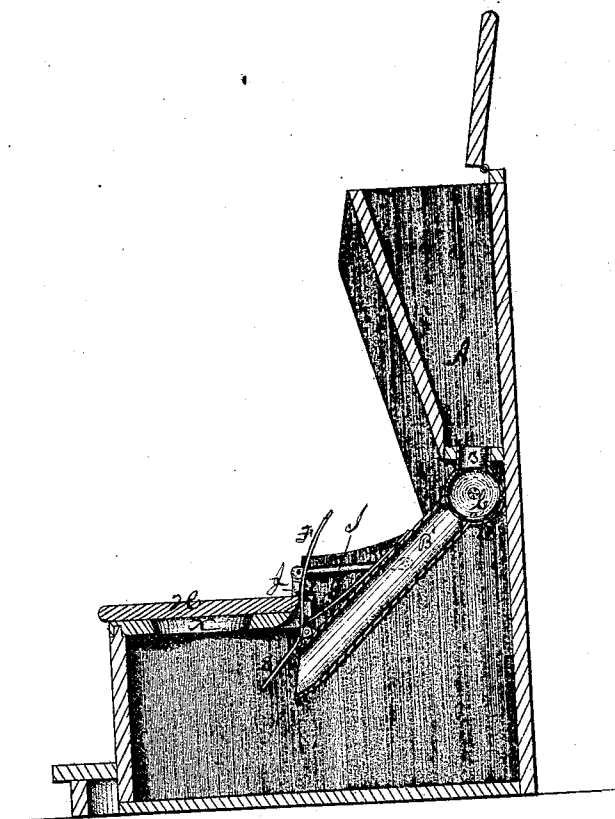


W.R.C. Clark,

Earth Closet.

No. 105,045.

Patented July 5, 1870.



Witnesses

G. A. Jenkins
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WILLIAM ROBERT COLTON CLARK, OF NEW ORLEANS, LOUISIANA.

Letters Patent No. 105,045, dated July 5, 1870.

IMPROVEMENT IN EARTH-CLOSETS.

The Schedule referred to in these Letters Patent and making part of the same

I, WILLIAM ROBERT COLTON CLARK, of the city of New Orleans, in the State of Louisiana, have invented an Improvement in Earth-Closets, of which the following is a specification.

My improvement, as is the case of nearly if not all improvements in earth-closets, consists of a mechanical arrangement for precipitating the deodorizing substance, as, for example, dry earth, pulverized or powdered charcoal, or the like, on each deposit of fecal matter, in proper quantity and at the proper time, with the view of absorbing or deodorizing the hurtful and offensive gases which exhale from human excrement, and, at the same time, to reduce said fecal matter in such manner as to make its instant application to sterile lands as a fertilizer alike convenient and without discomfort to the persons who are called upon to apply it to such purpose.

The invention is very simple, and will be at once understood, on reference being had to the accompanying drawing, whereon it is shown in connection with an earth-closet, in which it has been introduced, by a sectional view, the line of bisection being from the front to the rear, through the center thereof.

On the drawing—

A is the hopper in the closet, to contain the dry earth, or other deodorizing agent employed in lieu thereof, and

B B' two sections of a pipe for the conduit of said agent from the hopper to a point which will secure its precipitation on the excreta, that are united by what is technically called a "knuckle-joint," C. This joint is so adjusted that the vibration or swing of section B' of the tube will be toward the front and rear of the closet, within prescribed limits.

The barrel of the knuckle-joint C has an opening, *a*, at its bottom side, which, when the section B' of the tube occupies a position at the extreme limit of its backward sweep, will bring it precisely over the upper end of said section, and thus permit the deodorizing substance to pass below said joint without check or interruption, whereas, when the section B' is at the limit of its swing toward the front of the closet, the opening *a* passes outside the barrel of this section, in consequence of the change of the inclination of the latter, and is closed by the shell of the overlapping part C' of the knuckle-joint, as shown on the drawing, so that, when the section occupies this position, the flow of the deodorizing agent beyond the said joint is completely cut off and stopped.

The lower extremity of the section B' is closed by a hinged gate or shutter, E, which, above the point at which it is hinged, extends upwardly in the form of a narrow curved arm, F, as shown.

The length of the section B' is so regulated, and the arm F so curved, that, when the said section is at the

limit of its forward sweep, the said arm is forced back by a positive contact between it and the cross-bar of the closet, to which the cover H of the closet-seat is hinged, sufficiently to overcome the tensile force of the opening T, and open the gate E, as seen in the drawing.

The spring G, acting on the arm F, keeps the gate E closed whenever there is no pressure against the said arm, and in so much as, in consequence of the curvature of this arm, all pressure is taken off immediately after the section B' begins to swing back, it closes the gate before the opening *a* comes over this section, and hence does not allow of any waste of the deodorizing agent at the time this section is receiving or being filled with said agent from the hopper.

The vibration or sweep of the section B' is effected by the opening and closing of the cover H, by a very simple mechanical arrangement.

A small rod, I, is pivoted to it, as shown by dotted lines, and connects, by a pivot joint also, with a short rod, J, that is firmly fastened to the cover H at right angles to the plane of the surface of the latter.

Under this arrangement the raising of the cover gradually brings these two rods in line with one another, and consequently swings back the section B' to the extreme limit of its rearward vibration. The movement back takes off the pressure from the arm F, allows the spring G to close the gate E, brings the opening *a* over the section B', and permits the deodorizing substance to flow into and fill said section.

The closing of the cover reverses everything. It closes the opening *a* and stops the flow of the deodorizing agent, opens the gate by bringing the arm F in contact with the cross-piece to which the cover is hinged, and empties the section B', precipitating the contents thereof on the fecal matter just deposited.

In swinging the section B' forward, a considerable impetus is given to the descent of the deodorizing substance beyond what its mere gravity would superinduce, and hence this substance is carried and precipitated considerably in advance of the vertical line occupied by the lower end or mouth of the section. This enables me to place this end of section B' sufficiently behind the opening K, in the seat of the closet, to prevent the fall of any fecal matter upon it.

If it be desired to dispense with the spring G, and open the gate E by positive action, a very simple alternative arrangement will accomplish the object. It is only necessary in such case to make the gate turn edgewise on a pivot fixed in an arm projecting horizontally from the lower extremity of section B', to provide a straight arm behind the pivot, and then to place two stoppers, in proper position for this arm

to strike against them, in reverse directions at the points at which the gate is to be opened and shut.

What I claim is—

The combination of a tube, composed of two sections, B B', that are united by a knuckle-joint, C, and provided with a gate, E, having an extended curved arm, F, which is operated in one direction by a spring, G, and in the other by pressure from the cross-bar, to

which the cover of the seat of the closet is hinged with the rods I and J, when all parts are connected, arranged, and operate substantially as herein described, for the purpose set forth.

WILLIAM ROBERT COLTON CLARK.

Witnesses:

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