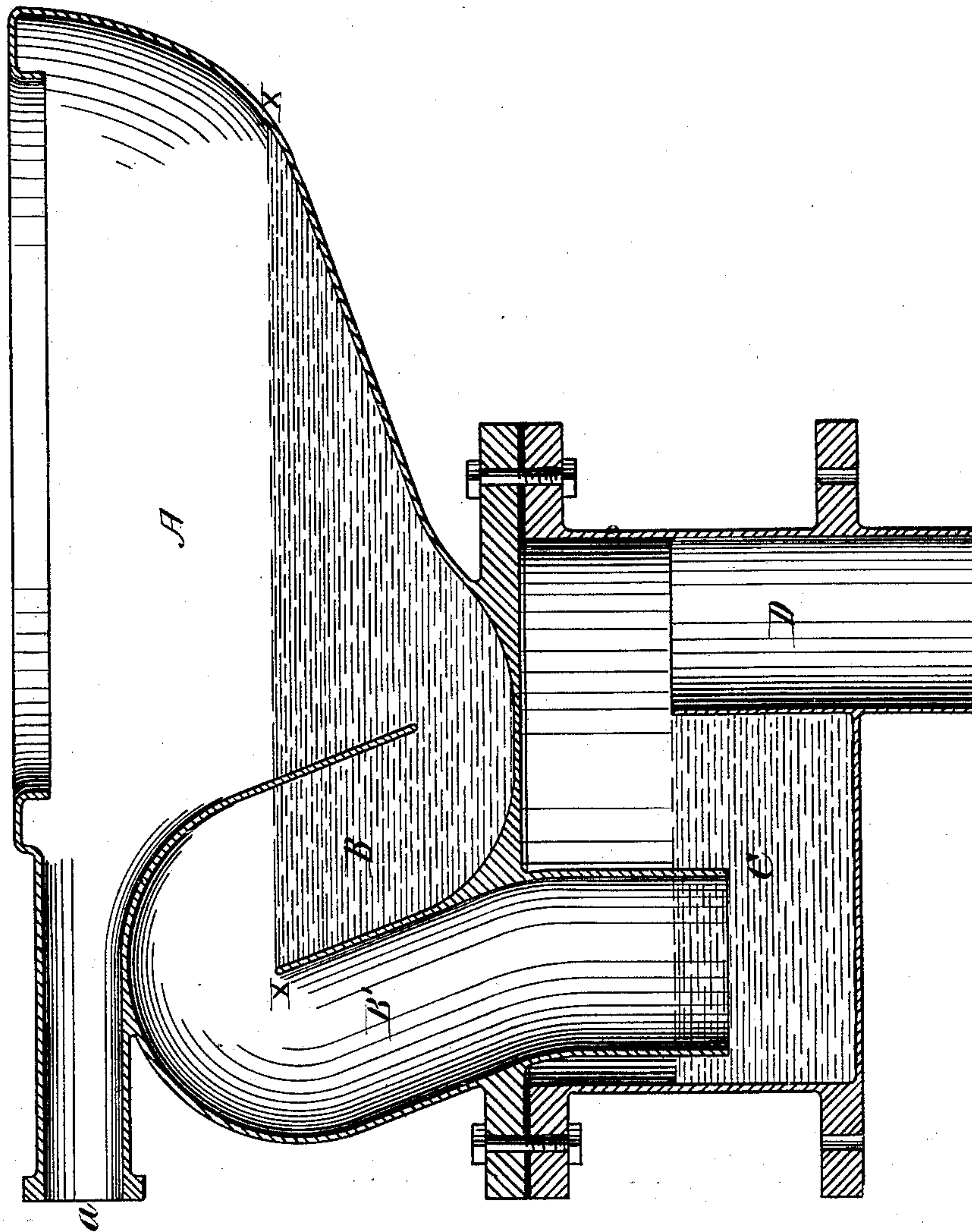


(No Model.)

H. C. WEEDEN.
SIPHON CLOSET.

No. 409,341.

Patented Aug. 20, 1889.



WITNESSES.

John H. Taylor.
Ellen B. Tomlinson.

INVENTOR.

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UNITED STATES PATENT OFFICE.

HENRY C. WEEDEN, OF BOSTON, MASSACHUSETTS, ASSIGNOR TO THE WEEDEN
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SIPHON-CLOSET.

SPECIFICATION forming part of Letters Patent No. 409,341, dated August 20, 1889.

Application filed April 27, 1889. Serial No. 308,795. (No model.)

