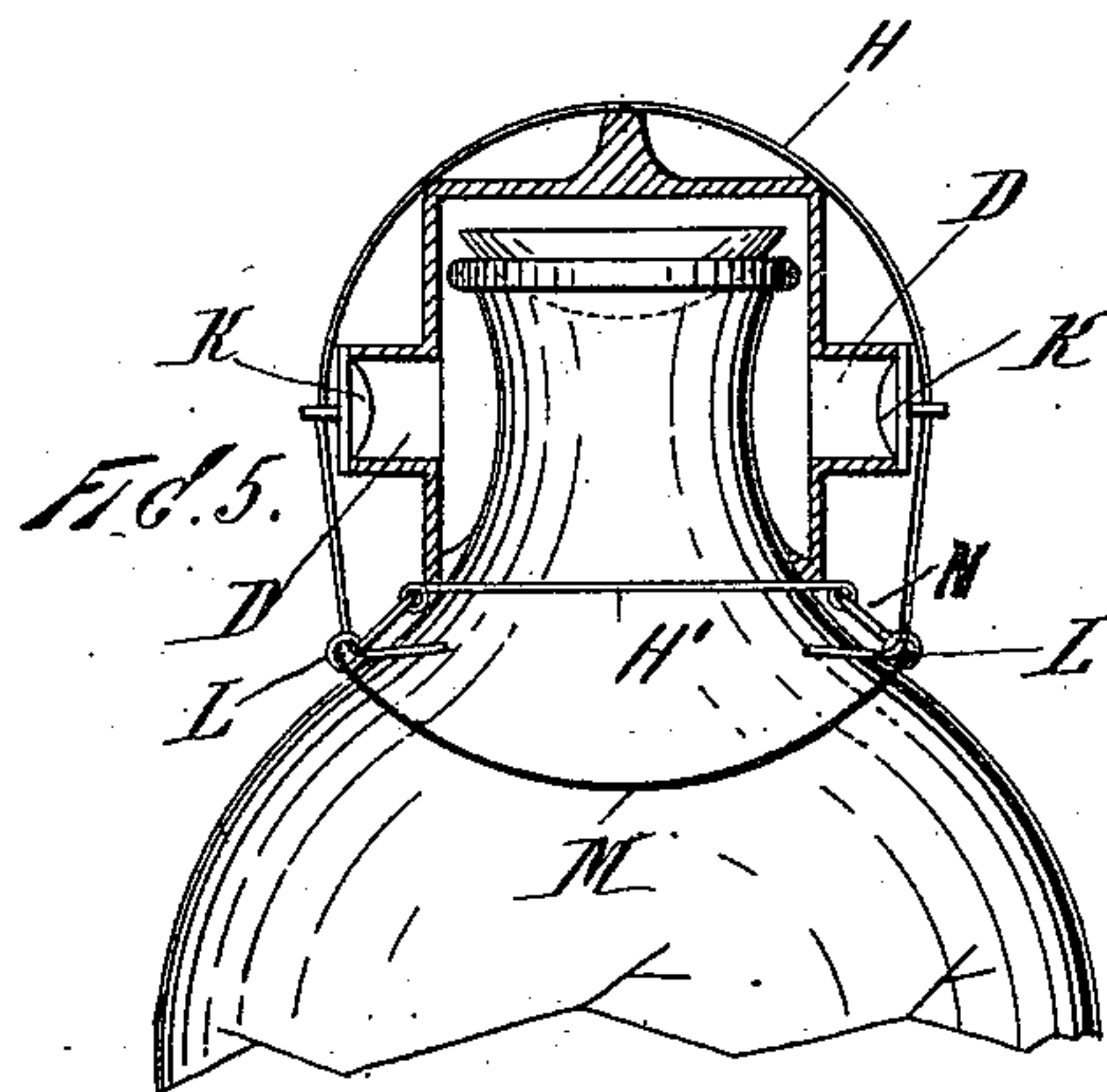
