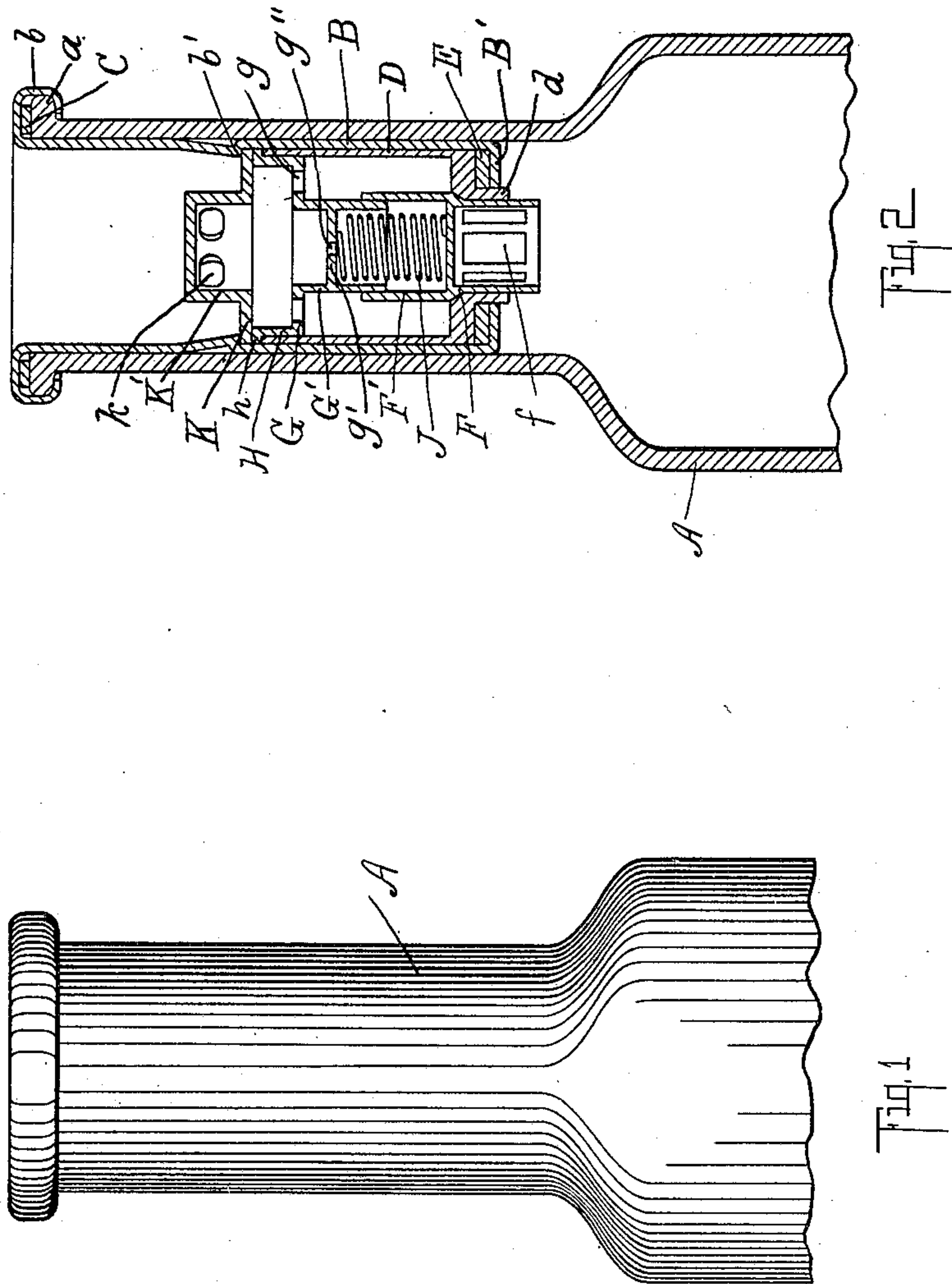


No. 825,413.

