

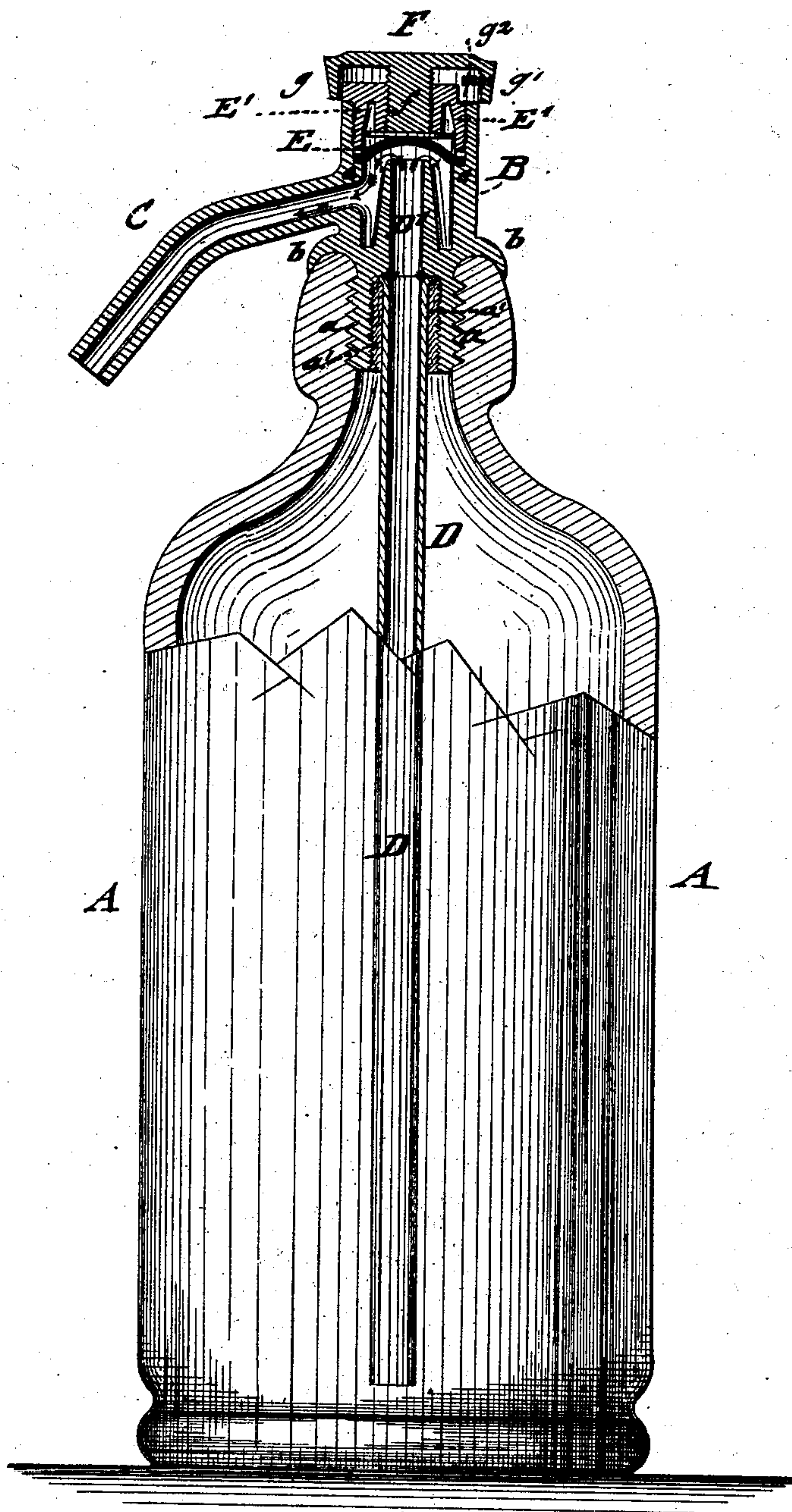
(No Model.)

C. DE QUILLFELDT.

SIPHON BOTTLE.

No. 248,147.

Patented Oct. 11, 1881.



WITNESSES:

*Carl Karp*  
*Joh. H. Rosenbaum.*

INVENTOR

*Charles de Quillfeldt*  
BY *Paul Goepe*

ATTORNEY



# UNITED STATES PATENT OFFICE.

CHARLES DE QUILLFELDT, OF NEW YORK, N. Y.

## SIPHON-BOTTLE.

SPECIFICATION forming part of Letters Patent No. 248,147, dated October 11, 1881.

Application filed July 30, 1881. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES DE QUILLFELDT, of the city, county, and State of New York, have invented certain new and useful  
5 Improvements in Siphon-Bottles, of which the following is a specification.

This invention has reference to improvements in siphon-bottles for aerated liquids, whereby the opening and closing is obtained  
10 in a simple and reliable manner, with less liability of the mechanism to get out of order and admit the escape of gas, as is the case in the constructions heretofore employed.

