

No. 620,352.

Patented Feb. 28, 1899.

A. O'BRIEN.

OVERFLOW, VENTILATING, AND DISCHARGE FITTINGS FOR CLOSETS.

(Application filed Feb. 11, 1898.)

(No Model.)

2 Sheets—Sheet 1.

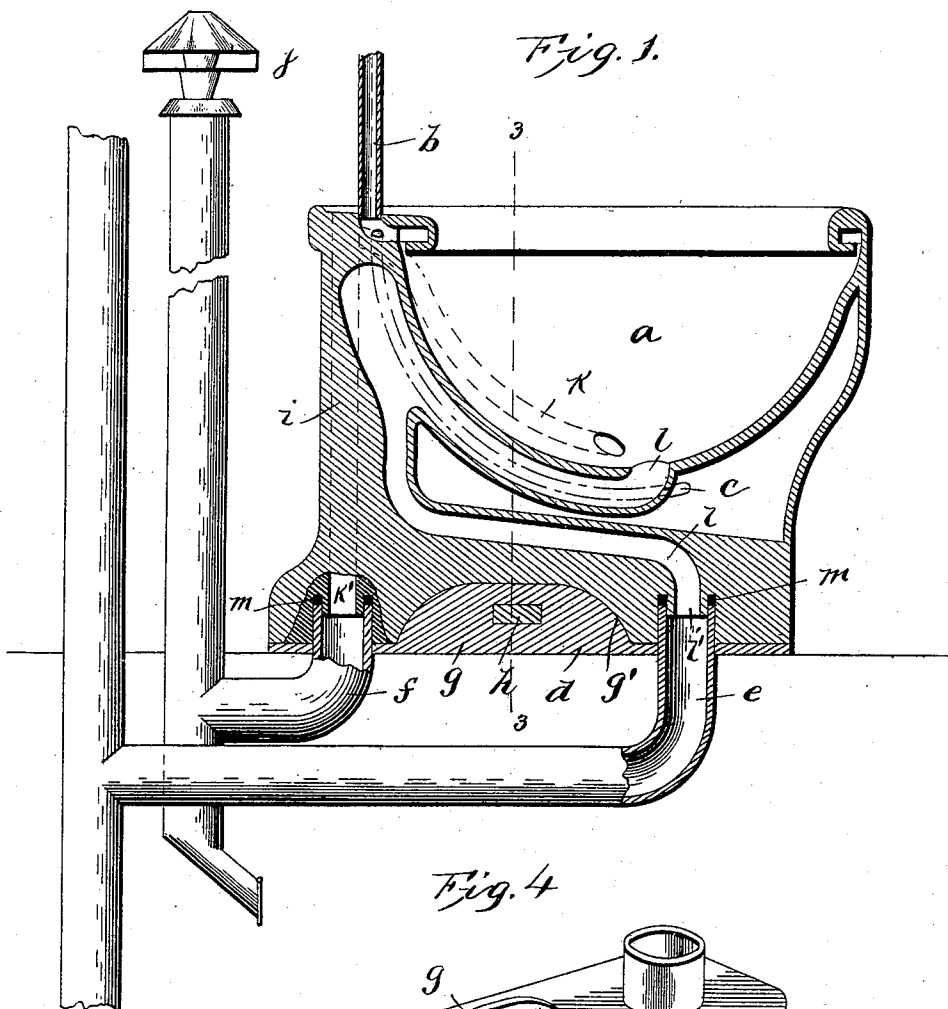


Fig. 1.

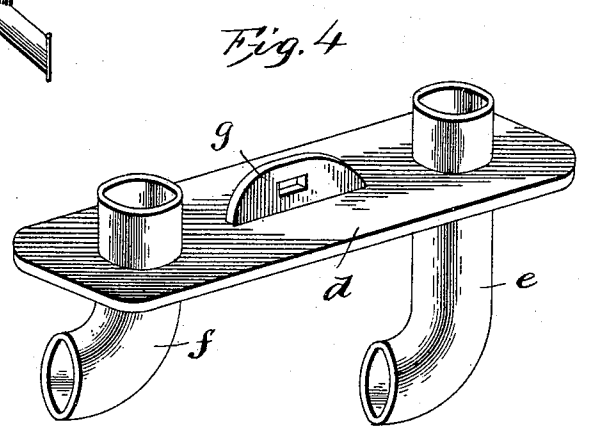


Fig. 4.

