

(No Model.)

H. C. STIFEL.
WATER CLOSET.

No. 516,129.

Patented Mar. 6, 1894.

Fig. I.

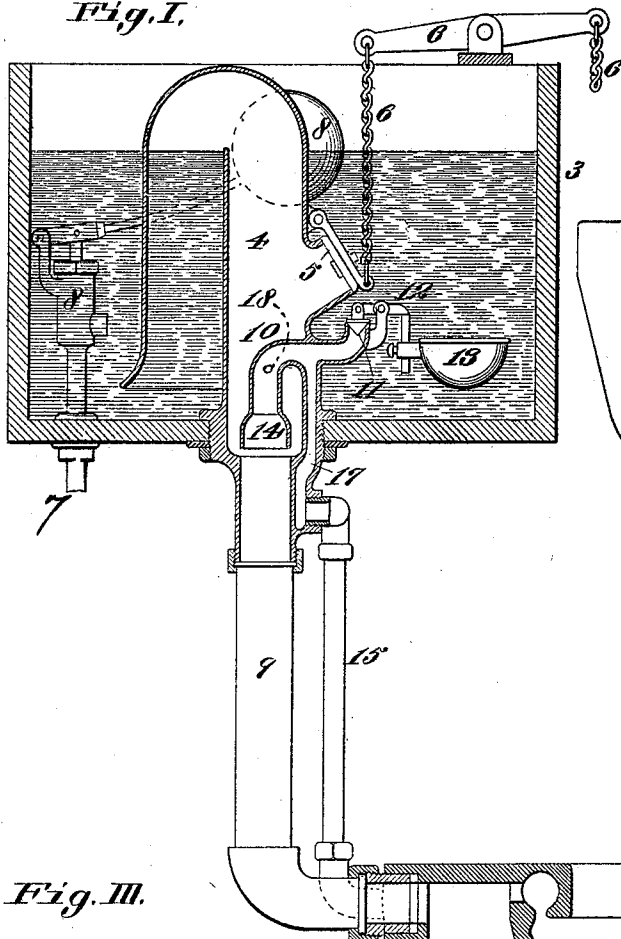


Fig. II.

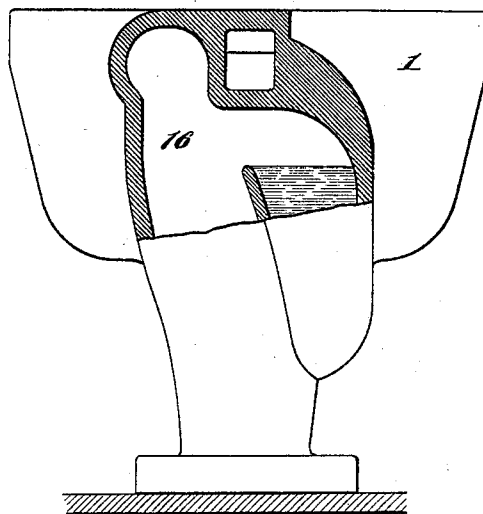
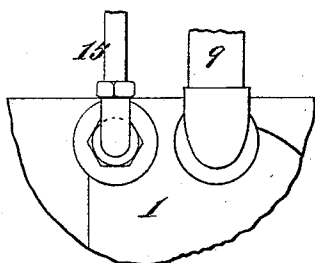
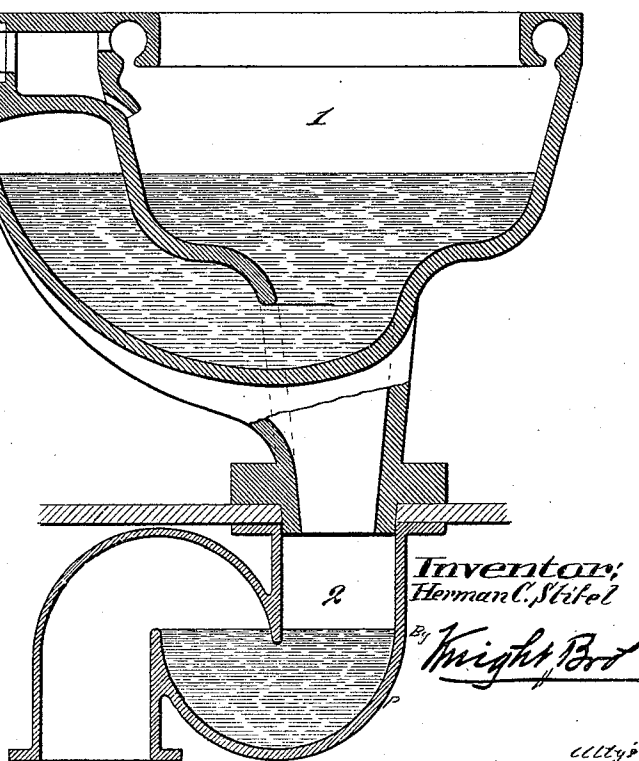


Fig. III.