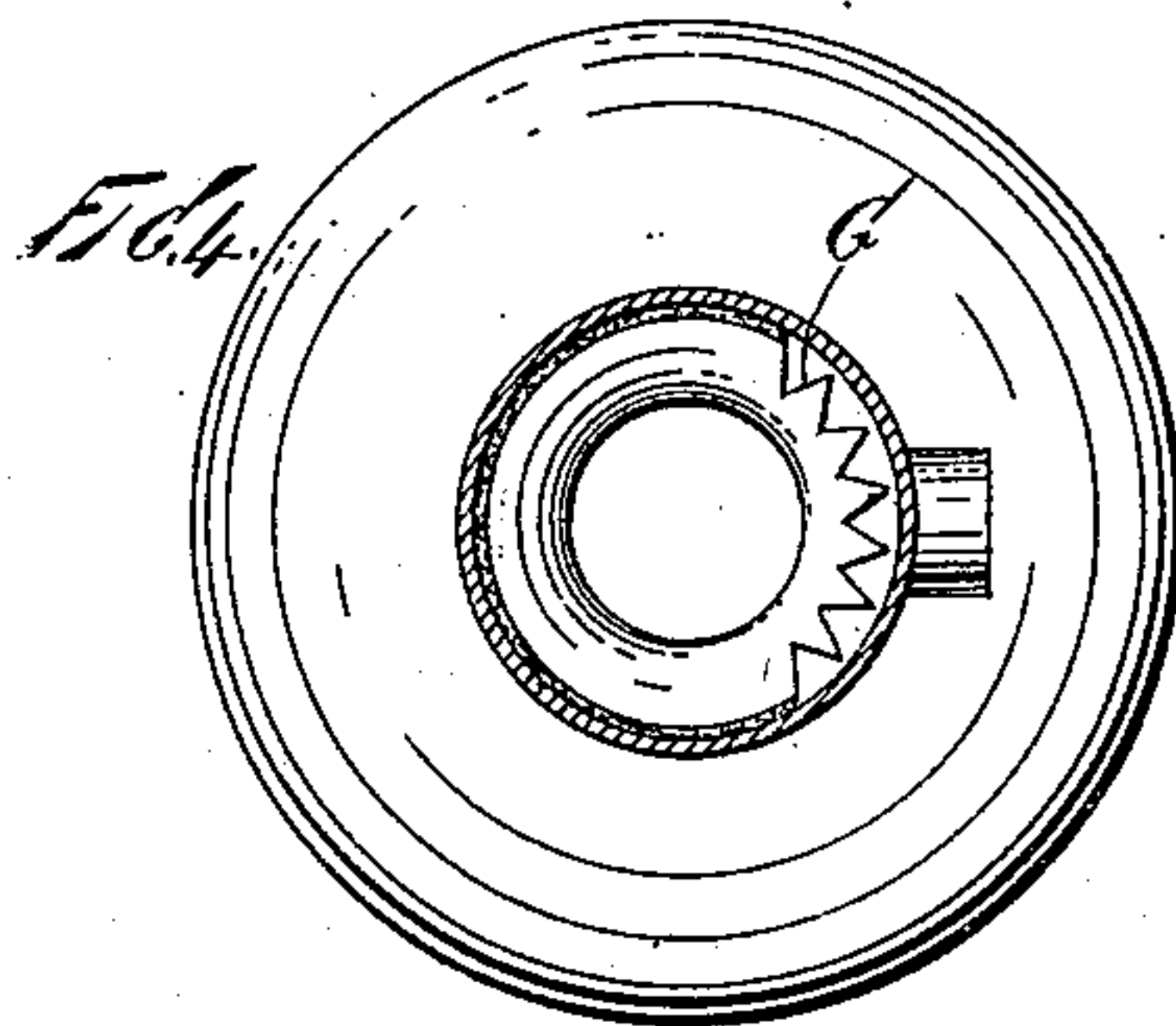
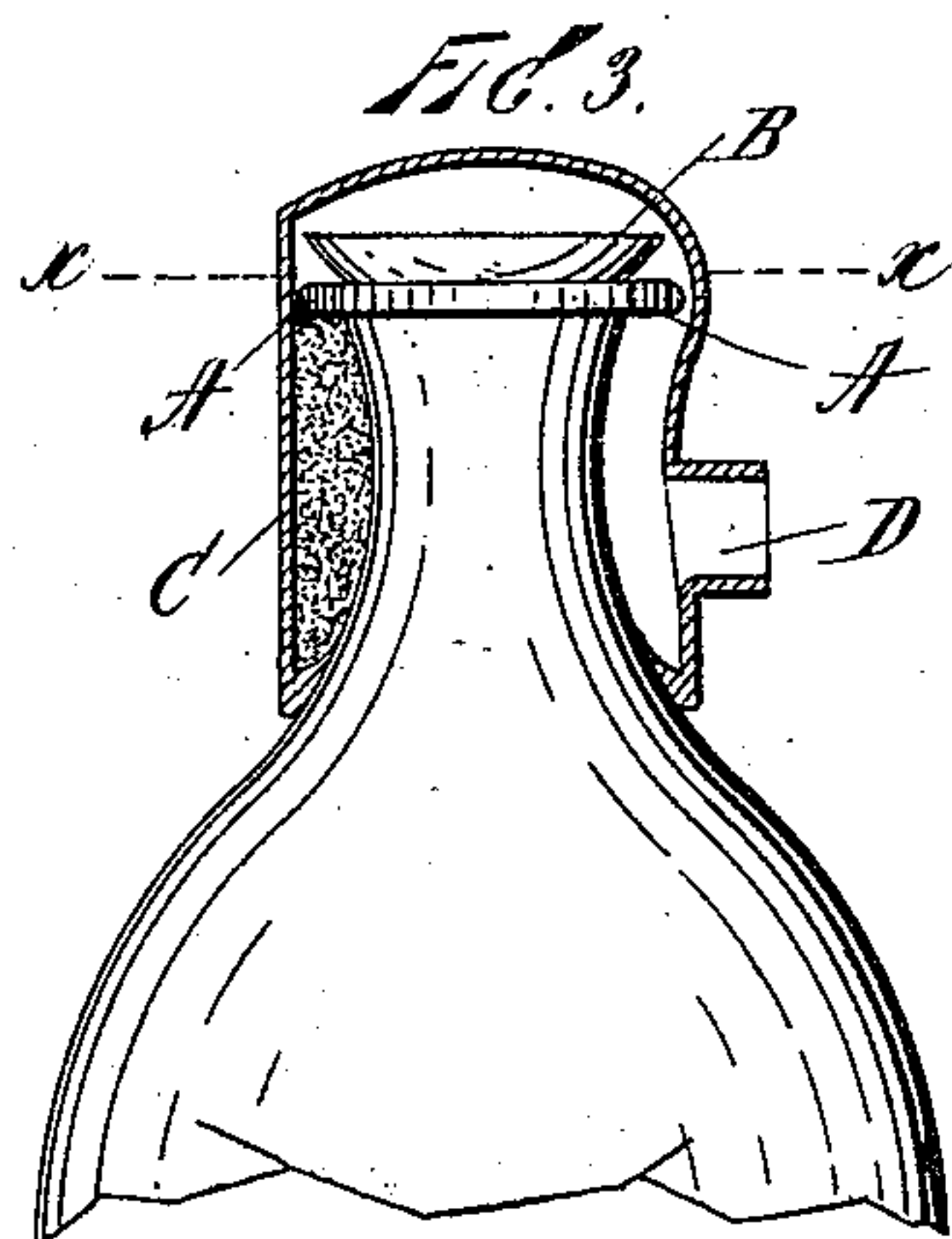
