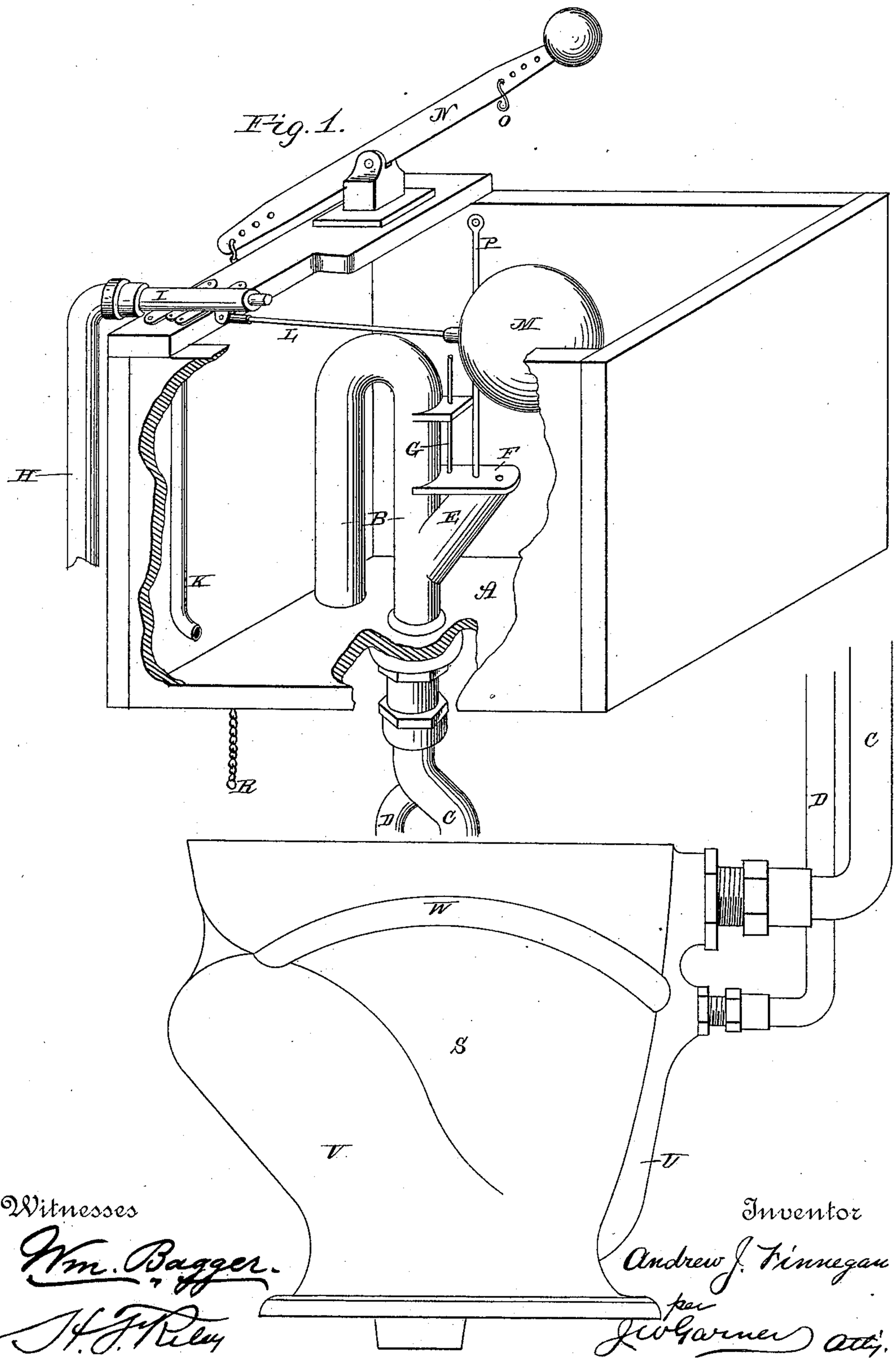
(No Model.) 2 Sheets—Sheet 1.