PATENTED JULY 10, 1906.

J. A. PHEIFFER.  
NON-REFILLABLE BOTTLE.  
APPLICATION FILED APR. 18, 1906.



Witnesses

Lulu G. Greenfield  
Bara A. Sabin

Inventor

Joseph A. Pfeiffer

By

Chappell & Earl

Attorneys

# UNITED STATES PATENT OFFICE.

JOSEPH A. PHEIFFER, OF KALAMAZOO, MICHIGAN, ASSIGNOR OF ONE-HALF TO GEORGE R. FARLEY, OF KALAMAZOO, MICHIGAN.

## NON-REFILLABLE BOTTLE.

No. 825,413.

Specification of Letters Patent.

Patented July 10, 1906.

Application filed April 18, 1906. Serial No. 312,377.

*To all whom it may concern:*

Be it known that I, JOSEPH A. PHEIFFER, a citizen of the United States, residing at Kalamazoo, in the county of Kalamazoo and State of Michigan, have invented certain new and useful Improvements in Non-Refillable Bottles, of which the following is a specification.

This invention relates to improvements in non-refillable bottles.

The objects of this invention are, first, to provide an improved non-refillable bottle which is effectively sealed by the liquid which it is attempted to introduce; second, to provide an improved non-refillable bottle which it is impossible to mutilate from the outside without destroying or injuring the same.

Further objects and objects relating to structural details will definitely appear from the detailed description to follow.

I accomplish the objects of my invention by the devices and means described in the following specification.

The invention is clearly defined, and pointed out in the claims.

A structure embodying the features of my invention is clearly illustrated in the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a detail elevation of a bottle containing my improvements. Fig. 2 is a detail vertical central section of my improved non-refillable bottle.

In the drawings similar letters of reference refer to similar parts in both views.

Referring to the drawings, A represents the bottle. In the neck of the bottle I arrange the supporting-casing B. This casing is preferably provided with an inwardly-projecting flange B' at its lower end, by which the valve-casing is supported. The upper end b of the casing B is folded outwardly over the rim a of the bottle-neck. A gasket or packing-ring C is preferably arranged on the top of the bottle-neck and is clamped thereon by the outturned portion b of the casing.

The valve-casing D is supported by the flange B' of the supporting-casing, a gasket or packing-ring E being arranged between the same to form a tight joint at this point. The valve-casing D is provided with a downwardly-projecting tubular portion d, which projects through the flange B' of the sup-

porting-casing. The valve F is preferably tubular in form and is provided with ports, as f, in the side walls. Upon the valve is a cup-like receptacle F'.

A partition-plate G, having perforations g therein, is arranged within the valve-casing. This partition-plate is provided with a centrally-arranged depending tube G', upon which the valve-receptacle F' is adapted to telescope. The tube G' forms a guide for the valve. Within the tube G' is a partition g', having a perforation g'' therein, the object of which will be pointed out later.

A coiled spring J is arranged within the valve-receptacle F' for holding the valve yieldingly downward in its seat. The upper end of this spring is preferably arranged to bear against the partition g'. The casing-partition G is preferably provided with a rim H, having an outturned flange h, adapted to rest on the top of the valve-casing D. The valve-casing cap K rests upon this flange h and is preferably secured by forming an annular shoulder b' in the supporting-casing B, which shoulder locks the parts of the valve-casing together. The cap-plate K is provided with an upwardly-extending central portion K', having openings k in its side walls.

In use it is intended that the bottle shall be filled and the device inserted and secured in position. The parts all being carried by the supporting-casing renders this a very simple matter. The upper end of the supporting-casing is adapted to receive the sealing-cork of the bottle, the cork not being here illustrated. When the sealing-cork or stopper is removed, in drawing the contents of the bottle the weight of the liquid is sufficient to lift the valve from its seat, thereby allowing the liquid to flow out through the ports in the valve and the ports g and k of the valve partition-plate and casing-cap. When it is attempted to introduce liquid, the same passes into the tube G' and through the perforation g'' into the valve-receptacle, filling this chamber and preventing the lifting of the valve from its seat until the liquid is drawn off by inverting the bottle. It will thus be seen that the valve is effectively locked in its seat by the liquid introduced.

