

(No Model.)

J. HILDITCH.
SIPHON.

No. 478,108.

Patented July 5, 1892.

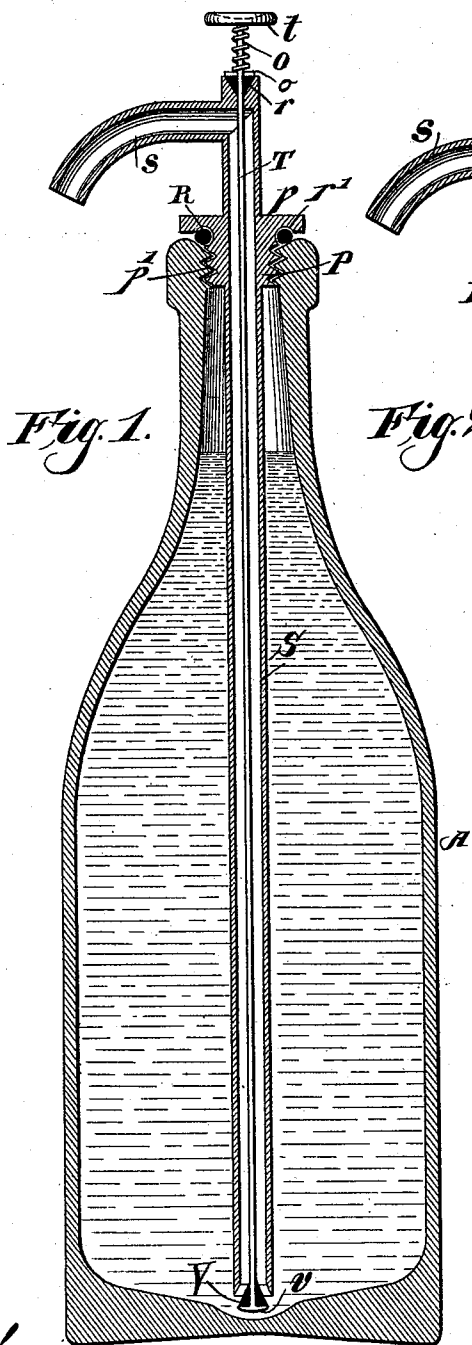


Fig. 1.

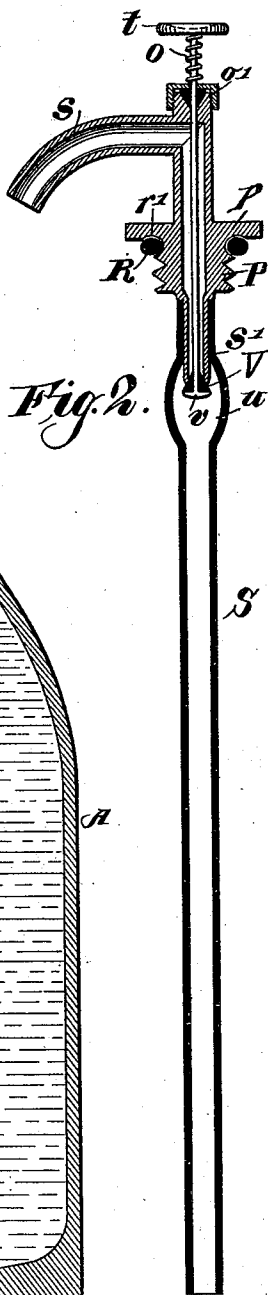


Fig. 2.

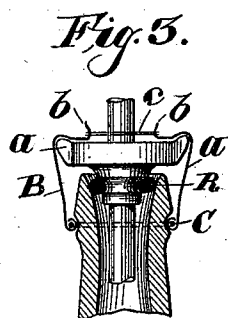


Fig. 3.

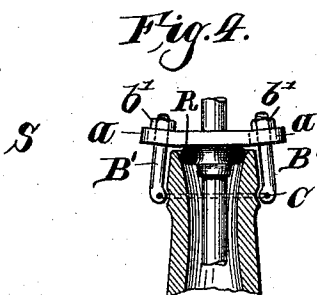


Fig. 4.

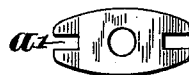
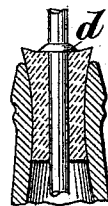


Fig. 5.



Witnesses:
H. G. Dieterich
M. J. L. Higgins.

Inventor:
Jacob Hilditch,
by Henry Orth
Atty:

UNITED STATES PATENT OFFICE.

JACOB HILDITCH, OF CHRISTIANIA, NORWAY, ASSIGNOR TO THE NORWEGIAN SIPHON COMPANY, LIMITED, OF SAME PLACE.

