

(No Model.)

M. SYER.

SIPHON WATER WASTE PREVENTER.

No. 355,800.

Patented Jan. 11, 1887.

FIG. 1.

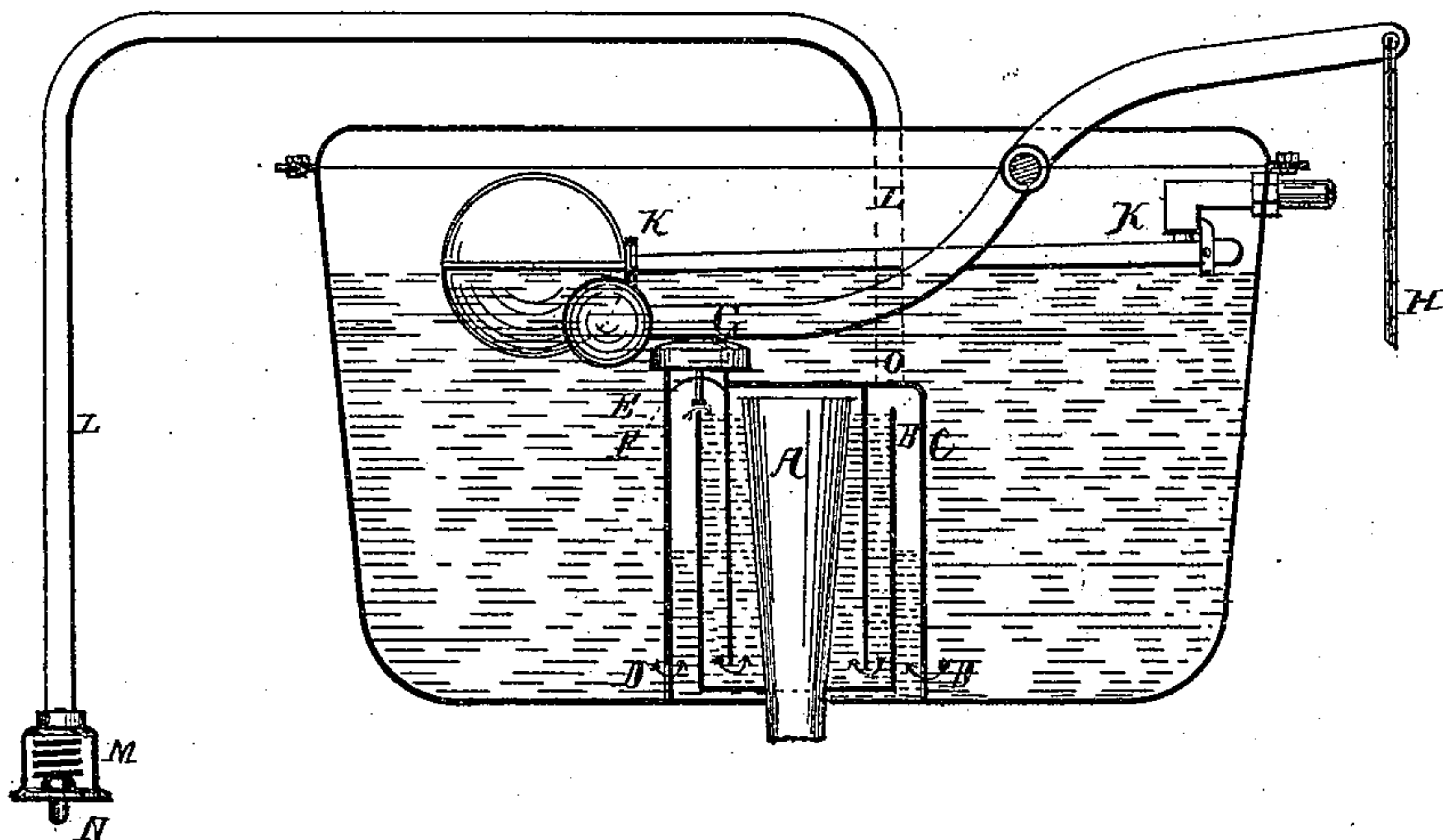
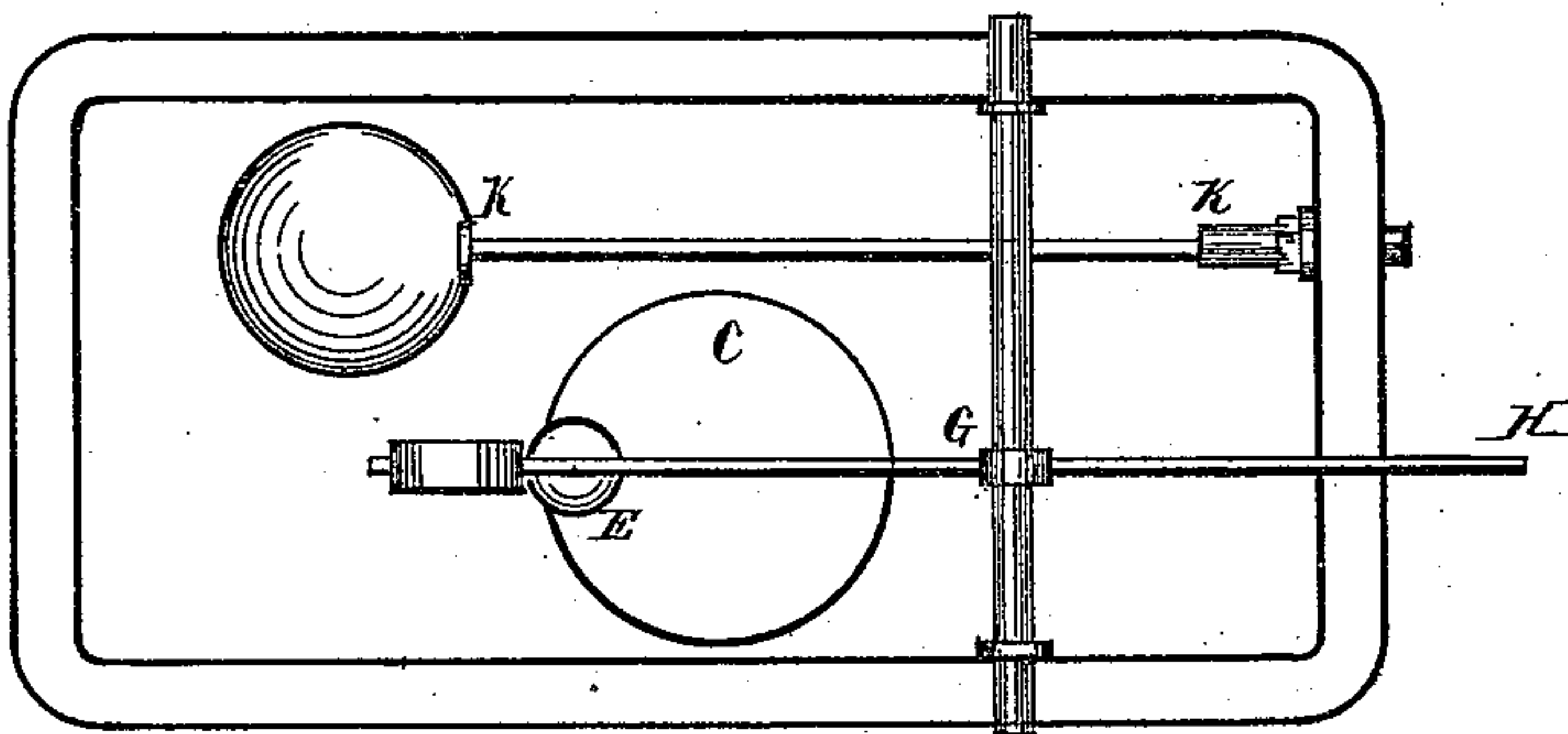