With the parts arranged as I have illustrated it is believed to be quite impossible for the valve to be manipulated by the introduc-



tion of a wire or the like. The openings in the valve-casing cap and plate G are out of register, and the valve is so shaped that there are no projecting portions to be engaged.

5 I have illustrated and described my improved valve-casing in detail in the form preferred by me on account of its convenience in use and the ease with which the parts may be manufactured and assembled. I am, how-  
10 ever, aware that it is capable of considerable variation in structural details without departing from my invention.

Having thus described my invention, what I claim as new, and desire to secure by Let-  
15 ters Patent, is—

1. The combination with a bottle, of a supporting-casing having an inturned flange at its lower end, secured in the neck of the bot-  
20 tle; a valve-casing arranged within said supporting-casing; a tubular valve having ports in the sides thereof and a cup-like receptacle on its upper end; a perforated partition-plate for said valve-casing, having a depending tube thereon, projecting into the receptacle  
25 on said valve and forming a guide for the valve; a perforated partition in said tube; a coiled spring arranged in said receptacle on said valve for holding said valve yieldingly in its seat; and a cap-plate for said valve-casing  
30 having an upwardly-projecting central portion with openings in the side walls thereof, said supporting-casing having an annular shoulder formed therein for holding said cap-plate in position, for the purpose specified.

35 2. The combination with a bottle, of a supporting-casing secured in the neck of the bottle; a valve-casing arranged within said supporting-casing; a tubular valve having ports  
40 in the sides thereof and a cup-like receptacle on its upper end; a perforated partition-plate for said valve-casing, having a depending tube thereon, projecting into the receptacle on said valve and forming a guide for the  
45 valve; a perforated partition in said tube; a coiled spring arranged in said receptacle on said valve for holding said valve yieldingly in its seat; and a cap-plate for said valve-casing having an upwardly-projecting central por-  
50 tion with openings in the side walls thereof, for the purpose specified.

3. The combination with a bottle, of a supporting-casing secured in the neck of the bot-  
55 tle; a valve-casing arranged within said supporting-casing; a tubular valve having ports in the sides thereof and a cup-like receptacle on its upper end; a perforated partition-plate for said valve-casing, having a depending tube thereon, projecting into the receptacle  
60 on said valve and forming a guide for the valve; a perforated partition in said tube; a coiled spring arranged in said receptacle on said valve for holding said valve yieldingly in its seat; and a perforated cap for said valve-  
65 casing, for the purpose specified.

4. The combination with a bottle, of a sup-

porting-casing; secured in the neck of the bot-  
70 tle; a valve-casing arranged within said supporting-casing; a valve having a cup-like receptacle on its upper end; a perforated partition-plate for said valve-casing, having a depending tube thereon, projecting into the  
75 receptacle on said valve and forming a guide for the valve; a perforated partition in said tube; a spring for holding said valve yieldingly in its seat; and a cap-plate for said valve-casing having an upwardly-projecting  
80 central portion with openings in the side walls thereof, for the purpose specified.

5. The combination with a bottle, of a sup-  
85 porting-casing, secured in the neck of the bottle; a valve-casing arranged within said supporting-casing; a valve having a cup-like receptacle on its upper end; a perforated partition-plate for said valve-casing, having a depending tube thereon, projecting into the  
90 receptacle on said valve and forming a guide for the valve; a perforated partition in said tube; a spring for holding said valve yieldingly in its seat; and a perforated cap for said valve-casing, for the purpose specified.