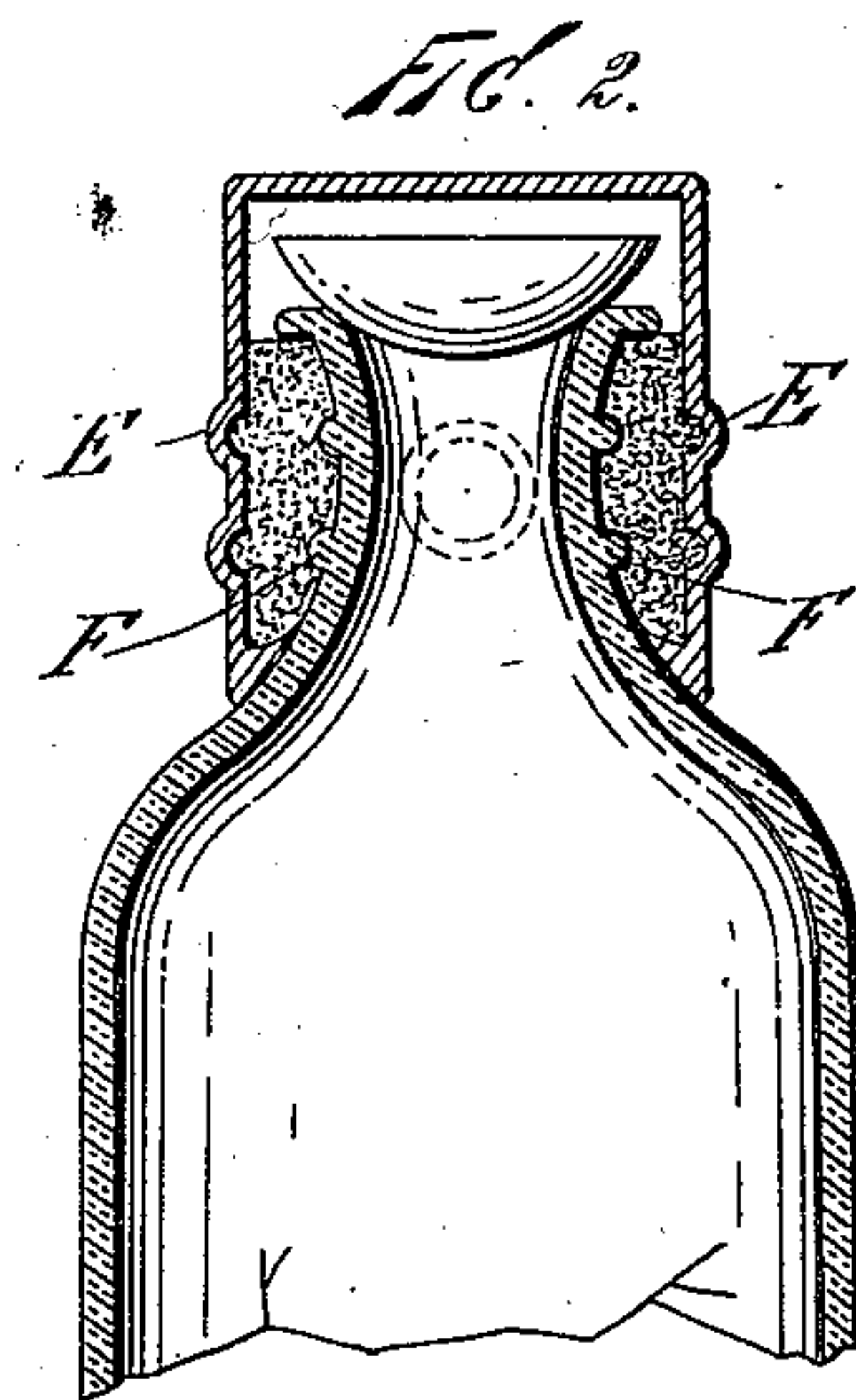
