

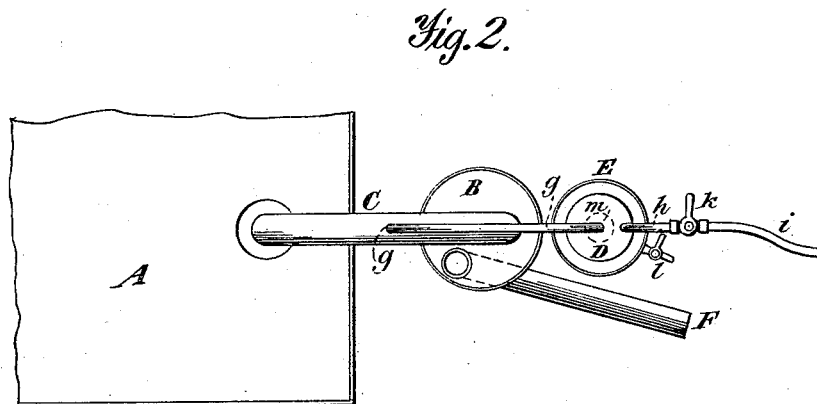
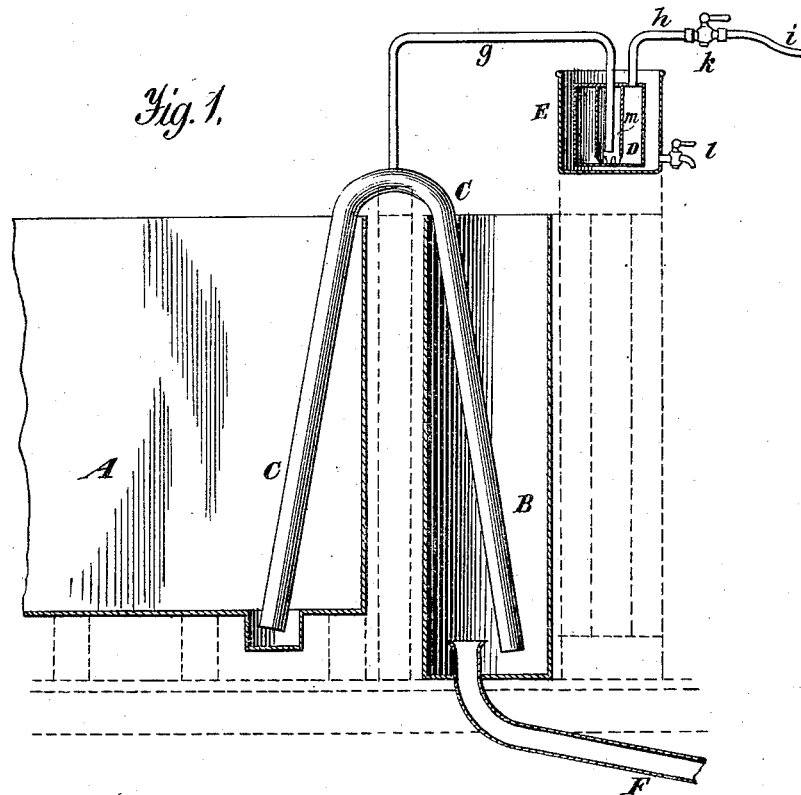
(No Model.)

J. SAUNDERS.

SIPHON.

No. 264,197.

Patented Sept. 12, 1882.



*Witnesses.*  
*A. Ruppert,*  
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*by J.R. Nottingham*  
*Assn. Atty.*

# UNITED STATES PATENT OFFICE.

JOSEPH SAUNDERS, OF BROOKLYN, NEW YORK.

## SIPHON.

SPECIFICATION forming part of Letters Patent No. 264,197, dated September 12, 1882.

Application filed May 4, 1882. (No model.)

### *To all whom it may concern:*

Be it known that I, JOSEPH SAUNDERS, a citizen of the United States, residing at Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Siphons for Transferring Liquids from One Vessel to Another; and I do hereby declare that the following is a full, clear, and exact description of the invention, which 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 letters of reference marked thereon, which form a part of this specification.

This invention relates to certain improvements in siphons, and has for its object to provide a more rapid means than has heretofore been accomplished of producing the necessary vacuum for charging or filling the same and for securing absolute immunity from drip, spatter, or loss during transfer of liquids by siphon. These objects I attain by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a vertical sectional view of my improved siphon, and Fig. 2 a top plan view of the same.

Referring to the drawings, A indicates a portion of a tank or vessel which contains the liquid to be siphoned, and B the tank or vessel which receives the liquid through the siphon C, the said siphon connecting the two vessels together. An outlet-pipe, F, is attached to the vessel B. A receiver, E, contains a vacuum-chamber, D, the bottom of which is located above the top of the siphon, a small pipe, g, connecting the said chamber with the siphon. A cylinder, m, provided at its base with openings, as shown, forms an inner support of the vacuum-chamber, which is made

of any suitable material, and is of a capacity equal to that of the siphon. A pipe, h, connects with the vacuum-chamber and a hose or pipe, i, through which steam is introduced, a pipe, k, being provided with a stop-cock, k. A receiver, E, is also provided with stop-cock l.

The operation of my invention is as follows: Steam is introduced through the hose or pipe i into the pipe h by means of the stop-cock k, and passes thence to the vacuum-chamber D, into the cylinder m by means of the perforations, as described, and through pipe g into the siphon C, displacing the air and filling the vacuum-chamber, siphon, and pipe with steam. The stop-cock k is closed and the receiver is filled with cold water, whereby the steam in the vacuum-chamber becomes rapidly condensed, producing a vacuum, which causes the liquid in vessels A and B to rise and charge or fill the siphon and vacuum-chamber. The work of transfer, being commenced, will continue until the entire volume of liquid in the tank A is exhausted, or until the stop-cock k is opened, admitting air, which immediately discharges the siphon and empties the vacuum-chamber.

After using the apparatus, the water in the receiver may remain until the siphon is to be recharged, when it should be drawn off at stop-cock l and returned immediately after shutting off the steam.

Having thus fully described my invention, what I desire to secure by Letters Patent is—

The combination, in a siphon apparatus, of a vacuum-chamber and condenser, together with the necessary connections to operate the same, substantially as specified.

JOSEPH SAUNDERS. [L. s.]

Witnesses:

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