(No Model.)

J. P. PUTNAM.

WATER CLOSET AND SIMILAR RECEPTACLE.

No. 285,925. Patented Oct. 2, 1883.

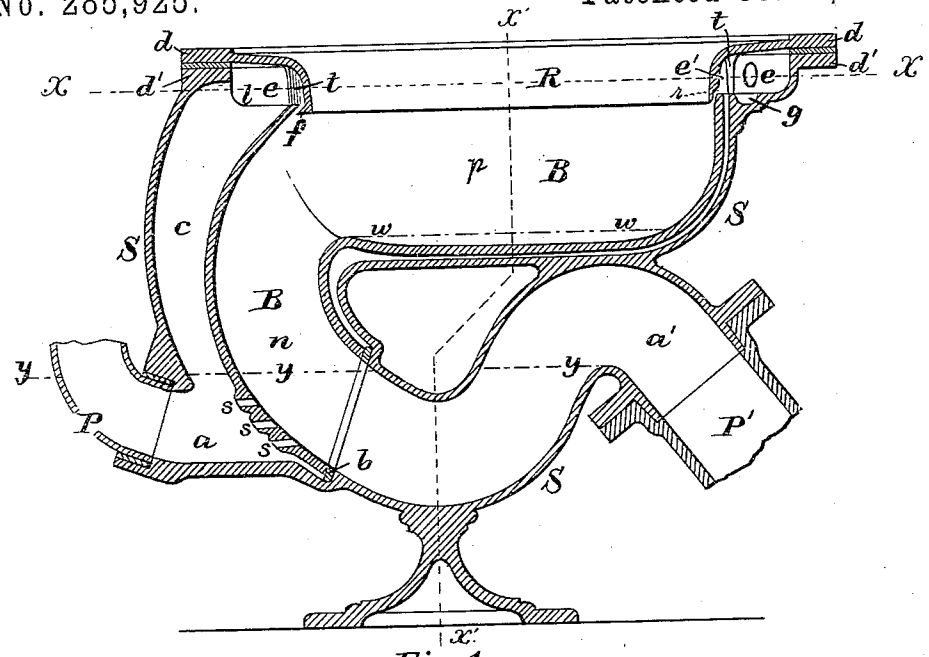


Fig. 1.

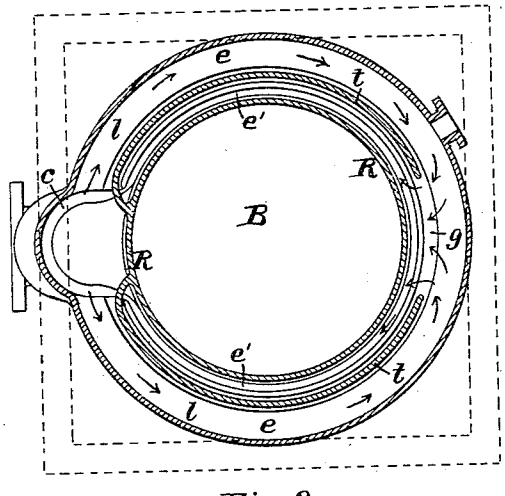


Fig. 2.

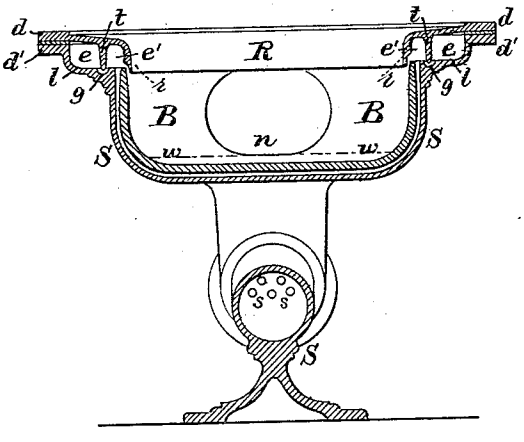


Fig. 3.

Witnesses:

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UNITED STATES PATENT OFFICE.

JOHN PICKERING PUTNAM, OF BOSTON, MASSACHUSETTS.

WATER-CLOSET AND SIMILAR RECEPTACLES.

SPECIFICATION forming part of Letters Patent No. 285,925, dated October 2, 1883.

Application filed January 12, 1883. (No model.)

To all whom it may concern:

Be it known that I, JOHN PICKERING PUTNAM, of Boston, in the State of Massachusetts, have invented a new and useful Improvement in Water-Closets, Wash-Basins, Urinals, Stop-Sinks, and Similar Receptacles, of which the following is a specification.

The invention is more particularly applicable to a water-closet, and especially to that class of water-closets in which it is required that the upper flushing-water, while overflowing the entire upper edge of the basin, shall take a general direction toward one end of the basin, even when the supply-pipe and the outflow-pipe connect with the basin upon the same side. For the purpose there has heretofore been used, in connection with a flushing-rim, a double water-way around the upper portion of the basin; and the present invention relates to the manner of forming such double passage-way, and more particularly to a manner of dividing a single trough or channel under the flushing-rim around the upper portion of the basin, by means of a diaphragm, a groove, and cement, into two passage-ways.

The invention further relates to other details of construction especially set forth in the claims, and more especially in the beveling of that part of the flushing-rim which lies just above and opposite the upper edge of the basin when the basin and flushing-rim are formed in separate pieces. In setting the flushing-rim in position relatively to the basin, advantage is taken of the bevel to make the aperture for the flushing of greater or less width.