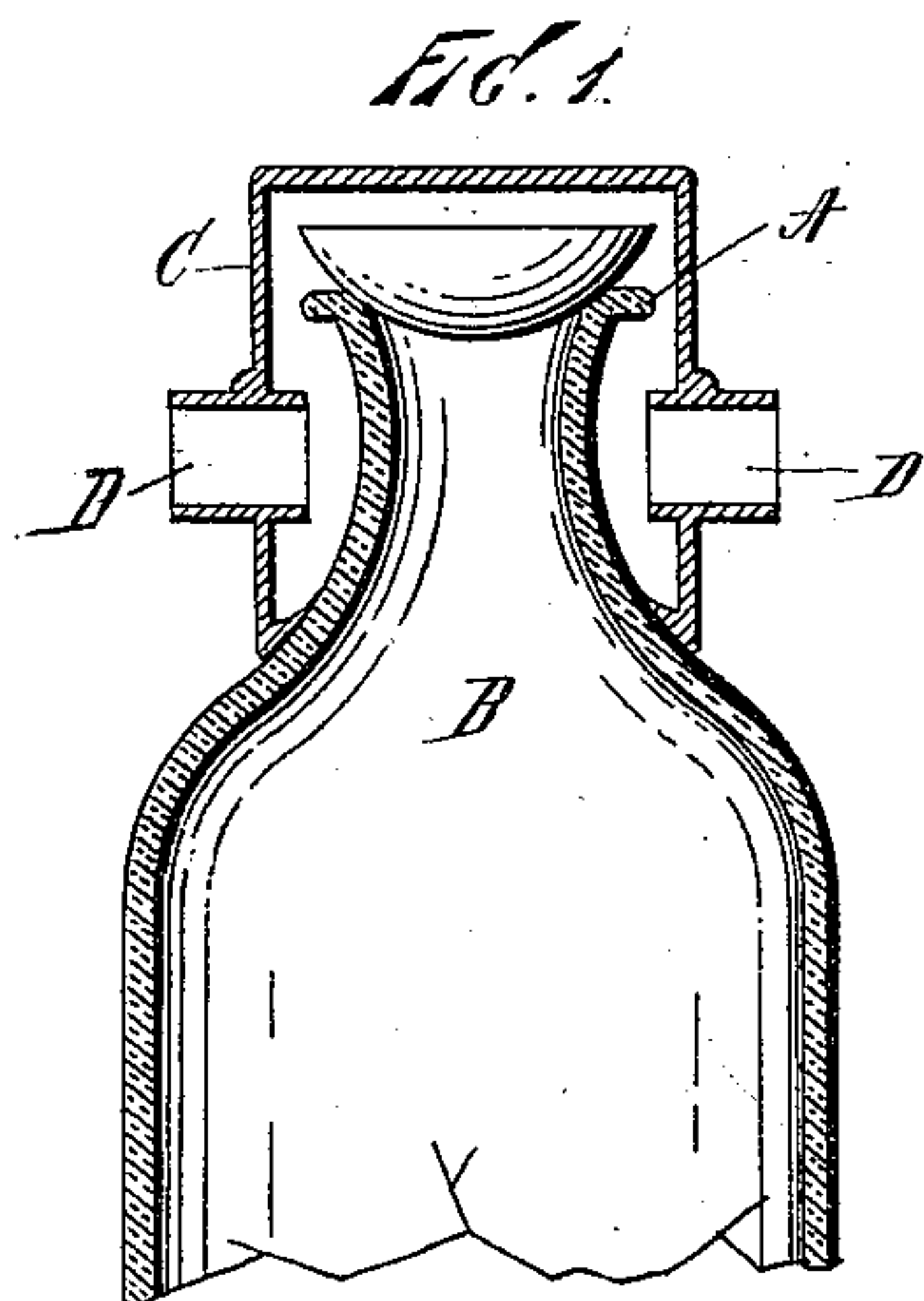


