M. MAUER.

CLOSET FLUSHING APPARATUS.

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1,141,354.

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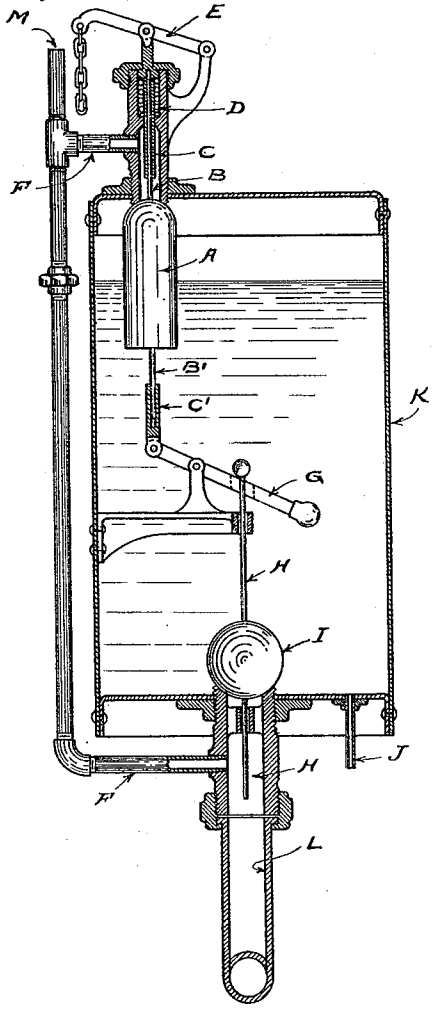


FIG. 1.

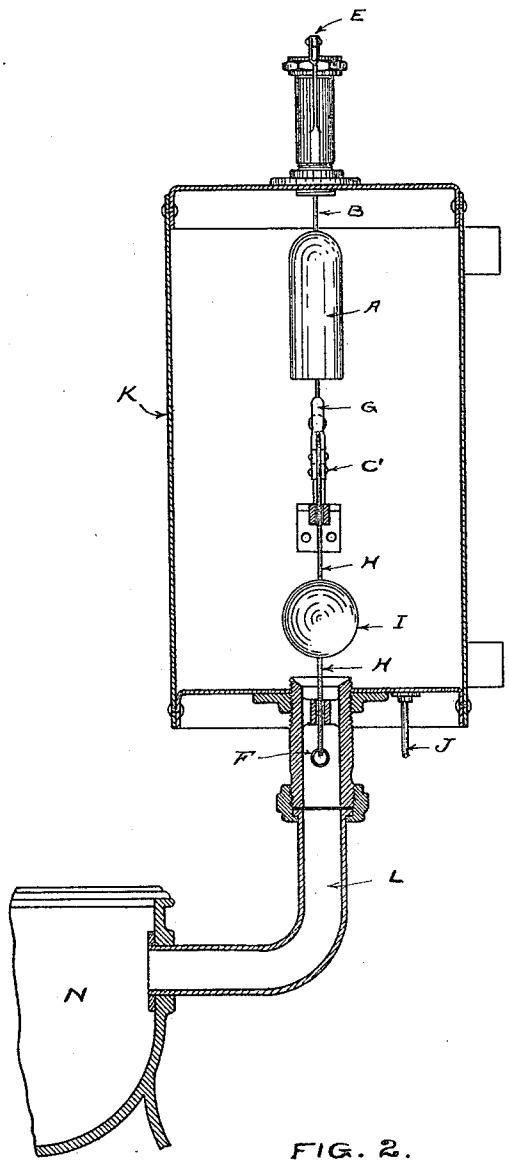


FIG. 2.

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CLOSET-FLUSHING APPARATUS.

1,141,354. Specification of Letters Patent. Patented June 1, 1915.

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To all whom it may concern:

Be it known that I, MICHAEL MAUER, a citizen of the United States, and residing at Detroit, in the county of Wayne and State of Michigan, have invented a new and useful Closet-Flushing Apparatus, of which the following is a specification.

My invention relates to improvements in closet flushing apparatus in which a valve or float, first, has to be lowered from the top to release the air pressure, and with the same operation (and a moment later) the bottom valve or ball is raised from its seat allowing the closet to flush noiselessly and without splashing.