The invention consists of a siphon-bottle,  
15 the mouth of which has an interior screw-thread for screwing in the threaded shank of the siphon, which is also provided with an interior screw-thread for attaching by an elastic and cemented sleeve the liquid-conducting glass  
20 tube. The shank of the siphon has an annular flange or seat, which is fitted by its concave under side to the bottle-mouth. The siphon is provided with an interior tube in line with the glass tube, above which is arranged  
25 an elastic diaphragm, which is retained by the closing-nut of the siphon. Through the nut passes the screw-threaded shank of an axially-turning cap, said shank bearing by a washer upon the elastic diaphragm, so as to press the  
30 same upon the extension-tube of the liquid-conducting tube when the cap is turned in one direction, but release it when the cap is turned in the opposite direction, so as to admit the flow of liquid through an annular chamber around  
35 the interior tube and the discharge-spout.

The accompanying drawing represents a side elevation of a siphon-bottle with the siphon shown in vertical central section.

A represents a bottle of suitable shape, as  
40 usually employed for aerated liquids, and of a thickness to resist the pressure of the liquid charged into the same.

B is the siphon, through which the aerated liquid is discharged from the bottle. The siphon B is provided with a discharge-spout, C,  
45 and below the connection of the latter with the body of the siphon with a screw-threaded tubular shank, *a*, by which it is screwed into the correspondingly-threaded bottle-mouth, to  
50 which it is furthermore attached by a suitable cement or packing, so as to produce the intimate and rigid connection of the parts. The

siphon B is further provided below the spout with an annular flange, *b*, the under side of which is concaved, so as to fit on the upper  
55 part of the bottle-mouth and retain the siphon reliably in position on the bottle.

To the inside of the tubular shank *a* of the siphon B is secured by means of an elastic sleeve-shaped packing, *a'*, the central glass-  
60 tube, D, through which the liquid is conducted to the spout C. A tube, D', is arranged at the interior of the siphon B, in line with the glass tube D and as an extension of the same, the extension-tube D' communicating with the  
65 discharge-spout by means of an annular space formed around it by the exterior wall of the siphon. The upper end of the extension-tube D' is above the opening of the spout and surmounted by a disk or diaphragm, E, of rubber or  
70 other suitable elastic material, which is retained by a nut, E', and a metallic ring-shaped washer on an interior shoulder, *e*, of the siphon B, the shoulder being below the upper end of the extension-tube D'. The diameter of the  
75 diaphragm E is larger than the inside diameter of the siphon B, so that it forms a kind of arch over the extension-tube D' and leaves a space between the orifice of the tube D' and the diaphragm when the latter is not compressed  
80 by exterior means. In this position of the diaphragm a channel is provided for the free exit of the aerated liquid to the annular space around the extension-tube D', and thence to the discharge-spout C. The diaphragm serves  
85 the twofold purpose of closing, when pressed down, the liquid-conducting tube, so as to interrupt the flow of liquid, and prevent positively any leakage of liquid or gas at the top part of the siphon, which forms one of the ob-  
90 jectionable features in the common siphon-bottles at present in general use.

The screw-nut E' has an exterior shoulder near its upper end, by which it bears on the top part of the siphon when entirely screwed  
95 in. A cap, F, screws by a threaded center-shank, *f*, into the hollow center portion of the nut E' and presses a disk-shaped metallic washer upon the upper surface of the diaphragm E, so as to close the extension-tube D' when the  
100 shank is turned in two directions, while releasing the same when the shank is turned in opposite direction. The cap F is provided with a circumferential flange, *g*, around the upper



part of the nut E' and the main piece B, said flange having a fixed inwardly-projecting pin, g', which moves in a recess, g<sup>2</sup>, of the nut E', so that the cap may be turned in one or the opposite direction only as far as the recess g<sup>2</sup> admits, by which motion the cap is sufficiently raised or lowered so as to secure the opening or closing of the siphon bottle. As all the parts of the operating mechanism are fully protected against external injury, and can also be readily replaced, a durable and reliably-working siphon-bottle is obtained, which can be manufactured at less expense than the siphon-bottles heretofore in use.

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

1. The combination of a siphon having an interior extension-tube in line with the liquid-conducting tube and an interior annular chamber around the extension-tube, with an elastic diaphragm above the extension-tube, an interior screw-nut for securing the diaphragm to

the siphon, and an axially-movable cap having a central screw-threaded stem passing through the center of the screw-nut, substantially as set forth. 25

2. In a siphon-bottle, the combination of a siphon, B, having an interior extension-tube, D', in line with the liquid-conducting tube D, with an elastic diaphragm, E, secured by a screw-nut, E', with an axially-movable cap-piece, F, turning by a screw-threaded shank, f, in the open central portion of the cap, and with means whereby the extent of axial motion of the cap is controlled, substantially as set forth. 30 35

In testimony that I claim the foregoing as my invention, I have signed my name, in presence of two witnesses, this 26th day of July, 1881.

CHARLES DE QUILLFELDT.

Witnesses:

PAUL GOEPEL,  
CARL KARP.