SIPHON.

SPECIFICATION forming part of Letters Patent No. 478,108, dated July 5, 1892.

Application filed March 17, 1892. Serial No. 425,290. (No model.)

To all whom it may concern:

Be it known that I, JACOB HILDITCH, a citizen of Norway, residing at Christiania, in the county of Christiania, Norway, have invented certain new and useful Improvements in Siphons; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

My invention relates to means for securing siphons in bottles of any ordinary form, and at the same time simplifying and improving the construction thereof by reducing the number of parts, thereby reducing the cost of manufacture.

The invention consists in the arrangement and combination of the parts thereof, as well as in the construction of the same, substantially as hereinafter described, and illustrated in the accompanying drawings, in which—

Figure 1 is a longitudinal section of a siphon-bottle, illustrating one form of my invention. Fig. 2 is a modification of the same; and Figs. 3, 4, and 5 show different means for attaching the siphon to the bottle.

As shown in Fig. 1, A designates a bottle of a well-known form, having screw-threads *p'* formed on the inside of its mouth for receiving the screw-threads on the outer periphery of the plug or stopper P, which has an annular flange *p* formed thereon, and in the under surface of said flange is formed a groove *r'* to receive a ring or packing R, formed of rubber or any equivalent material, thus insuring a perfectly air-tight stopper.

The plug or stopper P is provided with an exhaust-tube S, which may form an integral part thereof or may be soldered or otherwise secured thereto, said tube S having the spout *s*, formed above the mouth of the bottle and at right angles thereto. In the upper end of the tube S is an opening through which the valve-stem T passes, said opening being made air-tight by the insertion of an elastic plug or packing *r*, seated in a conical recess on the top of said tube, over which a washer *o* or cap *o'*, as shown in Fig. 2, is placed and forms a

bearing for the spiral spring O, mounted on the valve-stem, which spring bears upward against the knob *t* on top of the said valve-stem. Thus it will be readily seen that as the knob *t* is pressed downward the spiral spring O bears upon the washer *o*, which rests on the elastic packing *r*, thereby compressing the latter and completely closing the opening around the valve-stem at the moment the valve at the bottom of the tube is opened to allow the fluid to pass out through the discharge-spout.

On the lower end of the stem T is secured the elastic valve-plug V by means of a disk or washer *v*. This valve-plug is shown conical in form, the face of which bears against the beveled end of the tube S; but it may be made in any desired shape to form a perfectly-tight joint.

In Fig. 2 I have shown the pipe S made separate from the plug or stopper P, fitting over a short tube *s'* made thereon, with the valve V bearing against the end of the short tube *s'*, thereby reducing the length of the valve-stem. The placing of the valve V within the tube S would necessarily require the diameter of the said tube to be made greater; but this I overcome by bulging the tube, as at *u*.

In Fig. 3 I have shown the plug P, provided with flanged projections *a a*, over which pass the wires B, formed with hooks *b b*, said wires being secured to the neck of the bottle by a band or wire C and locked together above the projections *a a* by the loop *c*.

Fig. 4 shows a plate adapted to fit over the siphon-pipe and bear upon a rubber ring or packing, said plate being provided with slots *a' a'* for the reception of the swinging bolts B', which are locked to said plate by the nuts *b'*; and in Fig. 5 is shown a siphon-pipe inserted through a cork and held therein by means of a concave collar *d*, the edge of which is pressed into the cork, which latter may be held in the bottle in the usual way by means of wire.

It will readily be seen that with the described construction an extremely simple and also very cheap siphon may be constructed that has advantages over other and more complicated siphons heretofore employed.

Having thus described my invention, what

I claim as new therein, and desire to secure by Letters Patent, is—

- 5 1. In a siphon attachment for bottles, the combination, with the siphon-pipe and valve-stem having a valve on its lower end to regulate the flow of liquid, of a conical opening in the top of said pipe, through which the valve-stem passes, an elastic packing seated in said opening, and the knob *t*, spring *O*, and
10 bearing-plate *o* for simultaneously compressing the packing and operating the valve to allow the discharge of liquid, as set forth.
2. In a siphon attachment, a siphon-pipe having near its upper end an enlarged por-

tion *u*, in combination with a discharge-pipe 15 extending into said enlarged portion *u* of the siphon-pipe, said discharge-pipe having a flanged enlargement adapted to be secured in the neck of the bottle, and a valve-stem having at its lower end a valve adapted to seat 20 in the corresponding end of the discharge-pipe, as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

JACOB HILDITCH.

Witnesses:

ALFRED J. BRYN,
L. DAAE.