A device which cannot get out of order, and will not deteriorate when it becomes old.

The invention will be hereafter fully described and specifically set forth in the annexed claims.

In the accompanying drawings; Figure 1 is a vertical view of my improved device partly in section. Fig. 2, is a vertical view of my device also partly in section, at right angles, showing the interior of the tank and the apparatus contained therein.

The operation necessary for the flushing of my apparatus as shown in Fig. 1 the following should be observed: When the chain which is attached to lever (E) is pulled it causes the stem (B) in casing (C) on top of float or valve (A) to lower said float or valve (A) and immediately the air pressure in tank (K) is released. Stem (B′) which is attached to bottom of float or valve (A) will then strike the bottom of casing (C) causing lever (G) to automatically raise stem (H) which is attached to valve or ball (I) and raise it from its seat and the closet will flush, and as the water recedes in tank (K) (or during the flushing operation) valve or ball (I) will gradually seat itself again when the closet has flushed sufficiently and allow the said tank (K) to fill again. The latter position is shown in Fig. 1 and when so positioned and the float or valve (A) is opened in the flushing operation, the tank operates nearly like a gravity tank, in that its interior becomes open to the atmosphere, and remains open until the water rises and will re-seat the valve or float (A).

Pipe (M) is the air intake or outlet.

(D) is a spring which forces the arm in center of lever (E) up again after the chain has been pulled, so that the valve or float (A) will act freely in the top of slot or casing when the water rises under the said valve or float (A).

In the foregoing paragraphs I illustrate the operation necessary to flush, and I will now demonstrate in detail the working parts when re-filling the said tank (K).

The present device includes a tank, but such tank is always in communication with the supply pipe, and the water in the tank is thus always under the pressure of that in the supply pipe.

As shown in Fig. 1, J is the supply pipe, and as the water rises in tank (K) and reaches the valve or float (A) it will cause the said valve or float (A) to rise, and shut off the air outlet of the tank before the water has reached the top, or filled the tank completely, as the air when shut in in this manner will not allow the tank to fill entirely.

Pipe (F) is the overflow and in case the valve or float (A) should become blocked or stopped up by some foreign matter the water would run down pipe (F) then down the service pipe (L) and into the closet bowl N.

In the practice of my invention I employ a glass tank which is secured preferably to the wall by means of brackets, but it is obvious that it may be supported from the floor by means of a suitable standard, if preferred, the tank, floats and valves and other working parts may also be made of glass or other suitable material.

Having thus described the workings of my invention, what I claim as new, and desire to secure by Letters Patent is,

1. In a closet flushing apparatus, the combination of a flushing tank and the air outlet therefrom, a float valve located therein adapted to close off the exit of air therefrom, a lift valve adapted when seated to close off the egress of liquid therefrom, and means connecting the two valves whereby the air valve is first operated to discharge air and then both valves are operated, and means for operating said connecting means, substantially as described.

2. In a closet flushing apparatus, the combination of a flushing tank and the air outlet therefrom, a float valve located therein adapted to close off the exit of air therefrom, a lift valve adapted when seated to close off the egress of liquid therefrom, and means connecting the two valves whereby the air valve is first operated to discharge air and

then both valves are operated, means for operating said connecting means and a by-pass air passage leading from the outlet of said flushing tank to an air space above the air float valve, substantially as described.

3. In a closet flushing apparatus, the combination of a closed flushing tank adapted to hold liquid and air under compression, a float valve located therein operated by inclosed liquid and adapted when closed to prevent egress of air therefrom, an air vent opening directly to the atmosphere, a lift valve adapted when seated to close off the egress of liquid therefrom, connecting means between said valves to open said valves, means for operating said connecting means, a slip connection in the means connecting said valves whereby the air valve is operated to discharge air from said tank in advance of the discharge of liquid therefrom, substantially as described.

In testimony that I claim the foregoing as my invention I affix my signature in the presence of two witnesses.

MICHAEL MAUER.

Witnesses:
FELIX A. DOETSCH,
OTTO REICH.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."