

(No Model.)

2 Sheets—Sheet 1.

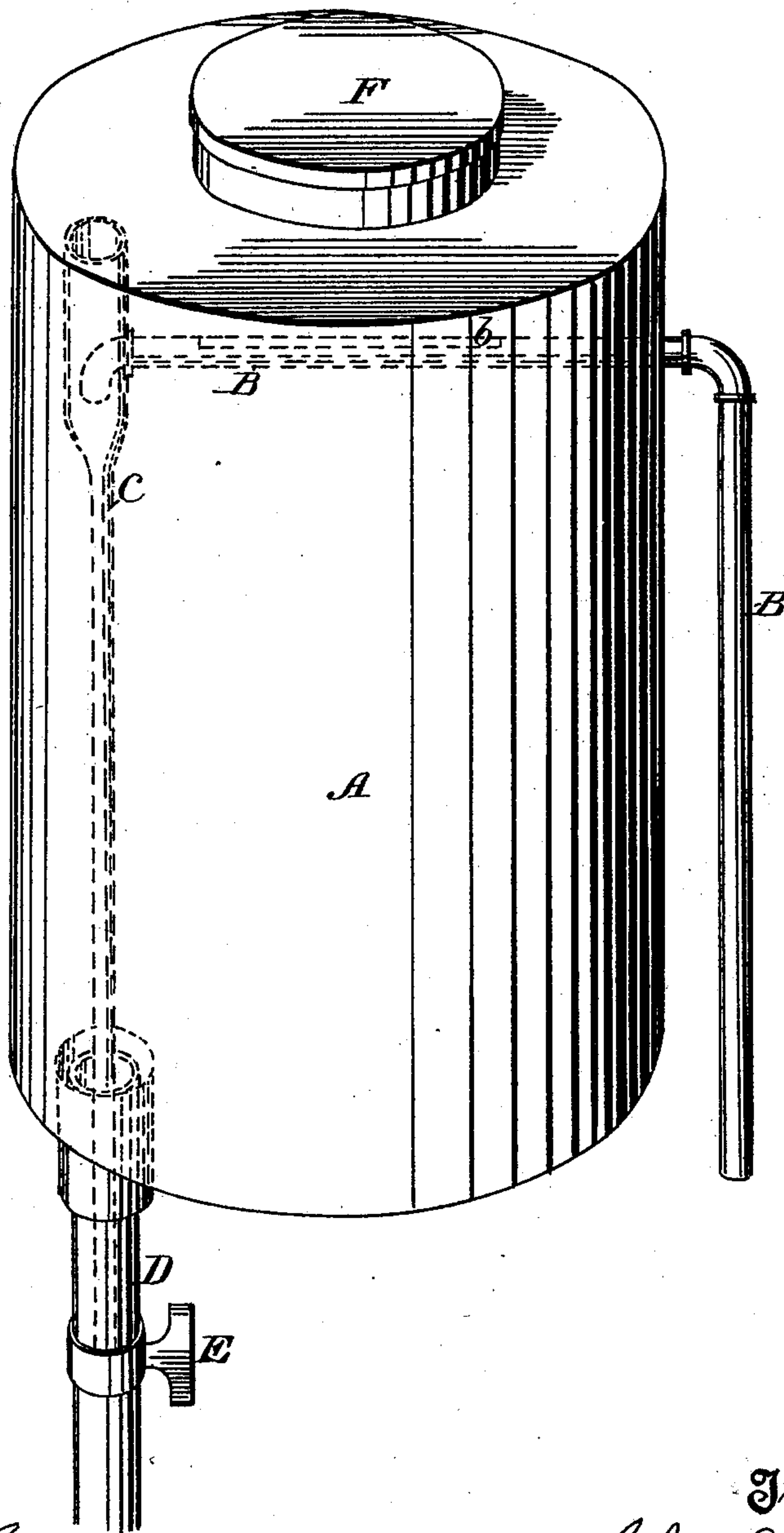
C. E. SHERMAN.

SIPHON.

No. 275,530.

Patented Apr. 10, 1883.

*Fig. 1.*



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(No Model.)

