No. 695,739. Patented Mar. 18, 1902.

D. A. KREIDER.

SIPHON.

(Application filed May 1, 1901.)

(No Model.)

Fig. 1.

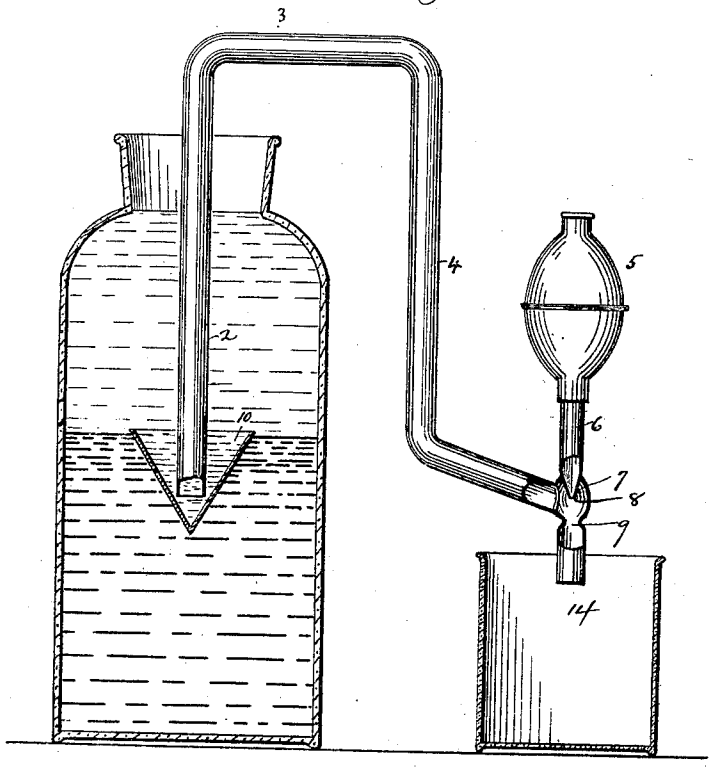


Fig. 2

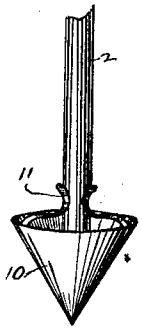


Fig. 3

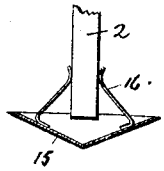


Fig. 4.

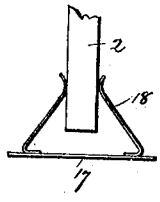
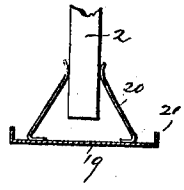


Fig. 5.



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UNITED STATES PATENT OFFICE.

DAVID ALBERT KREIDER, OF NEW HAVEN, CONNECTICUT.

SIPHON.

SPECIFICATION forming part of Letters Patent No. 695,739, dated March 18, 1902.

Application filed May 1, 1901. Serial No. 58,305. (No model.)

To all whom it may concern:

Be it known that I, DAVID ALBERT KREIDER, of New Haven, in the county of New Haven and State of Connecticut, have invented a new Improvement in Siphons; and I do hereby declare the following, when taken in connection with the accompanying drawings and the numerals of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this specification, and represent, in—

Figure 1, a view, partly in vertical section and partly in elevation, of a siphon constructed in accordance with my invention and showing one form of aspirator and one form of fender which I may employ; Fig. 2, a broken perspective view showing the form of fender illustrated by the preceding figure; Figs. 3, 4, and 5, broken views, in vertical section, showing modified forms of the fender.

My invention relates to an improved siphon, the object being to produce a simple, compact, durable, and effective device designed with particular reference to being started in operation without the application of the mouth or finger to any of its openings.

With these ends in view my invention consists in a siphon having certain details of construction and combinations of parts, as will be hereinafter described, and pointed out in the claims.

In carrying out my invention as herein shown the siphon consists of a glass tube bent into the usual form, so as to produce an inlet end 2, a reach 3, and a discharge end 4. The said discharge end of the siphon has applied to it an aspirator, which in the particular form shown comprises a compressible rubber bulb 5, provided with a valve, (not shown,) and the upper end of a short tube 6, the lower end of which is tapered and inserted into the upper end of a chamber 7, constituting an enlargement of the discharge end 4 of the siphon. The tapered lower end of the aspirator-tube 6 is formed with an orifice 8, smaller in diameter than the said discharge end of the siphon, which is contracted to form a neck 9, located in quite close proximity to the said orifice. The said neck 9 is located at the upper end of a portion of the discharge end of the siphon, separated from the main body thereof by the chamber 7 aforesaid, but really constituting a part of the siphon.

It will be readily understood that when the bulb 5 is compressed a jet of air will be expelled from the orifice 8, whereby the requisite degree of exhaustion will be produced for starting the siphon.

The aspirator may of course assume different forms and may be constructed so as to produce the exhaustion required for starting the siphon either by a jet of air, of vapor, or of liquid.

In order to provide for removing the lighter of two liquids of different specific gravity contained in the same vessel, I have produced a fender for application to the inlet end of the siphon, so as to prevent the direct upward movement of any fluid into the said end of the siphon. This fender may assume a variety of forms and may be made integral with the said inlet end of the siphon or independently thereof for application thereto. As shown in Figs. 1 and 2 of the drawings, the fender consists of a small inverted cone 10, provided at its open end with three inwardly-extending spring-arms 11, which yield to receive the inlet end of the siphon between them. The apex of the said cone is located directly below the inlet end of the siphon, and therefore prevents the direct upward movement of any fluid thereinto and forces the siphon to feed itself from a level above that occupied by its said end.

In the modified construction shown by Fig. 3 of the drawings the fender consists of a very shallow cone 15, provided with spring-arms 16, receiving the inlet end 2 of the siphon between them. In this construction the siphon is not obliged to feed itself from a point above the level of its inlet end; but the direct upward movement of any liquid into its said end is prevented by the fender.

In the construction shown by Fig. 4 of the drawings the fender consists of a flat disk or plate 17, provided with spring-arms 18, receiving the inlet end of the siphon. In this construction the sole function of the fender is to prevent the direct upward movement of any fluid into it.

In the construction shown by Fig. 5 of the drawings the fender consists of a flat plate 19,

provided with spring-arms 20, receiving the inlet end of the siphon, the said plate being formed with an upwardly-turned flange 21, which somewhat assists the plate in preventing direct upward movement into the inlet end of the siphon.

Still other forms of fenders might be employed; but the modifications shown sufficiently suggest the scope of the invention in this respect.

In view of the modifications illustrated and of others which may obviously be made I would have it understood that I do not limit myself to the precise construction herein shown and described, but hold myself at liberty to make such changes as fairly fall within the spirit and scope of my invention.

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

1. A siphon having its discharge end formed with a chamber, of an aspirator-tube having its lower end tapered and inserted into the upper end of the said chamber, and formed with an orifice smaller in diameter than the discharge end of the siphon which is contracted at a point near the said orifice and at the lower end of said chamber which is interposed in the said discharge end of the siphon.

2. A siphon having its inlet end provided with a fender constructed and arranged to prevent the direct upward movement of any liquid into the said end of the siphon, and the said fender being formed with yielding arms receiving the said end of the siphon between them.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

D. ALBERT KREIDER.

Witnesses:
FREDERIC C. EARLE,
LILLIAN D. KELSEY.