(No Model.)

H. G. WOOD.
NON-FILLABLE BOTTLE.

No. 553,551.

Patented Jan. 28, 1896.



Witnesses:
John Buckler,
A. M. Cusack

Inventor:
H. G. Wood
By Edgar Tate &
Attorneys.

UNITED STATES PATENT OFFICE.

HORATIO G. WOOD, OF NEWPORT, RHODE ISLAND.

NON-FILLABLE BOTTLE.

SPECIFICATION forming part of Letters Patent No. 553,551, dated January 28, 1896.

Application filed April 19, 1895. Serial No. 546,311. (No model.)

To all whom it may concern:

Be it known that I, HORATIO G. WOOD, a citizen of the United States, and a resident of Newport, county of Newport, and State of Rhode Island, have invented certain new and useful Improvements in Non-Fillable Bottles, of which the following is a specification, reference being had to the accompanying drawings, forming a part thereof, in which similar letters of reference indicate corresponding parts.

This invention relates to bottles, jugs, cans, or similar articles, and the object thereof is to produce an article of this class which having been once filled and emptied of its contents cannot be again filled or reused.

The invention is fully disclosed in the following specification, of which the accompanying drawings form a part, in which—

Figure 1 represents a central vertical section of the upper part of the bottle provided with my improvement; Fig. 2, a similar section thereof on a plane at right angles to that of Fig. 1; Fig. 3, a view of the upper part of the bottle provided with a modified form of my improvement, which is shown in vertical section; Fig. 4, a section thereof on the line xx , the valve not being shown; and Fig. 5 represents another modification, the attachment being shown in section.

In the practice of my invention I preferably provide an annular outwardly-directed flange A at the nozzle of the bottle, on which nozzle is placed a plano-convex or concavo-convex valve B, the convex side thereof being directed downward, as shown, said valve being composed of glass, cork, rubber, or any other desired material, and around the neck and nozzle of the bottle and inclosing said valve is placed or secured a cap C, being preferably cylindrical in form and closed at the upper end and provided with ports or openings D at opposite sides. This cap is composed of any desired material, preferably metal, and provided on the sides at right angles to the ports D with corrugations E, and adjacent thereto the neck of the bottle is also provided with outwardly-directed beads or projections F, as shown in Fig. 2, and within this space between the neck of the bottle and the side walls of the cap is placed any desired form or kind of cement in a plastic con-

dition, by which the cap is held securely in place and cannot be removed without breaking the bottle; or in place of the cement molten glass may be used, if desired, or any other preferred means may be employed for securing the cap to the neck of the bottle.