Witnesses.

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2 Sheets—Sheet 2.

Fig. 2.

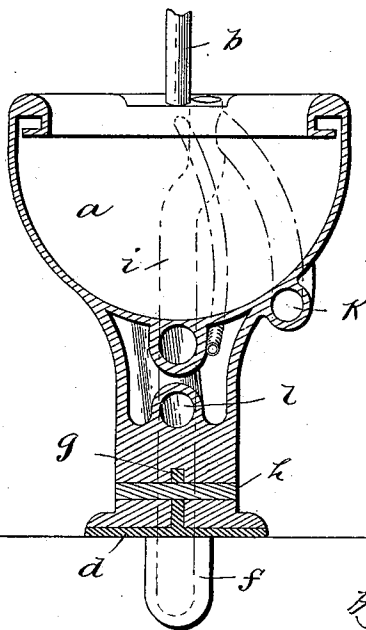
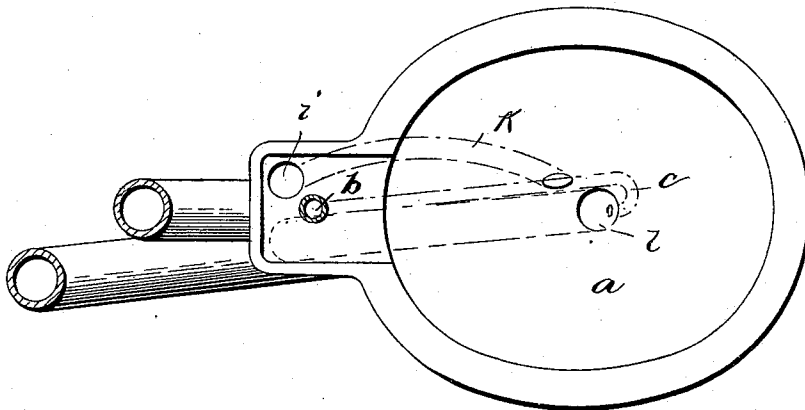


Fig. 3.

Witnesses.

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UNITED STATES PATENT OFFICE.

ARTHUR O'BRIEN, OF HELENA, MONTANA, ASSIGNOR OF THREE-FOURTHS
TO AUGUST FACK AND MARTIN A. MITCHELL, OF SAME PLACE.

OVERFLOW, VENTILATING, AND DISCHARGE FITTINGS FOR CLOSETS.

SPECIFICATION forming part of Letters Patent No. 620,352, dated February 28, 1899.

Application filed February 11, 1898. Serial No. 669,964. (No model.)

To all whom it may concern:

Be it known that I, ARTHUR O'BRIEN, of Helena, in the county of Lewis and Clarke and State of Montana, have invented certain new and useful Improvements in Overflow, Ventilating, and Discharge Fittings for 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 the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form part of this specification.

This invention relates to certain new and useful improvements in safety-overflow and local ventilation for water-closets.

The object of the invention is to provide a closet simple, cheap, and durable of construction, composed of a minimum number of parts, and quick and accurate of operation.

A further object of the invention is to provide means for setting the closet or bowl without nails or screws and to prevent leakage.

A further object of the invention is to provide a safety-overflow for closets which will carry off only the superfluous water, leaving the light and heavy particles in the bowl, thus preventing the bowl from overflowing on the floor.

A further object of the invention is to provide a local ventilation for the bowl and room caused by the use of a draft-creator in the outer atmosphere.

A further object of the invention is to provide means for connecting the soil-pipe and ventilating and overflow pipe to the bowl in such a manner that the pottery extends into the said pipes for the purpose of preventing leakage.

A further object of the invention is to provide a plate having a rib in its center and carrying the pipes for discharge and ventilation, the pipes being soldered to said plate and adapted to fit in the recesses and form connections with the soil and ventilating and safety overflow pipes or channels of the bowl, the rib fitting in a recess under the bowl and secured together with a pin which passes through bowl and rib.

The invention consists of certain novel fea-

tures of construction and in combination of parts more fully described hereinafter and particularly pointed out in the claims.

In the accompanying drawings, forming 55 part of this specification, Figure 1 is a vertical central section of my improved device. Fig. 2 is a top plan thereof. Fig. 3 is a vertical section on the line 3 3, Fig. 1; and Fig. 4 is a detail perspective view of the clamping 60 and connecting plate.