2 Sheets—Sheet 2.

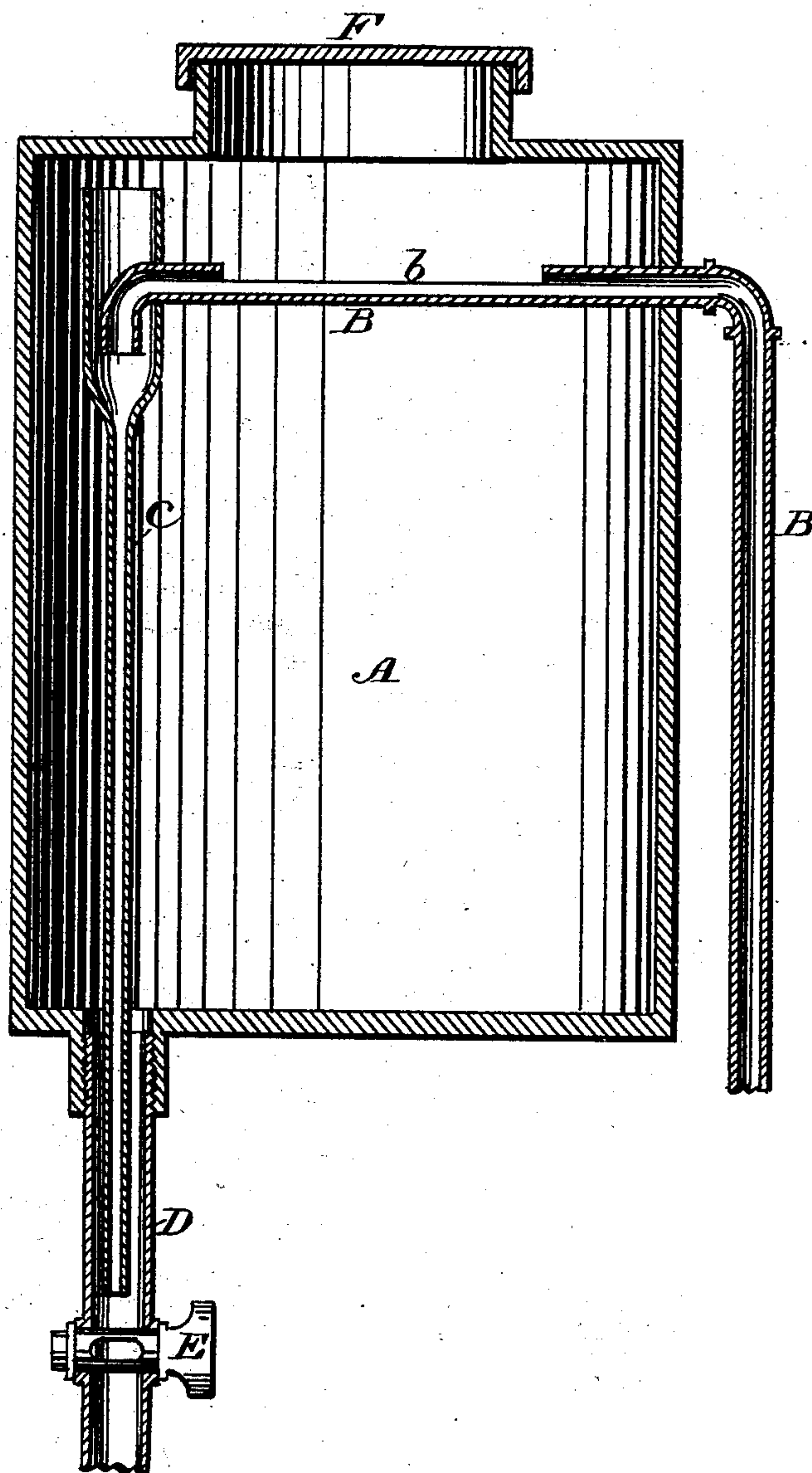
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*Fig. 2.*



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# UNITED STATES PATENT OFFICE.

CHARLES E. SHERMAN, OF SAN FRANCISCO, CALIFORNIA.

## SIPHON.

SPECIFICATION forming part of Letters Patent No. 275,530, dated April 10, 1883.

Application filed October 2, 1882. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES E. SHERMAN, of San Francisco, county of San Francisco, State of California, have invented an Improved Siphon; and I hereby declare the following to be a full, clear, and exact description thereof.

My invention relates to an improvement in siphons, by which they may be effectually kept clear of air, which will in time accumulate in the upper part of an ordinary siphon, and if not removed will stop the flow through the apparatus.

It consists in the combination, with the pipes of a siphon, of a second discharge-pipe and a chamber, into which the upper ends of the pipes open independently, so that the interior of the chamber is also connected with the pipes, and any air which may have accumulated in this chamber will be forced into the discharge-pipe, which acts as an air-pump.

Referring to the accompanying drawings for a more complete explanation of my invention, Figure 1 is a view of my improved siphon. Fig. 2 is a section.

A is a chamber or vessel, which may be made of any suitable shape, size, or material. Through one side of this vessel, and near the top, is an opening, into which the inlet or suction pipe B is fixed, so as to be air-tight at its point of entrance, and it projects across the chamber, so as to discharge into the upper end of the pipe C, which leads down through the bottom of the chamber, and is surrounded by a larger pipe, D, which opens just inside the chamber near the bottom. The pipe C, which is smaller than the inlet-pipe, is funnel-shaped or enlarged near the top, and extends nearly to the top of the chamber A, its mouth being just beneath that of the pipe B to receive liquid from it, as above described. The pipe B, extending horizontally across the upper part of the chamber, is left open upon its upper surface for this portion of its length, as shown at *b*, to allow the surplus influx water to fall directly to the bottom of the chamber A.

The operation will then be as follows: The

cock E, which is fixed in the pipe D below the end of the pipe C, is closed, and the chamber A partly filled with water through an opening, F, at the top, which is then closed, and the cock E is opened. Water commences to flow through the pipe D, and the vacuum thus produced in the chamber A causes water to flow in through the inlet-pipe B. Part of the water entering pipe B discharges into the enlarged upper end or funnel of the pipe C, and as it is discharged from said pipe a partial vacuum will be produced therein, which will draw into it any air that may be contained in the upper part of the chamber A, thereby causing said pipe C to act as a pump to draw the air out. The remainder of the water overflows the pipe B into the vessel A, and is carried off through the pipe D. In this manner any accumulation of air in the siphon will be prevented.

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

1. In a siphon, the chamber A, having the discharge-pipe C, with its open and enlarged upper end, and the inlet-pipe B, constructed so as to discharge into the pipe C and into the chamber A, substantially as and for the purpose herein described.

2. In a siphon, the chamber A, with the inlet and discharge pipes B C, placed with relation to each other, as shown, and the second discharge-pipe, D, arranged through the lower part of the chamber A and inclosing the lower end of pipe C, substantially as and for the purpose herein described.

3. In a siphon, the chamber A, with the inlet and discharge pipes B C, placed with relation to each other, as shown, and the second discharge-pipe, D, communicating with the lower part of chamber A, substantially as and for the purpose herein described.

In witness whereof I hereunto set my hand.

CHARLES E. SHERMAN.

Witnesses:

G. W. EMERSON,

J. H. BLOOD.