6. The combination with a bottle, of a valve-casing; a tubular valve having ports in the sides thereof and a cup-like receptacle on its upper end; a perforated partition-plate for said valve-casing, having a depending tube  
95 thereon, with which said receptacle on said valve is arranged to telescope; a perforated partition in said tube; a coiled spring arranged in said receptacle on said valve for holding said valve yieldingly in its seat; and a  
100 cap for said valve-casing having an upwardly-projecting central portion with openings in the side walls thereof, for the purpose specified.

7. The combination with a bottle, of a valve-casing; a tubular valve having ports  
105 in the sides thereof and a cup-like receptacle on its upper end; a perforated partition-plate for said valve-casing, having a depending tube thereon, with which said receptacle on said valve is arranged to telescope; a perforated  
110 partition in said tube; a coiled spring arranged in said receptacle on said valve for holding said valve yieldingly in its seat; and a perforated cap-plate for said valve-casing, for the purpose specified.

8. The combination with a bottle, of a valve-casing; a valve having a cup-like recep-  
115 tacle on its upper end; a perforated partition-plate for said valve-casing, having a depending tube thereon, with which said receptacle on said valve is arranged to telescope; a per-  
120 forated partition in said tube; a coiled spring arranged in said receptacle on said valve for holding said valve yieldingly in its seat; and a cap for said valve-casing having an up-  
125 wardly-projecting central portion with openings in the side walls thereof, for the purpose specified.

9. The combination with a bottle, of a valve-casing; a valve having a cup-like recep-  
130



tacle on its upper end; a perforated partition-plate for said valve-casing, having a depending tube thereon, with which said receptacle on said valve is arranged to telescope; a perforated partition in said tube; a coiled spring arranged in said receptacle on said valve for holding said valve yieldingly in its seat; and a perforated cap-plate for said valve-casing, for the purpose specified.

10 10. The combination with a bottle, of a valve-casing; a tubular valve having ports in the sides thereof and a cup-like receptacle on its upper end; a perforated partition-plate for said valve-casing, having a depending tube thereon, with which said receptacle on said valve is arranged to telescope; a perforated partition in said tube; a spring for holding said valve yieldingly in its seat; and a cap for said valve having an upwardly-projecting central portion with openings in the side walls thereof, for the purpose specified.

15 11. The combination with a bottle, of a valve-casing; a tubular valve having ports in the sides thereof and a cup-like receptacle on its upper end; a perforated partition-plate for said valve-casing, having a depending tube thereon, with which said receptacle on said valve is arranged to telescope; a perforated partition in said tube; a spring for holding said valve yieldingly in its seat; and a perforated cap-plate for said valve-casing, for the purpose specified.

20 12. The combination with a bottle, of a valve-casing; a valve having a cup-like receptacle on its upper end; a perforated partition-plate for said valve-casing, having a depending tube thereon, with which said receptacle on said valve is arranged to telescope; a per-

forated partition in said tube; a spring for holding said valve yieldingly in its seat; and a cap for said valve-casing having an upwardly-projecting central portion with openings in the side walls thereof, for the purpose specified.

13. The combination with a bottle, of a valve-casing; a valve having a cup-like receptacle on its upper end; a perforate partition-plate for said valve-casing, having a depending tube thereon, with which said receptacle on said valve is arranged to telescope; a perforated partition in said tube; a spring for holding said valve yieldingly in its seat; and a perforated cap-plate for said valve-casing, for the purpose specified.

14. The combination with a bottle, of a valve-casing; a tubular valve having ports in the sides thereof and a cup-like receptacle on its upper end; a perforated partition-plate for said valve-casing, having a depending tube thereon, with which said receptacle on said valve is arranged to telescope; a perforated partition in said tube, for the purpose specified.

15. The combination with a bottle, of a valve; members arranged telescopically to form a chamber adapted to receive liquid, one of said members being connected to said valve, for the purpose specified.

In witness whereof I have hereunto set my hand and seal in the presence of two witnesses.

JOSEPH A. PHEIFFER. [L. s.]

Witnesses:

LULU G. GREENFIELD.

OTIS A. EARL.