Referring by letter to the drawings, *a* is a closet-bowl of approved design having the flush *b* and siphon-jet *c*.

d is a clamping-plate through which passes 65 the soil-pipe *e* and the ventilating and safety overflow pipe *f*. About the middle of the clamping-plate *d* is a rib *g*, which is adapted to fit in a corresponding recess *g'* in the base of the bowl *a* and securely held therein by a 70 pin *h*.

The ventilating-pipe *i* is formed in the rear of the bowl, passing vertically therethrough, open at its upper end for a free passage of air from the room and bowl and connected at 75 its lower end to the pipe *f*, which connects at its upper end with the outer atmosphere, where it is provided with a draft-creator *j*, and at its lower end with a gravity-valve which is normally closed, thus allowing the 80 draft-creator full control of the ventilating-pipe *i*. The said gravity-valve is only open when the overflow is in operation—that is, when water is passing through the overflow *k* and ventilating-pipe *i* into the pipe *f* and 85 out at the valved lower end thereof.

k is the safety overflow-pipe, formed on the outside of the bowl *a*, connecting with the interior thereof at a point a little higher than the mouth of the soil-pipe, and empties into 90 the ventilating-pipe *i* below the upper edge of the bowl, so that should the soil-pipe be stopped up and the water continue to flow from the flush the surplus water would be carried off before the bowl would overflow, 95 and nothing but the water would pass, as the safety-overflow *k* is so arranged that the heavy particles would sink below its mouth and the light stuff float above.

l is the soil channel and trap of the bowl 100 into which the siphon-jet *c* empties to start the discharge of the bowl.

At the lower discharge end of the ventilating and safety overflow pipe is provided a gravity flap or valve which is normally closed when the overflow is not running to prevent
5 air from entering and breaking the draft from the closet-bowl.

The channels *i* and *l* of the pottery terminate in the tubular projections *k'* and *l'*, respectively, which protrude into recesses for
10 the reception of the pipes *e* and *f*, which are large enough to encircle the projections *l'* and *k'* and form circular chambers, in which are inserted packings *m*, such as rubber gaskets or the like, which are compressed, forming
15 air-tight joints, when the bowl *a* is set on the connecting-plate *d*, the rib *g* engaging the recess *g'*, and the pin *h* inserted.

When the flush-pipe enters the bowl, an incline is formed toward the interior of the
20 bowl to carry thereto any possible leakage.

It is evident that various slight changes might be made in the forms, arrangements, and constructions of the parts described without departing from the spirit and scope of
25 my invention. Hence I do not wish to limit myself to the exact construction herein set forth, but consider myself entitled to all such changes that fall within the spirit of my invention.

30 Having thus fully described my invention, what I claim, and wish to secure by Letters Patent of the United States, is—

1. In a safety-overflow and ventilator for water-closets the combination of the safety-
35 overflow and ventilator connected with the same discharge-pipe, a valve at the bottom and a draft-creator at the top thereof, and means for air tightly connecting the bowl with the discharge and soil pipes consisting

of the clamping-plate having a rib corresponding with a recess in the base of the bowl, discharge and soil pipes carried by said clamping-plate and connecting with the soil and ventilating and safety-overflow channels of the pottery, packing interposed at said connections and a pin passing through the base of the bowl and the rib of the clamping-plate whereby they are tightly secured together and the joints made air-tight, substantially as described.

2. A water-closet bowl comprising the safety-overflow, the ventilator, entering the bowl in different locations and emptying into the same discharge-pipe, the soil-channel and a plate carrying the discharge-pipes adapted to register with and form continuations of the ventilator and overflow-pipe and soil-channel substantially as set forth.

3. In a safety-overflow and ventilator for water-closets the combination of the soil-channel, the combined ventilator and overflow-pipe, a valve at one end of said pipe a draft-creator at the other end, the safety overflow-pipe opening into the bowl at a point above the soil-channel, emptying into the
6 ventilator-pipe below the edge of the bowl, and a plate adapted to be secured to the bowl carrying soil and ventilator discharge pipes registering with said channels of the bowl, substantially as set forth.

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

ARTHUR O'BRIEN. [L. s.]

Witnesses:

E. C. DUFFY,
F. C. BARRY.