In Figs. 3 and 4 I have shown a slightly-modified form of this construction in which but one of the ports is employed, and with this form of construction it will be observed that the cement used for securing the cap to the neck of the bottle may be carried farther around the neck, and thus make a more secure connection. In this form of construction the outwardly-directed flange A is notched or serrated, as shown at G in Fig. 4, and the wall of the cap on the side on which the port D is formed is contracted below the flange at the nozzle of the bottle, the object of this arrangement being to prevent the introduction of any kind of instrument to interfere with the operation of the valve B, as hereinafter described, or to assist in refilling the bottle.

The construction shown in Fig. 5 is practically the same as that shown in Figs. 1 and 2, the only difference being that in Fig. 5 I provide means for closing the discharge-ports D, the principle of which is similar to that employed in corking or closing soda-water bottles or others of that class.

To a bail H, which passes over the top of the cap C, are attached at opposite sides pads or stoppers K, which are adapted to close the ports D, as shown in Fig. 5, and below the cap the ends of the bail are bent at right angles through loops L, formed in the movable wire N, which is attached to the wire H', which encircles the neck of the bottle. It will be seen that the only object of this arrangement is to close the ports D, and it is evident that these ports may be closed in any desired manner by an ordinary cork or stopper, or by any other means.

It will be understood that in this class of devices the bottles must be filled, of course, before the cap or stopper is applied, and the operation of my improved stopper is as follows: The bottle having been filled with the desired contents, the valve B is placed in position, as shown in Fig. 1, after which the cap C is secured in place, as hereinbefore described, by means of cement, molten glass, or in any other

desired manner, and the ports D may also then be closed, either by a cork or plug, as usual, or by the device shown in Fig. 5. If now it is desired to empty the bottle or discharge
 5 a portion of its contents, it is only necessary to remove the stopper of the port or ports D and invert the bottle or tilt it in the usual manner, when the valve B will be forced from its seat by the pressure of the fluid, which
 10 will flow out through the nozzle of the bottle and through the port or ports D, and this process may be continued or repeated until the bottle is fully emptied of its contents.

It will be understood that the position of
 15 the valve B with reference to the top of the cap C is such that the valve can never be entirely misplaced, and though it will slide back and forth from one position to another it will always close the nozzle of the bottle unless
 20 the bottle be inverted. The bottle having been emptied it cannot be refilled, for the reason that it cannot be held in a position in which fluids can be poured into it without the valve B being seated in such a manner
 25 as to close the nozzle and prevent the entrance of fluids therethrough; and the construction and arrangement of the device are such that no tool or other instrument can be inserted through the port or ports D by which
 30 the bottle can be filled or the operation of the valve interfered with, and it will thus be seen that I accomplish the object of my invention by means of a device simple in construction and operation and which is comparatively in-
 35 expensive and does not materially change the form or construction of the bottle.

Having fully described my invention, I claim and desire to secure by Letters Patent—

40 1. The combination with a bottle, the nozzle of which is closed by a valve, having a convex lower surface, of a cap secured to the neck of the bottle, having a closed top, adjacent to said valve, and provided with a side
 45 port below the nozzle of the bottle, and adapted

to communicate therewith, through which the contents of the bottle may be discharged, substantially as shown and described.

2. The combination of a bottle having an outwardly directed flange on its nozzle, a cap
 50 arranged on the nozzle and a portion of the neck of the bottle and provided with ports below the nozzle, and a valve having a convex lower face adapted to fit in the nozzle to close the same and a flat upper face to con-
 55 tact with the top of the cap, substantially as described.

3. The combination with a bottle, the nozzle of which is provided with an outwardly directed flange, and a valve having a convex
 60 lower surface, to close the same, of a cap secured to the neck of the bottle, and provided with a closed top, adjacent to the valve, and with side ports below the nozzle of the bottle through which the contents of the bottle may
 65 be discharged, and means for closing said ports, consisting of pads or stoppers, secured to a wire frame, arranged on the bottle-neck, substantially as shown and described.

4. The combination with a bottle, the nozzle of which is provided with an outwardly directed flange, having notches or serrations formed therein, and a valve having a convex
 70 lower surface to close the nozzle, of a cap, secured to the neck of the bottle, and provided
 75 with a closed top, adjacent to the valve, and with a side port or ports below the nozzle, through which the contents of the bottle may be discharged, and means for closing said
 80 port or ports, substantially as shown and described.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of two witnesses, this 16th day of April, 1895.

HORATIO G. WOOD.

Witnesses:

A. F. HARRIS,

BENJAMIN MARSH, 2d.