I have represented the invention as applied to a trapped wash-out water-closet embodying the principal features of an invention described and shown in an accompanying application for a patent.

In the drawings, Figure 1 is a vertical section of such a water-closet. Fig. 2 is a plan of the same on line *x x* of Fig. 1. Fig. 3 is a vertical section on line *x' x'* of Fig. 1.

S is an outer shell or casting, having a short hollow arm, *a*, to receive the supply-pipe P, and a larger hollow arm, *a'*, curved to form a portion of a trap, and adapted to connect with the discharge-pipe P', as shown.

Near the top of the casting S, on the inner side, is a ledge, *l*, and in this ledge is a groove, *g*.

B is the basin proper, set within the casting S, as shown. It consists, substantially, of a flaring portion, *p*, and a hollow neck, *n*, opening out of the flaring portion at the bottom, and one side or end thereof, and making a water-tight connection with the hollow arm *a'* at *b*. The hollow neck *n* and arm *a* make the trap before mentioned. The flaring portion of the basin is slightly concave at the bottom, to hold water in the concavity, which would otherwise run out through the neck *n*, as shown by the water-line *w w*. A portion of the trap end of the neck *n* forms, as shown, an abutment to the passage-way through the hollow arm *a*, and is perforated in the manner described in my said application filed herewith, to permit water to pass from said passage-way directly into and through the trap, while the upper part of said neck and the continuous wall of the basin form, as shown, with the inner wall of the casting S, the upright or delivery arm of a U-shaped passage-way, such as is also described in my said application filed herewith, as adapted to flush the upper portion of the basin. This perpendicular passage-way is marked *c*, and it will be observed that its entrance into the passage way *a* is below the water-level of the seal of the trap, (see water-line *y y*,) and that by means of the perforations *s s* in the neck *n* water will stand in the trap and in the U-shaped passage-way at the same level. When an additional or fresh supply of water is admitted through the pipe P, a portion of it is thrown directly into the trap through the holes *s s*, to cleanse the trap, and a portion rises in the passage-way *c*, substantially as described in my said accompanying application, in part to flush the upper portion of the basin and in part to fall back and fill the trap when the additional supply is cut off.

R is a flushing-rim having its lower edge within and just below the upper edge of the basin B, as shown. It is supported in part by a flange thereof, *d*, resting upon a flange, *d'*, of the casting S, and in part by a downward projection or diaphragm, *t*, which enters the groove *g* in the ledge *l* of the shell S, and are there made water-tight, as is also the seam between the two flanges *d d'*. The lower edge, or part just above the lower edge of the flushing-rim, is beveled, as shown at *r*, and in putting the apparatus together advantage is taken

of this bevel to make the narrowest part of the opening between the flushing-rim and basin of greater or less width by using more or less cement in the groove *g* and in the seam between the two flanges *d d'*. The projection or diaphragm *t* divides the water-way formed above the ledge *l* as a continuation of the water-way *c* into the channels *e* and *e'*. The projection *t*, however, is broken away opposite the entrance from the passage-way *c*, in order that the two channels may open into each other. This method of construction is easy, avoiding the difficulty there is in casting tubular passage-ways. It is obvious that the diaphragm *t* might be cast with the ledge *l* and the groove made in the flushing-rim.

In the operation of the apparatus the greater part of the flushing-water rising in the passage-way *c* divides, and enters first the outer channels, *e e*, in which it flows, as indicated by arrows, to a point substantially opposite the discharging-neck *n*. The two streams, meeting at this point, are turned into the channels *e' e'*, as also indicated by arrows, and while flowing in this reversed direction, which is in the general direction of the discharging-neck, overflow the edge of the basin, and the basin is thus emptied of its contents without the function of eddies. A small portion of the water rising in the passage-way *c* flows into the basin directly from that passage-way, and that this water may lubricate the nearly-perpendicular wall of the neck *n*, the flushing-rim R is provided with an outer flange, *f*, upon that part of it immediately opposite the entrance from the passage-way *c*, to direct water against the said perpendicular wall.

I make no claim herein to any combination embracing a flushing-rim in which the flushing-rim is cast in one piece with the basin.

I claim—

1. The combination, with the basin of a water-closet or similar receptacle provided with a trough or channel around its upper edge, of a flushing-rim and diaphragm, the said basin and said flushing-rim being cast separately, and the lower edge of the said flushing-rim extending within and below the upper edge of the said basin, while the said diaphragm divides the said trough into two passage-ways, substantially as described.

2. The combination, with the basin B and shell S, provided with ledge *l*, containing groove *g*, of the flushing-rim R, provided with projection *t*, substantially as described.

3. The combination, with the basin of a water-closet or similar receptacle, of a flushing-rim, the said basin and the said flushing-rim being formed in separate pieces, and the said flushing-rim having its lower edge within and below the upper edge of said basin, and beveled, substantially as described.

4. The combination, with the casting S, provided with arms *a* and *a'*, of the basin B and flushing-rim R, provided with projection *t*, substantially as described.

5. The combination, with the basin B, provided with a U-shaped passage-way to introduce upper flushing-water, of the flushing-rim R, provided with flange *f*, substantially as described.

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Witnesses:
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