A. J. FINNEGAN.

WATER CLOSET.

No. 424,872. Patented Apr. 1, 1890.

Fig. 1.



Witnesses
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per
J. W. Garner Atty.

(No Model.) 2 Sheets—Sheet 2.

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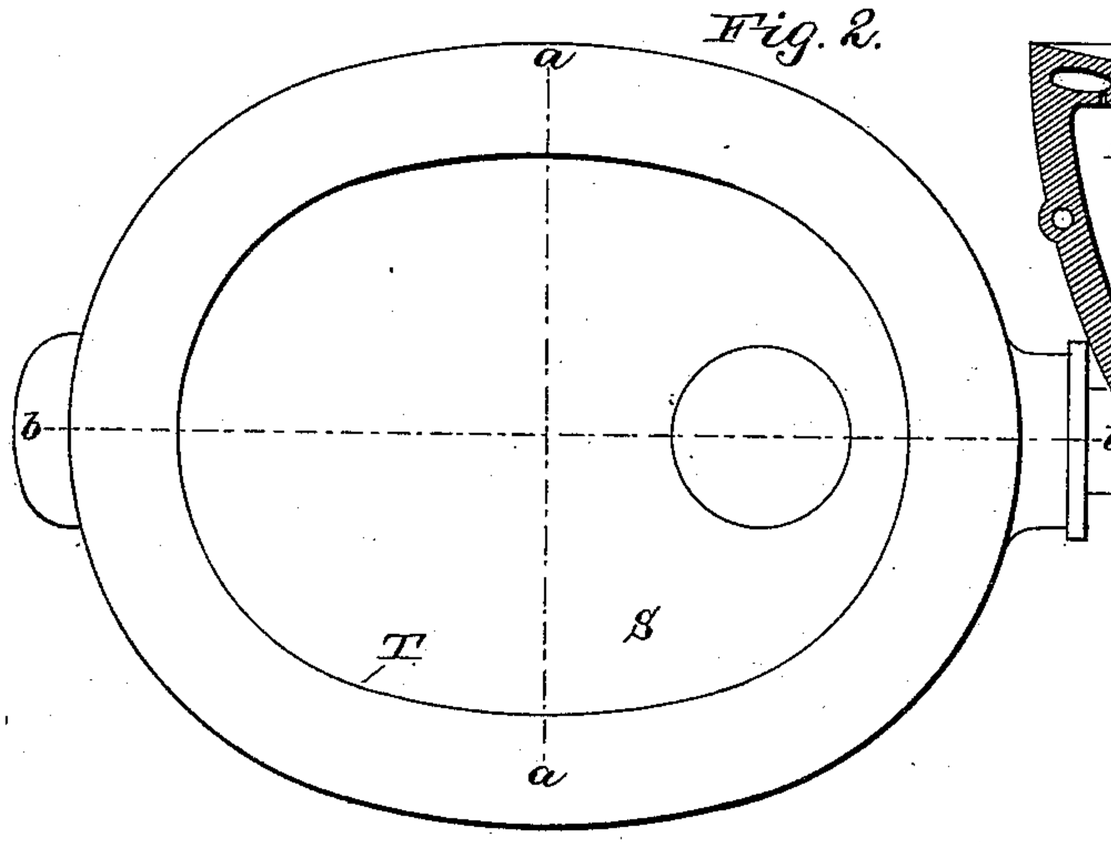
Fig. 2.