FIG. 2.



Witnesses:

F. Barnett.

B. Arthur Salinger

Inventor:

Milton Syer

Per.

James H. Lancaster  
Attorney.

# UNITED STATES PATENT OFFICE.

MILTON SYER, OF PECKHAM, COUNTY OF SURREY, ENGLAND.

## SIPHON WATER-WASTE PREVENTER.

SPECIFICATION forming part of Letters Patent No. 355,800, dated January 11, 1887.

Application filed September 9, 1886. Serial No. 213,150. (No model.) Patented in England January 14, 1885, No. 505.

*To all whom it may concern:*

Be it known that I, MILTON SYER, a subject of the Queen of Great Britain, of Peckham, in the county of Surrey, England, have  
5 invented certain new and useful Improvements in Siphon Water-Waste Preventers, (for which I have a patent in England, No. 505, January 14, 1885;) and I do hereby declare that the following is a full, clear, and exact description  
10 thereof.

My invention relates to improvements in siphon water-waste preventers for the flushing of closets, urinals, and other purposes, and it is designed to effect the same in an effectual  
15 and simple manner, and with a minimum of operative movement.

In carrying my invention into effect I combine a siphon-tube with a cistern of any desired capacity. The siphon is trapped, so as  
20 to prevent the escape of air down the siphon-tube. This siphon-tube is covered by a cap, and in this cap I fix an air-valve or air-pump. Now, the water filling the cistern compresses the air under the siphon-cap, and thus keeps  
25 the water from flowing down the siphon-tube. I release the compressed air and the water rises and flows down the siphon-tube, the siphon being started; the whole of the water in the cistern is withdrawn. I also fit a self-  
30 closing valve to the siphon-cap, closing the aperture through which the compressed air escapes, thus preventing the return of the air.

From the foregoing it will be understood that the cistern being empty, and the siphon trapped  
35 with water, which is retained in the trap, as the water fills up the cistern it compresses the air under the siphon, thus holding back the water from flowing down the siphon-tube. The cistern being supplied by means of a ball-valve,  
40 the supply is shut off when the water has risen to the required height. I now open the valve on the siphon-cap by means of a lever attached to the cistern, and at the same time I may secure the ball-valve, so that no water can enter  
45 the cistern until the lever is released which shuts the air-valve. I sometimes fix this air-valve onto an air-pipe of any required length, so that the air-valve may be conveniently placed in the seat of the water-closet, on the  
50 pressing or pulling of which the air under the siphon-cap is released and the water flows.

The siphon-tube and trapping-chamber I make in one or more pieces most suitable to manufacture.

In order that my invention may be better  
55 understood, I now proceed to describe the same in relation to the drawings hereunto annexed and forming a part of this specification.

Figure 1 is a sectional view of my device complete, showing alternative device for re-  
60 leasing the compressed air. Fig. 2 is a plan view of the same.

Similar letters refer to similar parts in both the figures.

A is a siphon-tube, leading down to the  
65 closet-pan, urinal, or other place where a flush may be desired. Surrounding this is the annular wall B, and fitting over this, so as to form a water-trap and a compressed-air chamber, is the cap C. This cap has its outer edges rest-  
70 ing upon supports or legs D. The air-valve is shown at E, and is conveniently in the form of a float-valve whose travel is kept vertical by the guide (fitted with a stop) and bridge F.

G is a weighted lever, resting upon the float-  
75 valve E and normally retaining the same in place upon its seating.

H is a pull operated from any convenient point, and which raises the lever when required.

K is the usual ball-cock.

As shown in the drawings, the flushing-cis-  
80 tern is full of water, a cushion of air having been compressed in the chamber formed between C and B by the water-pressure, and the spaces between B, C', and A forming a water-  
85 trap. Upon the pull H being operated, the weighted lever G is raised and the float-valve E rises from its seating, the compressed air being thus suddenly released and the siphonage brought into play by the water-head in the  
90 direction shown by arrows. As the water sinks, the valve E again falls onto its seating, preventing any break of the siphonage until the cistern is emptied. The ball-valve, being brought into play immediately, begins to refill  
95 the cistern and produce anew the conditions required for a flush.

My device, it will thus be seen, can be used as a continuous intermittent flush, or the ball may be secured until the cistern is emptied,  
100 and then allowed to drop and refill the same.

L shows an air-pipe leading to the valve M,



normally held closed by a spiral spring, which may be released by a push, N, thus allowing the compressed air to escape and the siphonage to be established. Where this is employed  
5 the valve E would not exist, the only aperture into the cap being at O.

Having now particularly described and ascertained the nature of my invention and in what manner the same is to be performed, I  
10 declare that what I claim is—

A waste-water siphon consisting of the pipe A, surrounded by the annular wall B, cap C, provided with a depending tube, a cylinder

having legs D, and a valve, E, operated by the weighted lever G, all placed within the 15 tank, and arranged, combined, and operated substantially as and for the purpose set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 18th day of August, 1886.

MILTON SYER.

Witnesses:

WILLIAM RD. CLARK,  
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