

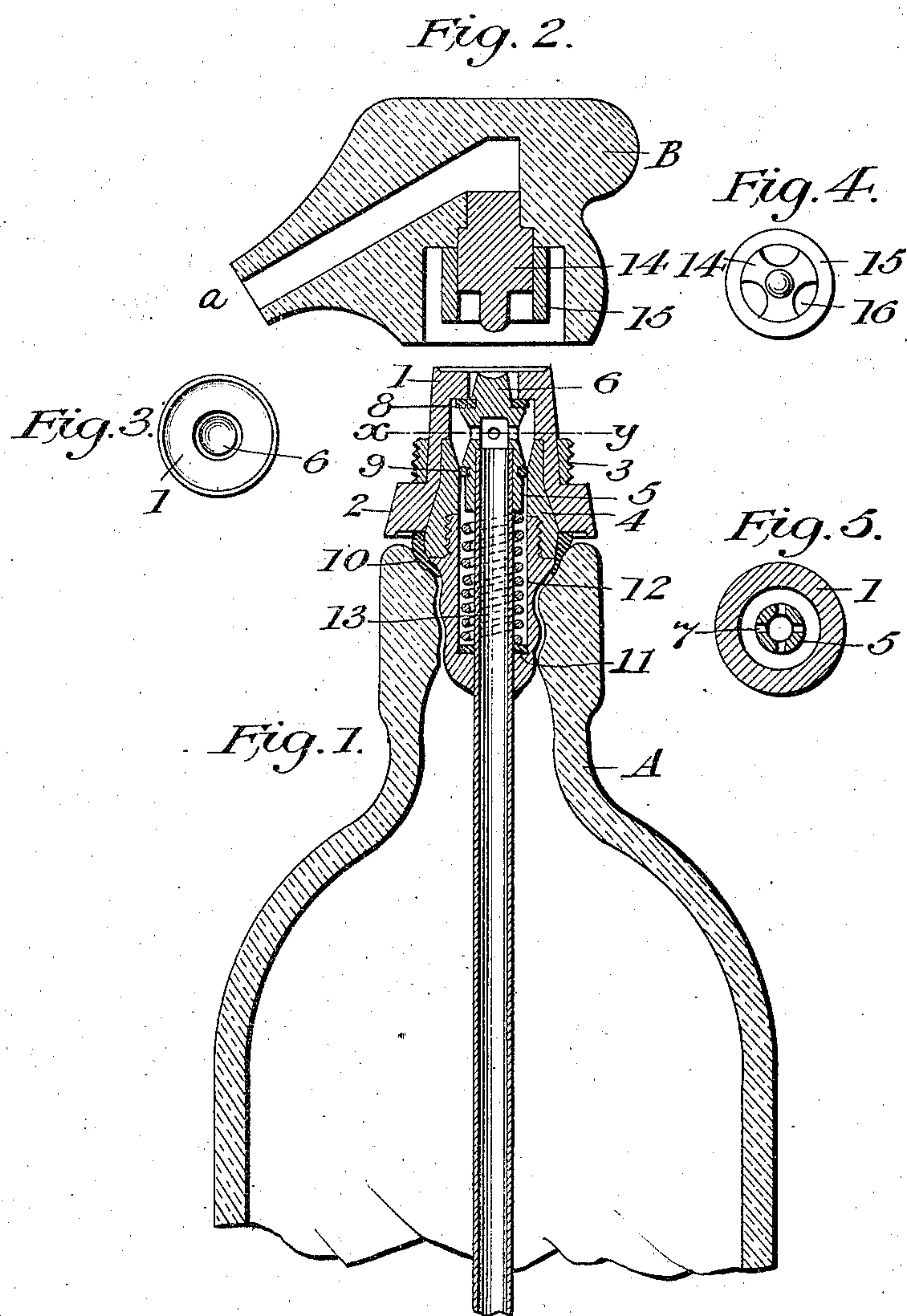
No. 741,965.