Attest
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Inventor:
Herman C. Stifel
By Knight Bros

UNITED STATES PATENT OFFICE.

HERMAN C. STIFEL, OF ST. LOUIS, MISSOURI, ASSIGNOR TO THE STIFEL-
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WATER-CLOSET.

SPECIFICATION forming part of Letters Patent No. 516,129, dated March 6, 1894.

Application filed March 17, 1893. Serial No. 466,482. (No model.)

To all whom it may concern:

Be it known that I, HERMAN C. STIFEL, of the city of St. Louis, in the State of Missouri, have invented a certain new and useful Improvement in Water-Closets, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

My invention relates to an improvement in water closets of the siphonic type; and my invention consists in features of novelty herein-after fully described and pointed out in the claims.

Figure I is a vertical section, illustrative of my invention. Fig. II represents the bowl, part in section, and part in elevation. Fig. III is a detail elevation of the bowl, and the discharge and air pipes.

Referring to the drawings, 1 represents the bowl, having a lower trap 2.

3 represents a water tank, within which is located a siphon 4, having a discharge valve 5, operated by a lever and chains 6, as usual.

7 is the supply pipe having the usual valve and a float 8.

9 is the discharge pipe connecting the tank 3 through means of the siphon 4 to the bowl 1.

10 represents the vent pipe controlled by a valve 11, a pivoted lever 12 and a float 13.

The pipe 10 has a bell mouth 14.

15 is an air pipe connecting the chamber 16 of the bowl with the siphon 4, through means of the pipe 10, and a port 17.

The operation is as follows:—When the bowl is to be flushed, the siphon is started by opening the valve 5, which is allowed to close immediately. The passage of the water through the siphon 4 and pipe 9, around the pipe 10, creates an upward current of air through the pipe 15, and port 17, to rarefy the air, and to start the siphon in the chamber 16. The water continues to pass from the tank to the bowl until the float 13 descends and raises the valve 11, opening the pipe 10 to the air. A portion of this air passes through the port 17, and pipe 15 into the chamber 16, to break the siphonic action. The air entering through the pipe 10 also breaks the siphon 4, and the water contained in the pipe 9 after the siphon is broken, forms the after-flush to fill the traps and the bowl.

By locating the pipe 10 so that its outer end, into which the air enters when the water in the tank becomes nearly exhausted, is beneath the normal level of the water, that is to say, beneath the surface of the water when the tank is full, the water in the tank serves as a seal to prevent any gases escaping from the pipe 10 into the room, so that the valve 12 is not alone relied upon to prevent gases passing from the pipe 10, which has direct communication with the chamber 16 of the bowl, into the room.

I prefer to form a perforation 18 in the pipe 10, to permit a free escape for the air into the siphon 4, when the valve 11 is open.

It will be observed that in this construction, there is no direct communication between the pipe 15 and the room in which the closet is located, until the valve 11 is opened, and then the current of air is in a down direction, so that with my improved construction, there is no escape of foul air from the pipe 15 except through the water tank, where it might escape into the room.

I do not wish to be limited to the exact construction of the pipe 10 and valve 11, with its float, as other means may be employed as a vent to break the siphon.

I claim as my invention—

1. The combination of a bowl, a tank, a siphon located in the tank, a valve for said siphon, a discharge pipe connecting the tank to the bowl through said siphon, a pipe 10 located within the siphon, and projecting therefrom into the tank beneath said siphon valve, an air vent to said pipe 10 outside of said siphon and below the normal water level, an air pipe communicating with the chamber between the traps of the bowl, and a port or passage 17 forming a communication between said air pipe and said pipe 10; substantially as and for the purpose set forth.

2. In a water closet, the combination of a bowl, a tank, a siphon located in the tank, a valve for said siphon, a discharge pipe connecting the tank to the bowl, an air pipe communicating with the chamber between the traps of the bowl, a port or passage 17 with which said air pipe communicates, a pipe 10 having a perforation 18, and located beneath the valve of the siphon and extending into

the tank, and a vent for said pipe 10 outside of said siphon; substantially as and for the purpose set forth.

3. In a water closet, the combination of a
5 bowl, a tank, a siphon located in the tank, a valve for said siphon, a discharge pipe connecting the tank to the bowl, an air pipe communicating with the chamber between the traps of the bowl, a port or passage 17, with
10 which said air pipe communicates, a pipe 10

having a perforation 18 and located beneath the valve of the siphon, and extending into the tank, and a valve and float controlling said pipe 10; substantially as and for the purpose set forth.

HERMAN C. STIFEL.

In presence of—

E. S. KNIGHT,
BENJN. A. KNIGHT.