To all whom it may concern:

Be it known that I, HENRY C. WEEDEN, of Boston, in the county of Suffolk and State of Massachusetts, a citizen of the United States, have invented certain new and useful Improvements in Siphon-Closets, of which the following is a specification.

My invention relates to that class of water-closet bowls having a siphon-shaped outlet, wherein the discharge of a portion of the contents of the bowl is produced by siphonic action set up in the outlet-pipe by pouring water into the bowl.

The object of my improvement is to increase the simplicity and efficiency of such apparatus, as will be hereinafter more fully pointed out.

In the accompanying drawing I have represented a structure embodying my present improvement shown in vertical section.

In the drawing, A represents the bowl proper, which is of a well-known form. This bowl is provided with a horn *a* in the ordinary manner, to which is coupled the pipe which supplies the flushing-water. The outlet B B' of the bowl is bent into the form of a siphon, the long leg B' of the siphon being of course that portion of the outlet which is farthest from the bowl proper. In connection with the bowl above described, and beneath the extremity of the long leg B' of its siphon-outlet, I form a water-retaining chamber C. This chamber is so constructed as to retain a body of water within it at all times, into which body of water the lower extremity of the long leg B' of the siphon-outlet of the bowl may dip or enter, so as to be always sealed by the liquid in the chamber, the top or mouth of the chamber surrounding the said outlet and being of a greater area than the outlet. In combination with the same chamber I provide a waste-pipe D, leading to the drain or soil pipe, in connection with which the closet is to be set up, this waste-pipe D and the chamber C being relatively so located and arranged that the overflow from the chamber C shall enter the waste-pipe D and pass downwardly and outwardly through the same. The chamber C is formed in part by the outer wall of the outlet-pipe D, the height of this

wall being, as represented, above the lower extremity of the long leg B' of the bowl, so that liquid will always be retained in the chamber C at a height sufficient to seal the mouth of that leg.

The operation of the device is as follows: The parts being at rest and in their normal condition, water will stand at practically the level *xx* in the bowl and also on a level with the edge of the chamber C, and the long leg B' of the siphon-discharge of the bowl will dip below and be sealed by the water in the chamber. If now the closet be flushed in any well-known manner, so as suddenly to introduce into it a considerable body of flushing-water, a portion of this body being forced over the bend of the siphon discharge-outlet of the bowl will displace a portion of the air therein, forcing it to bubble out through the liquid in the water-chamber C. Inasmuch, however, as the seal of this water-chamber prevents the re-entrance of air to supply the place of that thus expelled it is evident that after a very brief period the rarefaction of air in the long leg of the siphon-outlet of the bowl due to the forcing out of a portion of it and its non-replacement, as described, will automatically start the siphon action therein. Immediately thereupon the contents of the bowl A will be suddenly and forcibly withdrawn outwardly and downwardly through the siphon-outlet B B into the water-chamber C, and thence over the rim thereof into the waste D and out to the drain. The siphon action of the outlet of the closet will continue until the water has been lowered therein below the mouth of the short leg B of the siphon and its flow has been thus broken. The body of water required to restore the desired level in the bowl will then be furnished by the residue of the flushing action, which should be sufficiently prolonged for this purpose. This may be conveniently accomplished in a well-known manner by the use of a tank provided with a service-box of given dimensions, the contents of which are discharged after the main outlet from the tank has been closed. Such a contrivance is well known in the art to which this invention relates and therefore need not be more specifically described.

I prefer, for convenience, to form the chamber C within a box or casing made separate from the bowl proper, this box or casing being adapted to rest upon the floor at its lower part, and at its upper part to receive and support the bowl to which it should be connected by a suitable connection, as indicated.

I would further say that only a slight dip or sealing of the leg B' of the bowl-outlet below the water-level in the water-chamber is necessary. I have found in practice that with a bowl having a three-inch outlet a seal not greater than a quarter of an inch in depth produces a very efficient and prompt siphonic action to empty the bowl.

I of course make no claim herein to the removal from the closet-bowl of its liquid con-

tents by siphonic action, as such has long been known and practiced.

I claim—

In a siphon water-closet, the combination of the bowl A, the siphon-formed outlet B B', a water-chamber surrounding and sealing the mouth of said outlet, and a waste-pipe whose outer wall forms a portion of the wall of said chamber, all substantially as described.

In testimony whereof I have hereunto subscribed my name this 19th day of April, A. D. 1889.

HENRY C. WEEDEN.

Witnesses:

JOHN H. TAYLOR,
ELLEN B. TOMLINSON.