PATENTED OCT. 20, 1903.

J. G. HENRICH.  
SIPHON BOTTLE.

APPLICATION FILED JAN. 31, 1901.

NO MODEL.



Witnesses:  
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# UNITED STATES PATENT OFFICE.

JOHN GEORGE HENRICH, OF LONDON, ENGLAND.

## SIPHON-BOTTLE.

SPECIFICATION forming part of Letters Patent No. 741,965, dated October 20, 1903.

Application filed January 31, 1901. Serial No. 45,508. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN GEORGE HENRICH, of London, England, have invented certain new and useful Improvements in Siphon-

5 Bottles, of which the following is a specification.

In the equipment of siphon-bottles as now in general use each bottle requires a separate complete outfit consisting of a combination of  
10 a stopper with valve and siphon-tube and the top or tap having a lever arrangement or similar device for operating the valve. Owing to this equipment the cost of siphon-bottles is considerable, and a further disadvantage  
15 consists in such equipment being very liable to damage in transit, while a thorough and effective cleansing of stopper, tap, and bottle proper is rendered very difficult and is for that reason frequently neglected or not carried out in efficient manner.  
20

The object of this invention is to obviate the said disadvantages and to provide a stopper of simple construction which can readily be applied to or removed from the bottle or  
25 vase in order to be thoroughly cleaned and, if necessary, repaired, admitting of the bottle or vase being also properly washed out like any ordinary bottle. Furthermore, a single tap only need be supplied with any number  
30 of bottles, be this a tap of the simple and inexpensive construction hereinafter described and forming part of this invention or a tap of known construction having a lever or similar device for operating the siphon-valve.

35 Referring to the drawings, which form part of this specification, Figure 1 is a vertical section of a siphon-bottle provided with the new stopper, all parts being shown in section. Fig. 2 is a vertical section of the new tap. Fig.  
40 3 is a top view of the upper surface of the stopper. Fig. 4 is a plan view of an insertion consisting of two separate parts and secured in the body of the tap, and Fig. 5 is a horizontal section through the stopper along line  
45 *xy*, Fig. 1.

Into the neck of bottle or vase A, having an interior screw-thread, a hollow screw-stopper of known conformation and connected with the upper portion of the siphon-stopper by  
50 means of suitable male and female screw-threads is inserted, and efficient air-tight

packing between stopper and bottle is provided in the form of annular washer 10, made of rubber or other convenient elastic material.

The stopper-cap 1, made of porcelain or any other suitable material or substance, has a flange 2, corresponding to the outer diameter of the bottle-neck, and its interior is hollowed out, so as to form a cavity or chamber  
55 for the reception of the valve. In the roof of said chamber there is a central aperture adapted to admit valve-head 6, while the lower portion of the chamber is enlarged in diameter in order to accommodate a short  
60 metal cylinder or bush 4, which may either be cast in or otherwise fixed in position. This cylinder or bush 4 has in its inner surface a female screw-thread for receiving the male thread of the before-mentioned hollowed screw-stopper, while the outer surface  
65 of the portion of bush 4 protruding downwardly from cap 1 below flange 2 is rounded or otherwise adapted to hold packing-ring 10 when the stopper device has been removed  
70 from the bottle. Around the outside of cap 1 above flange 2 the metal screw-thread 3 is cast on or otherwise secured, which thread serves to receive the threaded cup of the ordinary  
75 tap consisting of metal head with lever and rod or similar device for operating the valve in case this type of tap is to be used instead of the simpler new tap hereinafter described. If only the new type of tap is to be used, the thread 3 may be omitted.  
80

85 Valve-body 5, made of vulcanite or the like, is hollowed out from below to a certain depth and firmly fixed upon siphon-tube 13, and below the lower end or shoulder of said valve-body and the bottom of the hollow in the  
90 screw-stopper a strong spiral spring 12 is provided for the purpose of pressing valve-head 6 firmly into the central aperture in the roof of stopper-cap 1, an elastic washer 8, held in a suitable annular groove at the lower end of  
95 valve-head 6, insuring tight closing. Elastic ring 9, made of rubber or the like, is held in a groove sunk in the circumferential surface of valve-body 5 and serves to press firmly against the conical inner surface of bush 4  
100 in order to effectively prevent the liquid from entering the chamber in which spiral spring



12 is located, elastic washer 11 serving the like purpose at the bottom of said spiral-spring chamber.