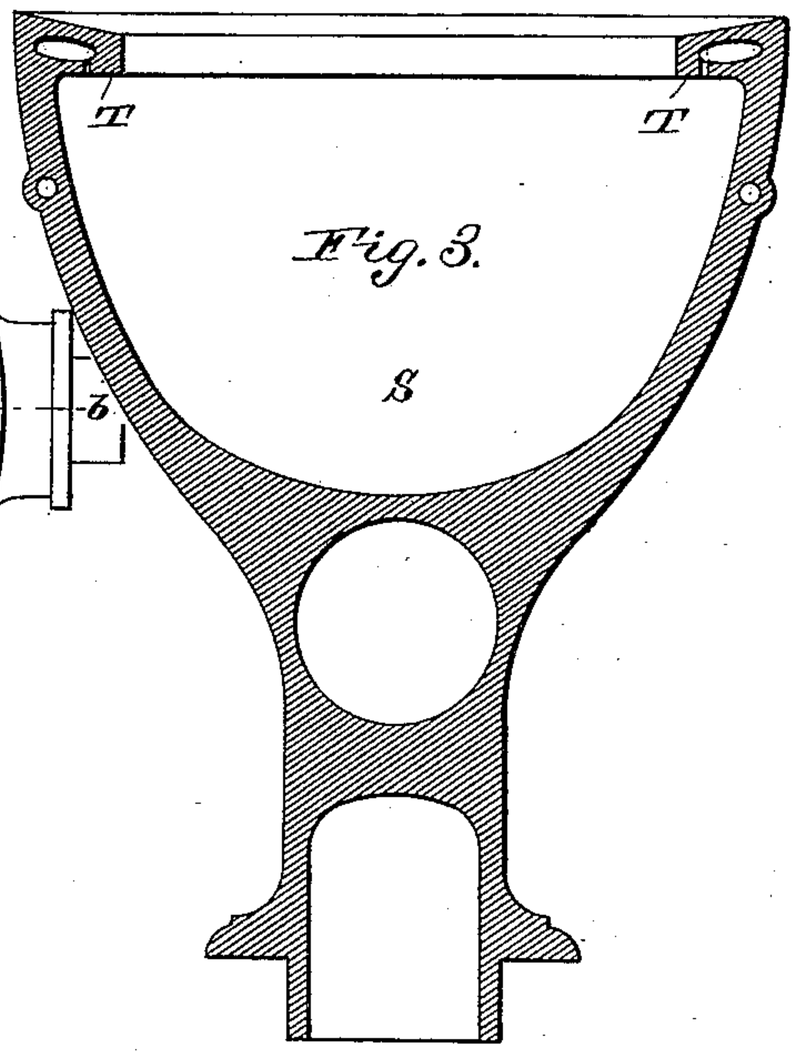


Fig. 3.

