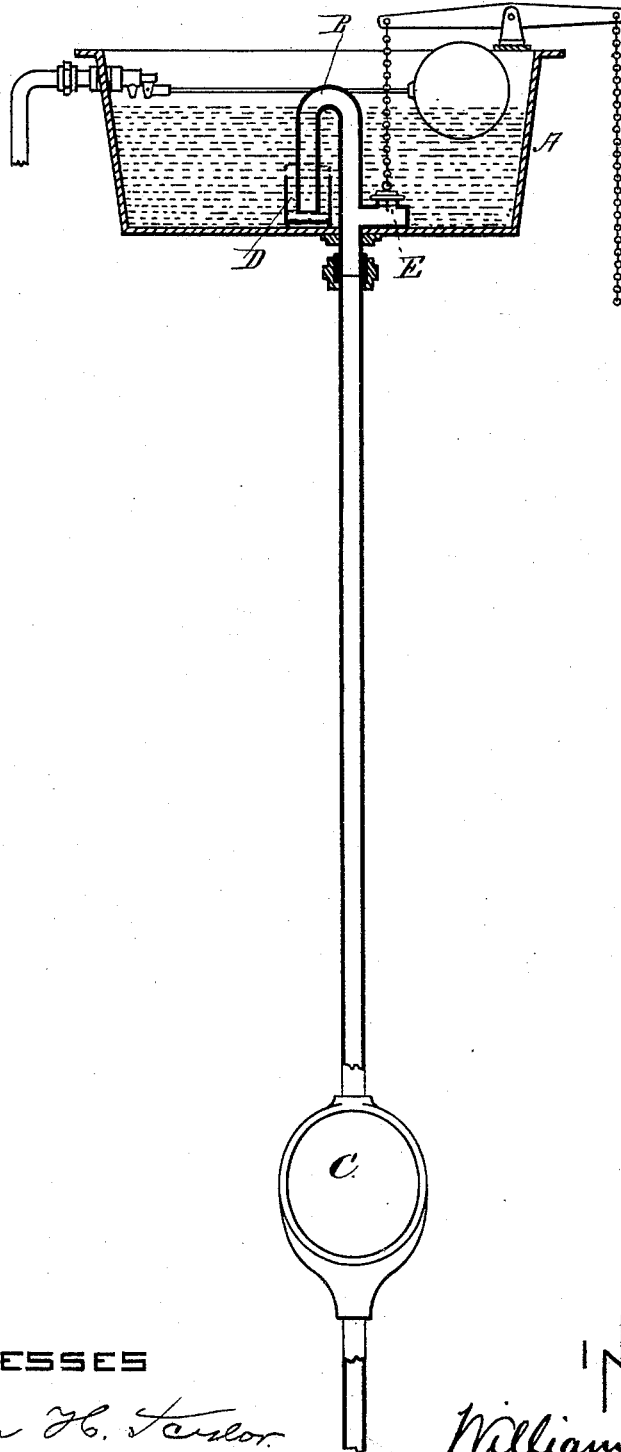


(No Model.)

W. H. CARLEY.
ATTACHMENT FOR SIPHONS.

No. 422,721.

Patented Mar. 4, 1890.



WITNESSES

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UNITED STATES PATENT OFFICE.

WILLIAM H. CARLEY, OF BOSTON, MASSACHUSETTS, ASSIGNOR TO THE
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ATTACHMENT FOR SIPHONS.

SPECIFICATION forming part of Letters Patent No. 422,721, dated March 4, 1890.

Application filed June 13, 1889. Serial No. 314,120. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. CARLEY, of Boston, in the county of Suffolk and State of Massachusetts, a citizen of the United States, have invented a certain new and useful Improvement in Attachments for Siphons, of which the following is a specification.

My invention relates especially to that class of contrivances of which the supply-cisterns for water-closets and similar structures are a type in which a siphon is used to produce, when desired, a discharge of water from the cistern or tank by siphon action. With such contrivances difficulty has been heretofore experienced in preventing the siphon action from being automatically re-established after it has once been broken by lowering the water-level in the tank below the outlet of the siphon.

The object of my invention is to provide an attachment whereby the breaking of the siphon shall be made certain and positive and "self-siphonage," so called, shall be prevented.

In the accompanying drawing I have represented a tank and siphon discharge-pipe provided with a device embodying my present improvement in the form now best known to me.

In the drawing, A represents a flushing-tank of ordinary construction, B a siphon-formed flushing-pipe of ordinary construction, and C a bowl to be flushed thereby.

The device for preventing automatic resiphonage is represented at D. It consists of a cup or vessel open at the top to admit water, and having a bottom so formed that when it is pressed against the mouth of the siphon it will substantially close the same. The chamber is also so constructed that when filled with water it will sink or fall away from the mouth of the siphon; but when the water is wholly or partly drawn out of the chamber it will float upwardly, so as to press against the mouth of the siphon. With this explanation the operation of the apparatus will be readily understood.

The normal condition of the apparatus is

represented by the figure, the water-level in the tank being not higher than the bend of the flushing-siphon and the chamber D being filled with water, and hence being in its lowest position, and the mouth of the siphon being open. If, now, the siphon action be started—as, for example, by momentarily opening the valve E, or in any other desired manner—siphonage will commence, and will continue until the water in the tank is drawn down to the water-level in the cup D. The continuation of the siphon action will lower the water in the cup to such a point that, being relieved of a portion of its liquid contents, it will be sufficiently light to float upward until it presses against and closes the mouth of the siphon. The action of the siphon will then obviously cease almost immediately, the further supply of water being cut off by the cup. As the water is replenished in the tank, it rises and overflows into the cup, which now sinks to its lowest position and is in readiness for a second operation of the device.

The cup D may be of any suitable form and material proper to give it the necessary flotation to operate as hereinbefore described. I have found in practice that an ordinary tin cup in the form of an open-top cylinder slightly larger in diameter than the siphon-pipe works well. If this cylinder be arranged, as shown in the drawing, relatively to the siphon-pipe, (this arrangement being preferred,) the latter will form a sufficient vertical guide to the cup to prevent its accidental displacement.

It is obvious that the depth to which the siphon dips below the full water-level of the cup should be sufficient to withdraw water enough therefrom by siphon action to insure the flotation of the cup to close the siphon, as described, and it is further obvious that the supply of water to refill the tank should not be so rapid as to prevent the cup from being sufficiently emptied by siphon action.

I claim—

The combination, with a flushing-tank, of a siphon, a water-supply device for the si-

phon, as valve E, and a cup D, surrounding
the short leg of the siphon and adapted to
float up against its lower end and cut off the
flow of water when the water has been par-
5 tially siphoned from the cup, substantially as
set forth.

In testimony whereof I have hereunto sub-

scribed my name this 1st day of June, A. D.
1889.

WILLIAM H. CARLEY.

Witnesses:

ELLEN B. TOMLINSON,
JOHN H. TAYLOR.