H. A. HAUGAN.

WATER-CLOSET TANK.

No. 182,756. Patented Oct. 3, 1876.

Fig. 1.

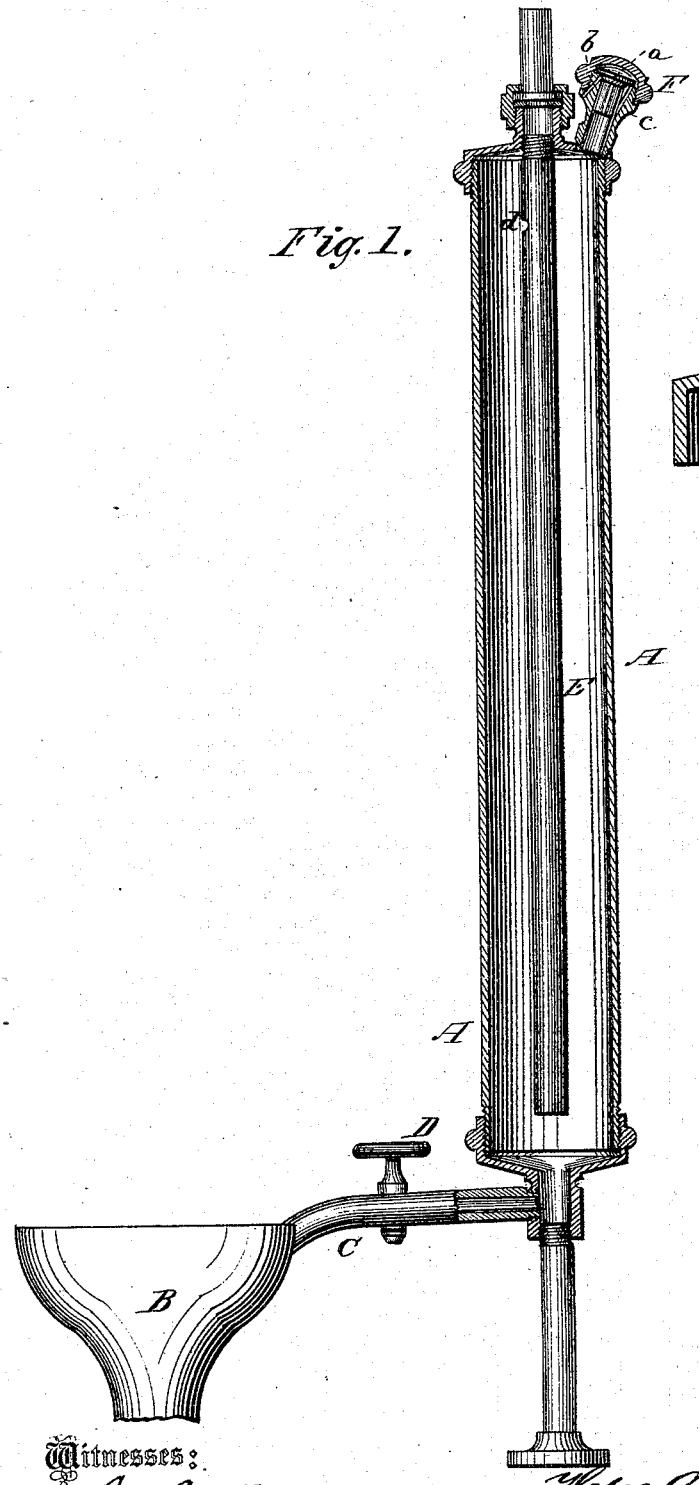


Fig. 2.

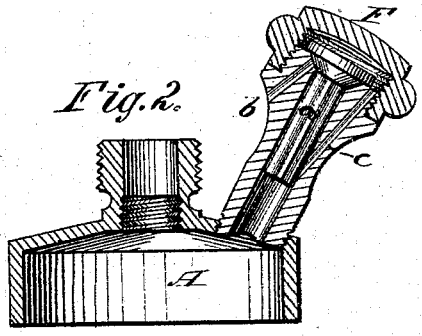
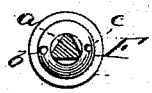


Fig. 3.



Witnesses:

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UNITED STATES PATENT OFFICE.

HELGE A. HAUGAN, OF CHICAGO, ILLINOIS.

IMPROVEMENT IN WATER-CLOSET TANKS.

Specification forming part of Letters Patent No. **182,756**, dated October 3, 1876; application filed March 4, 1876.

To all whom it may concern:

Be it known that I, HELGE A. HAUGAN, of Chicago, Cook county, and State of Illinois, have invented certain new and useful Improvements in Water-Closet Tanks, of which the following is a full description, reference being had to the accompanying drawings, in which—

Figure 1 is an elevation, partly in section, Fig. 2 a vertical section of the top-plate and air-vent; and Fig. 3, a cross-section of the air-vent.

In cistern or tank water-closets, as heretofore constructed, the tank has been placed over the seat, and connected therewith by a chamber at the bottom of the tank, and operated by a series of valves connected, by means of wires and bell-crank levers, with a knob or handle at the side of the seat. This arrangement is very liable to get out of order, and the tank or tanks make an unsightly projection into the room, and, as arranged, they cannot be made to utilize any hydraulic pressure obtained from their connections with the street-mains. By the use of my improvements these difficulties are avoided; and the nature of my invention consists in providing a tank which may be located at the back or side of the seat, and which may be used either with or without hydraulic pressure, according to its location; and it also consists in the several improvements and combinations hereinafter claimed as new.

In the drawings, A represents a cistern or tank; B, the seat-basin; C, the connecting-pipe; D, valve or cut-off; E, central pipe of tank; F, an air-vent; *a*, valve in air-vent; *b c*, air-passages; and *d*, opening in central pipe. As shown, the tank A is cylindrical, and the heads are held in place by screw-threads, but in construction the heads may be attached by soldering, seaming, or riveting, or partly by seaming, or riveting and soldering, and in form it may be made triangular to fit into corners with or without a curved front, or it may be rectangular and flattened so as to take up but little room when placed behind the seat, or at its side, and so that it can be cased up in the wall, if desired, so that there will not be anything except a door to indicate its presence. The pipe E descends nearly to the bottom, and it is provided with a small hole, *d*, near the top, so as to prevent noise either in filling or emptying, and the tank is provided with an air-vent or escape, F, so as to let out the air which otherwise might prevent it from filling properly. The vent is provided with the usual valve *a* and vent-holes *b c*. The basin B may be of any of the usual forms, and the valve D will be the only valve necessary. This valve may be arranged so as to be attached directly to the knob, and be operated in both directions by it, or it may have a return spring, and the basin and pipe will be incased with suitable casing for the seat. By this construction and arrangement of the tank, it may be placed where it will only be filled in the night when the highest pressure is had, or by pumps, and it will hold sufficient water to operate during the day, or it may be placed where the pressure is continuous, and in that event the hydrant-pressure will be added to the might of the water-column formed by the tank, so that the tank will work either with continuous or intermittent pressure. The tank A may be cast entire, or the heads may be made of cast-iron and the body of boiler-iron, or other suitable sheet metal.

What I claim as new, and desire to secure by Letters Patent, is—

1. The tank A and pipe E, in combination with the air-vent F, substantially as specified.

2. The tank A, provided with the vent F, in combination with the basin B, pipe C, and valve D, substantially as described.

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Witnesses:

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