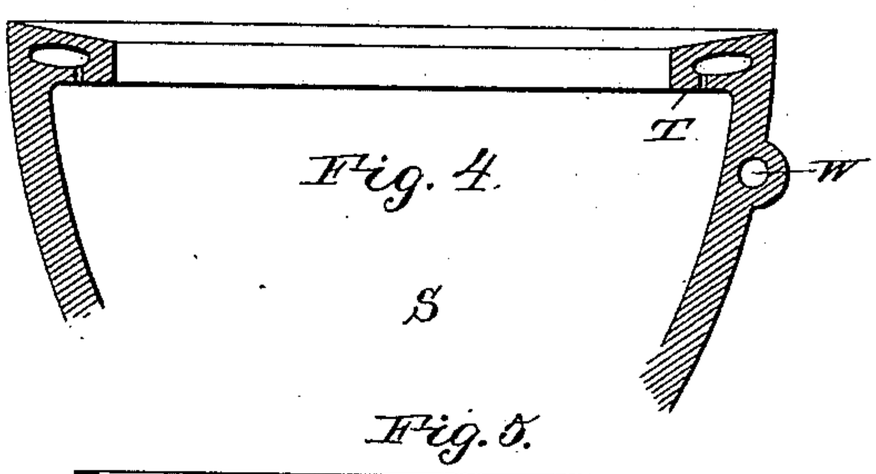
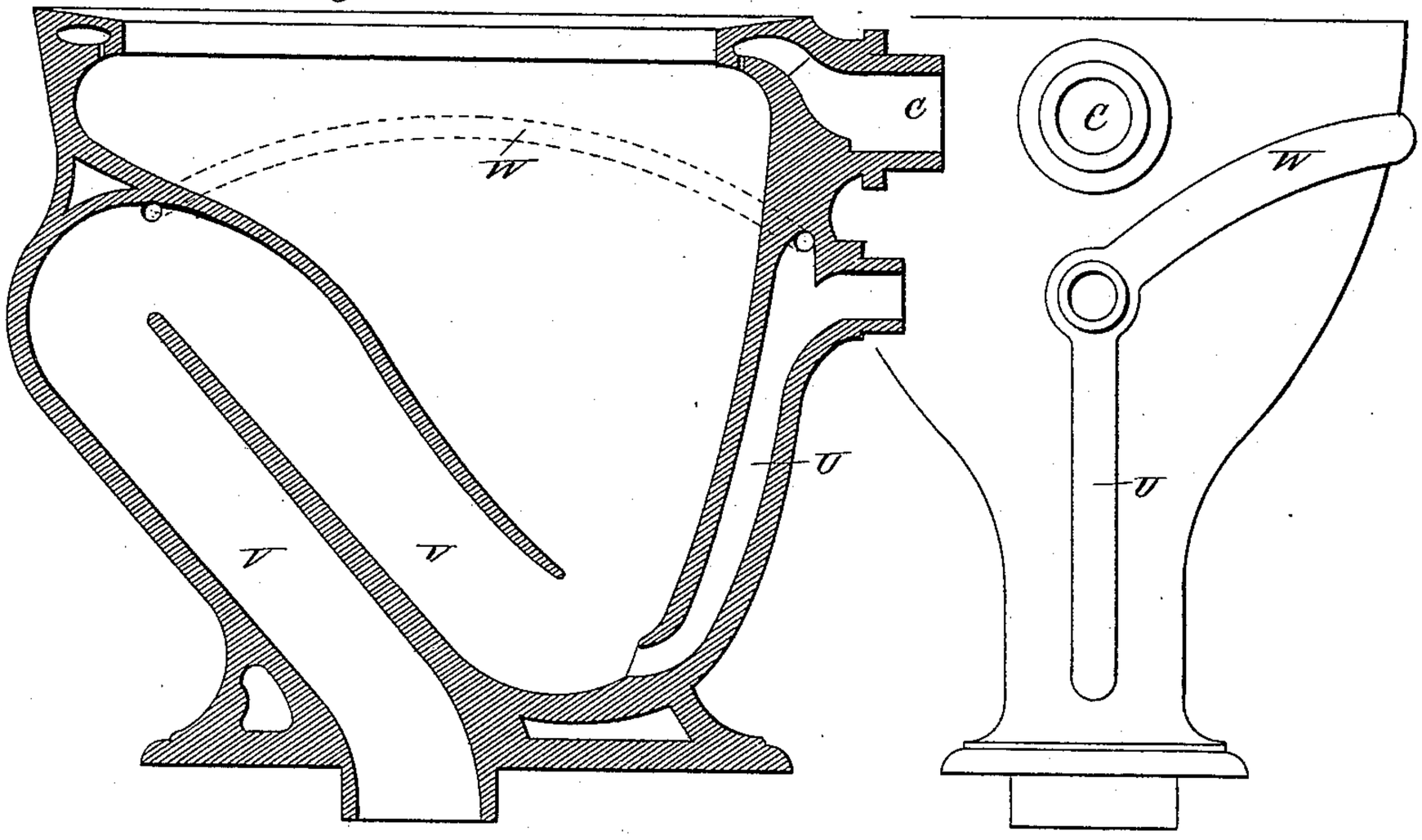


Fig. 4.

Fig. 5.

Fig. 6.



Witnesses

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UNITED STATES PATENT OFFICE.

ANDREW J. FINNEGAN, OF MINNEAPOLIS, MINNESOTA.

WATER-CLOSET.

SPECIFICATION forming part of Letters Patent No. 424,872, dated April 1, 1890.

Application filed August 24, 1889. Serial No. 321,907. (No model.)

