G. B. FLETCHER.

NON-REFILLABLE BOTTLE.

APPLICATION FILED JAN. 19, 1909.

924,333.

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Fig. 1.

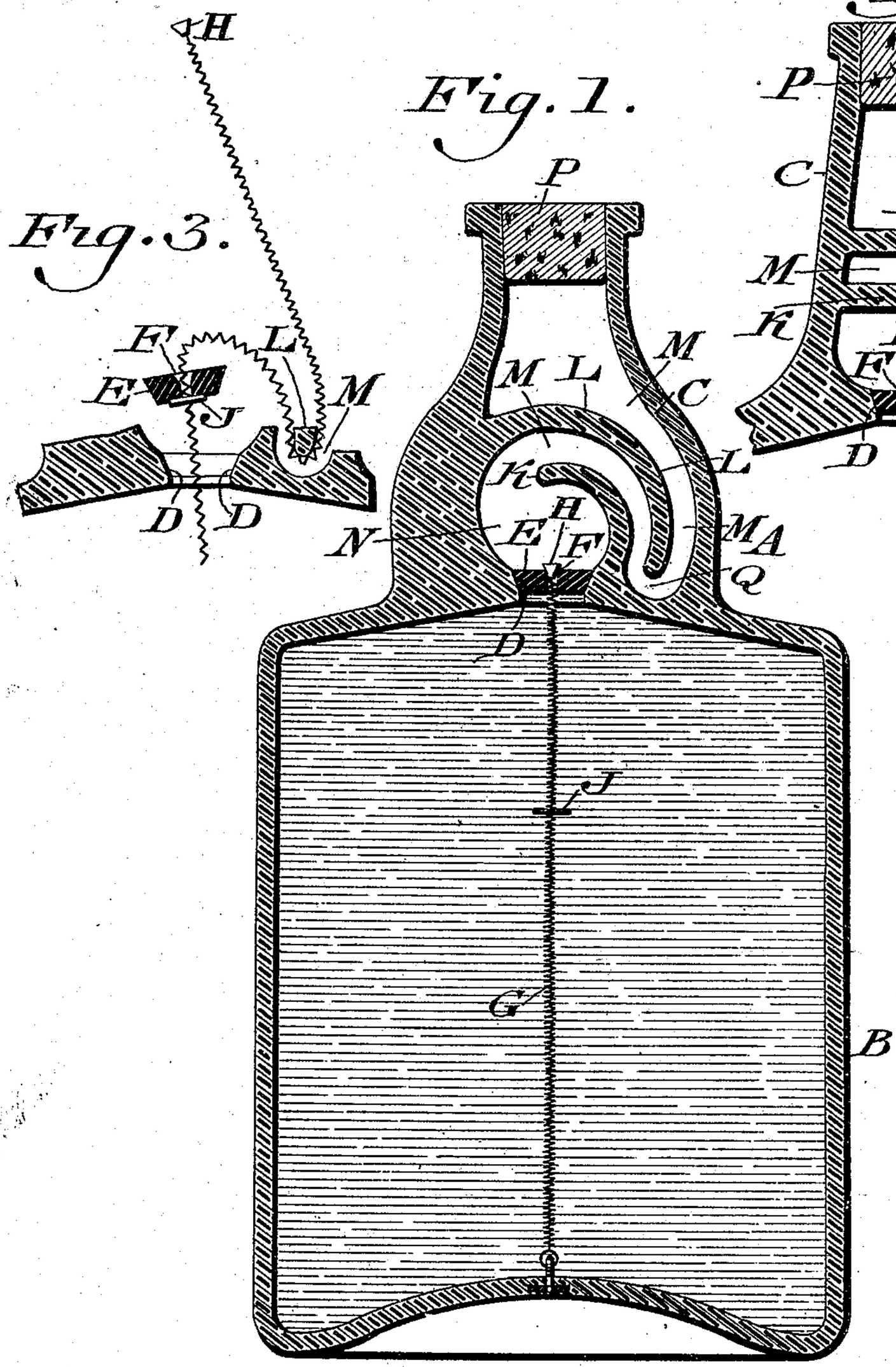
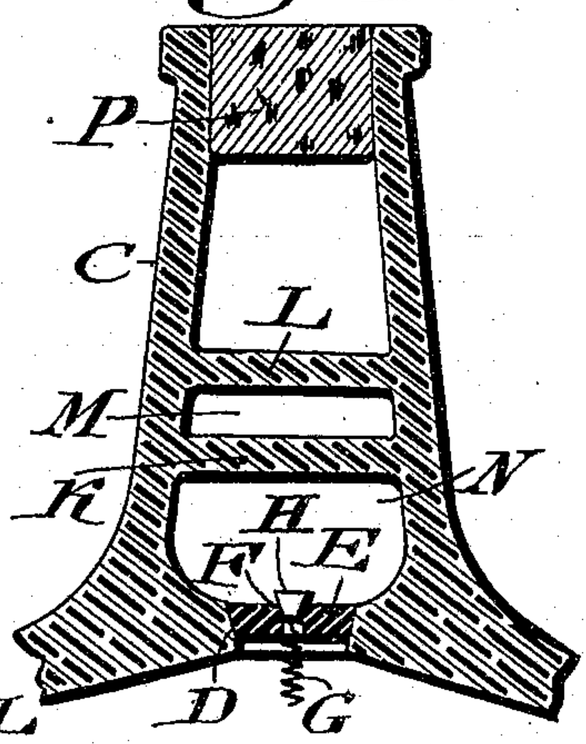


Fig. 2.



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NON-REFILLABLE BOTTLE.

No. 924,333. Specification of Letters Patent. Patented June 8, 1909.