From the upper portion of the bore in valve-body 5 and above the upper rim of siphon-tube 13 is formed a suitable number of holes 7, Fig. 5, into the central cavity or chamber of stopper-cap 1, so that upon valve 5 6 being depressed the liquid contained in the bottle will pass through siphon-tube 13 into valve-body 5, through apertures 7 into cap 1, and thence past washer 8 and valve-head 6 into the tap.

The new tap illustrated in section in Fig. 2 consists of body B, made of porcelain, wood, or other suitable material, and bipartite insertion 14 15, Figs. 2 and 4. The body of the tap may have any convenient conformation, preferably one easily fitting into the hollow of the hand, and has a circular central cavity of such diameter and depth as to fit loosely over stopper-cap 1, the said central cavity communicating with nozzle or spout *a* by means of a narrower stepped bore. A plug 14, made of wood, vulcanite, or the like, having three or other suitable number of longitudinal grooves 16 of convenient cross-section, is firmly inserted into aforesaid stepped bore and projects into the main cavity of body B, where it is inclosed by a broad soft-rubber ring or short piece of soft-rubber tubing 15, which is made to lie close against the roof of the cavity. The lower end of plug 14 is fined down into the shape of a stud, so as to admit of its entering the central hole in the upper surface of stopper-cap 1 in order to depress valve-head 6. Upon the tap being applied to the stopper and being pressed down, so as to operate the valve by means of the stud-shaped lower end of plug 14, the valve-body 5 is pressed down, together with siphon-tube 13, and the rubber ring or short piece of tubing 15 will lie tightly against the roof of the stopper-cavity and against the upper surface of stopper-cap 1. The liquid will therefore pass through the open valve and through the longitudinal grooves 16 of tap-plug 14 into spout *a*. As soon as the pressure upon the valve-head is discontinued the spiral spring will reexpand and return the valve-body to its normal position.

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

1. A closure for siphon-bottles comprising the screw-stopper adapted to fit in the mouth or neck of a bottle, the bush screwed to said stopper, and the cap secured to said bush and having an outlet, said stopper, bush, and cap being hollowed or chambered to receive a siphon-tube and a movable valve to close said outlet, in combination with the said valve closing said outlet, a spring operating upon said valve and tending to keep the same closed, and the said siphon-tube extending from said stopper downwardly.

2. A siphon-bottle having, in combination, a hollow stopper, a movable valve normally closing the outlet from the bottle, a siphon-tube extending down into the bottle, a spring in a chamber encircling the upper end of the siphon-tube and holding the valve to normally close the outlet and means for excluding the liquid from the chamber in which the spring is located.

3. A siphon-bottle having, in combination, a hollow stopper, a valve normally closing the outlet from the bottle, a siphon-tube connected with said valve to move therewith, a spring located within said stopper and encircling said siphon-tube, and packings above and below the spring and surrounding the siphon-tube whereby a tight chamber for the spring is formed.

4. A tap for a siphon-bottle having, in combination, a cavity to fit over the mouth of the bottle, a discharge nozzle or spout, a plug to open the outlet-valve of the bottle, and an elastic seat surrounding the plug and adapted to seat on the bottle when in use.

5. A tap for a siphon-bottle having, in combination, a discharge nozzle or spout, a plug to open the outlet-valve of the bottle, and an elastic seat surrounding the plug and adapted to seat on the bottle when in use.

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

JOHN GEORGE HENRICH.

Witnesses:

JOSEPH WINCKELSETT,  
RICHARD BOELKE-SIERA.