To all whom it may concern:

Be it known that I, ANDREW J. FINNEGAN, of Minneapolis, in the county of Hennepin, and State of Minnesota, have invented a new and useful Improvement in Water-Closets; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use it, reference being had to the accompanying drawings, forming a part thereof.

My invention relates to an improvement in water-closets; and it consists in the peculiar construction and combination of devices that will be more fully set forth hereinafter, and particularly pointed out in the claim.

In the accompanying drawings, Figure 1 is an elevation of a water-closet embodying my improvements, the tank and siphon-flushing apparatus being shown in perspective. Fig. 2 is a top plan view of the closet. Fig. 3 is a vertical transverse sectional view of the same, taken on the line *a a* of Fig. 2. Fig. 4 is a similar view of a modified form of the same. Fig. 5 is a vertical longitudinal sectional view of the closet, taken on the line *b b* of Fig. 2. Fig. 6 is an end elevation of the same.

In the tank A is located the siphon B, from which depend the flushing-pipe C and the jet-pipe D. On the inlet-arm E of the siphon is seated the valve F, having the guide G. The water-supply pipe H, which leads to the tank, has a valve or cock I, from which depends the pipe K, that leads to a point near the bottom of the tank. An arm L is connected to the valve or cock, and has a weight-float M at its outer end, the function of the arm and float being to close the valve when the tank is filled, and thereby prevent an overflow, and to open the valve after the water has been drawn from the tank to flush the closet. A lever-arm N is fulcrumed on a support at one side of the tank, and has a link O, adapted to be connected to a rod P, that projects from the upper side of the valve F, and thus enable the closet to be flushed whenever it is used. A chain R depends from the outer end of the lever and is within convenient reach.

The foregoing apparatus is not more fully described in this specification, for the reason that it forms the subject-matter for other applications for Letters Patent of the United States filed by me and now pending.

I will now describe the construction of the water-closet that constitutes my present improvements.

Surrounding the bowl S, at the upper edge thereof, is the flushing-rim T, that communicates with the lower end of the flushing-pipe C, as shown in Fig. 5.

In the back part of the closet is the jet-channel U, the upper end of which communicates with the lower end of the jet-pipe, and the lower end of which communicates with the bottom of the bowl. In the front side of the bowl is the trap V to form a water seal at the lower end of the bowl. An air-passage W communicates at one end with the upper portion of the trap, and at the opposite end communicates with the upper end of the jet-channel U. This air-passage may be formed in only one side of the closet, as shown in Fig. 4, or it may be formed in both sides thereof, as shown in Fig. 3. The said air-passage is above the water-level in the bowl and trap, as shown.

When the flushing apparatus is operated, the water that descends through the pipe C passes through the flushing-rim, and from there enters the bowl. The water that passes through the jet-pipe D is discharged into the bottom of the bowl at the entrance to the trap, and forms a current that causes the matter to enter the trap and become discharged from the bowl. As the said jet of water is thus forced into the lower end of the trap, it creates suction at the upper end of the jet-channel U, and air is thereby drawn from the upper portion of the trap through the air-passage W, creating a partial vacuum in the upper portion of the trap, thus causing the contents of the bowl to be siphoned therefrom, as will be readily understood.

It will be observed by reference to Fig. 5 that the bowl is of inverted conical shape and that its lower end is relatively small. The trap extends upward from the bottom of

the bowl to a height about on a level with the upper end of the jet-channel, thus causing a deep water seal to be formed in the bowl.

A water-closet thus constructed is cheap and simple and possesses maximum efficiency.

Having thus described my invention, I claim—

As an improved article of manufacture, the integral water-closet bowl formed with the flushing-rim having the water-inlet, the jet-channel having the water-inlet, the trap, and the air-passage W, (one or more,) formed in one or both sides of the bowl and connecting the upper end of the trap with the jet-channel at a point higher than the water-inlet of the latter, substantially as described.

In testimony that I claim the foregoing I append my signature.

ANDREW J. FINNEGAN.

Witnesses:

A. E. SIMSON,

F. GOGGIN.