Application filed January 19, 1909. Serial No. 473,035.

To all whom it may concern:

Be it known that I, GUSTAVUS B. FLETCHER, a citizen of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Non-Refillable Bottle, of which the following is a specification.

My invention consists of means embodying a valve and accessories for preventing the refilling of a bottle, while primarily permitting the proper filling of the same, provision being made for guarding said valve and accessories from being reached by an implement from the exterior of the bottle, or the opening of the valve by the introduction of liquor or fluid into the neck of the bottle, as will be hereinafter described, the novel features being pointed out in the claims.

For the purpose of explaining the invention, the accompanying drawing illustrates a satisfactory reduction of the same to practice, but the important instrumentalities thereof may be varied, and so it is to be understood that the invention is not limited to the specific arrangement and organization shown and described.

Figure 1 represents a vertical section of a non-refillable bottle embodying my invention. Fig. 2 represents a vertical section of a portion at a right angle to that shown in Fig. 1. Fig. 3 represents a vertical section of a portion showing the bottle properly open for primary-filling purposes.

Similar letters of reference indicate corresponding parts in the figures.

Referring to the drawing: A designates a bottle composed of the body B and neck C. At the top of said body and base of said neck is the seat D for the valve E, the latter having a vertical opening F therethrough, the same freely receiving the coiled-spring or elastic cord G, whose upper end has connected with it the plug H, which is adapted to be seated in said opening and close the same, as shown in Fig. 1, said spring being attached to the bottom of the body B, and have connected with it intermediate of its ends the cross-bar J, which is adapted to be brought into contact with the underside of the valve E and lift the latter from its seat, as in Fig. 2, so that the bottle may be properly filled, as will be hereinafter more fully described.

Rising from the top of the bottle at the wall of the valve-seat D, and joining opposite portions of the neck, is the curved wall K, and depending from the inner side of the neck C and also joining opposite portions of the neck, is the curved wall L which overhangs the wall K and is separated therefrom, said wall L being also separated from the side of the neck C opposite to where it starts, thus forming the circuitous passage M, which provides the communication between the mouth of the bottle and the chamber N above the valve and consequently to the interior of the body B through the valve-seat D.

Before the neck and body of the bottle are connected, the spring G is expanded or distended and its upper portion drawn through the passage M, the plug H being held at or about the mouth of the bottle so that the bar J retains the valve in open position, when the bottle may be filled at the mouth as usual, the fluid passing through the top of the neck, the passage M, the chamber N and the valve-seat D, and so reaching the body. The plug H is then released or let go, when the spring G contracts and the valve returns to its seat and the plug H inaccessibly seating itself on said valve and closing the opening F, while under the downward draft of said spring forces the valve on its seat, preventing improper elevation and opening of the same.

When the cork or stopper P is extracted, and the bottle overturned, the fluid will be directed against the underside of the valve, and its weight will force the latter from its seat, when the fluid may be discharged through the circuitous passage M and the neck C and be dispensed at the mouth of the bottle as usual.

When the bottle is restored to upright position, the valve closes as before. Should attempts be made to reach the valve by a piece of wire, a pin or other implement, the same will be resisted by the circuitous passage M whose walls will deflect said implement and prevent it from reaching the valve.

Should liquor or fluid be poured into the neck of the bottle, it may enter the outer member of the circuitous passage M, but meet the air cushion existing in the chamber Q at the base of said passage and so be resisted in advancing into the inner member of said passage, but at the terminal of the latter member another air cushion is presented in the chamber N and thus the fluid is prevented from reaching the valve, while

the last-named air cushion assists to force the valve more firmly on its seat and cause it to remain closed.

While the plug H closes the opening F and prevents the escape of air through the same, which would otherwise destroy the air cushions in the chambers Q, N, it also acts as a stop, preventing the downward escape of the spring or resilient member G through the valve.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent, is:—

1. In a bottle of the character stated, a neck portion having a circuitous passage therein, the same being formed of walls one below the other separated from each other and from said neck, said walls being curved with their terminals extending in opposite directions past each other with the passage disposed substantially all on one side of the vertical central line through the neck, a valve in the upper end of the body of the bottle beneath the terminal of the inner wall, there being a chamber in the neck at the base of the upper wall, and a chamber in said neck intermediate of the inner terminal of the other wall and said valve combined with an endwise extensible member conneted with said valve and carrying a closure for an opening therein.

2. In a bottle of the character stated, a valve and seat therefor in the bottle, said valve having an opening therethrough, an endwise extensible resilient member adapted to be connected with the bottle and passing freely through said opening, means on said resilient member engaging the valve to seat the same and means on said member adapted to abut said valve to lift it from its seat.

3. In a bottle of the character stated, a closing valve therein, the same having an opening therethrough, an endwise extensible resilient member in the bottle adapted to be attached thereto and pass freely through said opening, means on said member below said valve adapted when said member is distended to abut against said valve to lift the same from its seat, and means on said member above said valve adapted when said member is contracted to be seated on the valve to cause inward pressure on the valve and close said opening.

4. In a bottle of the character stated, a closing valve therein, the same having an opening therethrough, an endwise extensible resilient member in the bottle adapted to be attached thereto and freely passing through said opening, a stop-piece on said member below said valve and movable with said member on distention of the same, and a plug connected with said member above said valve and adapted on the contraction of said member to be seated on said valve and press inwardly on the same and close said opening.

5. In a bottle of the character stated, a neck having a circuitous passage a closing valve fitted to a seat at the bottom of the neck, the same having an opening therethrough, an endwise extensible resilient member on the bottle adapted to be connected with the latter and pass freely through said valve, and through said passage to the exterior of the bottle, and stops on said member on opposite sides of said valve.

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Witnesses:
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