(No Model.) 2 Sheets—Sheet 1.

C. D. LANE.

EARTH CLOSET.

No. 362,637. Patented May 10, 1887.

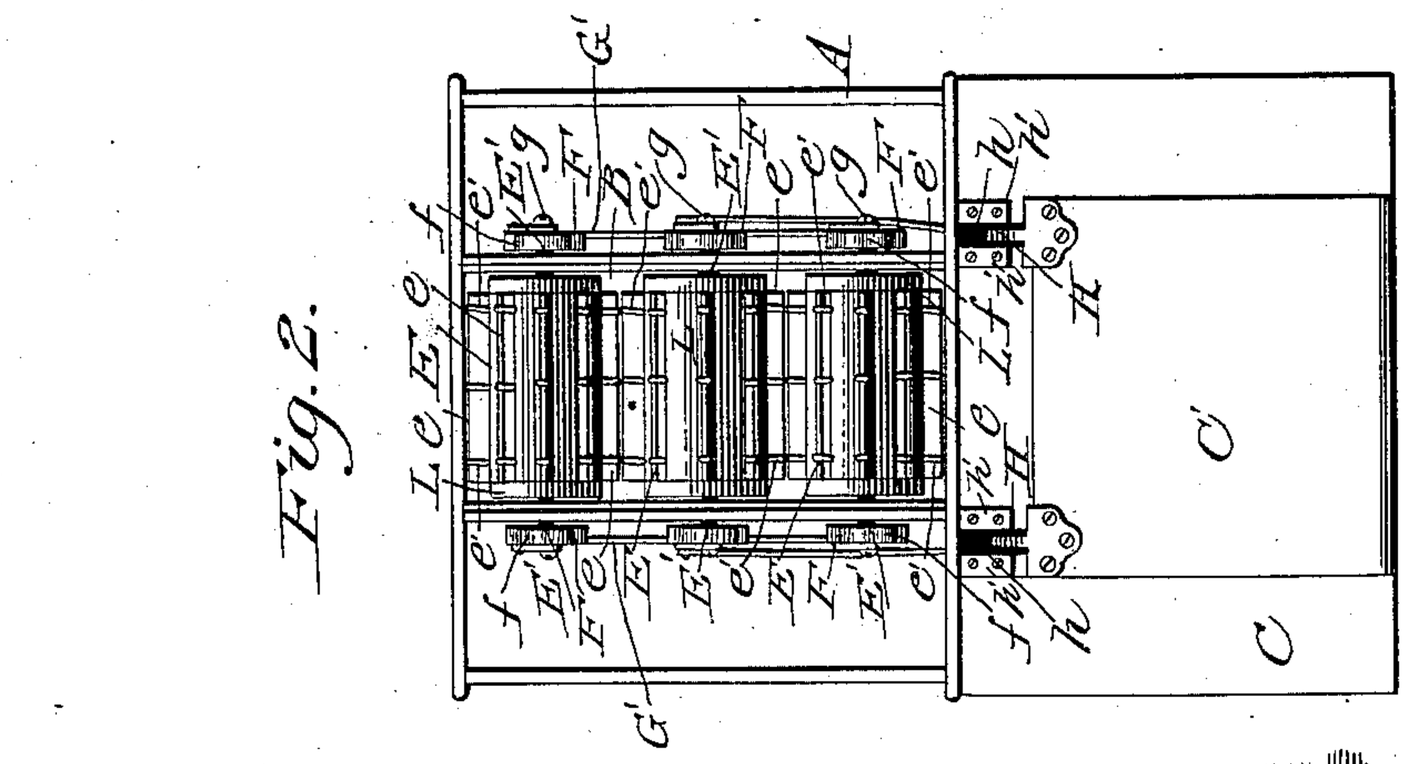

Fig. 2.

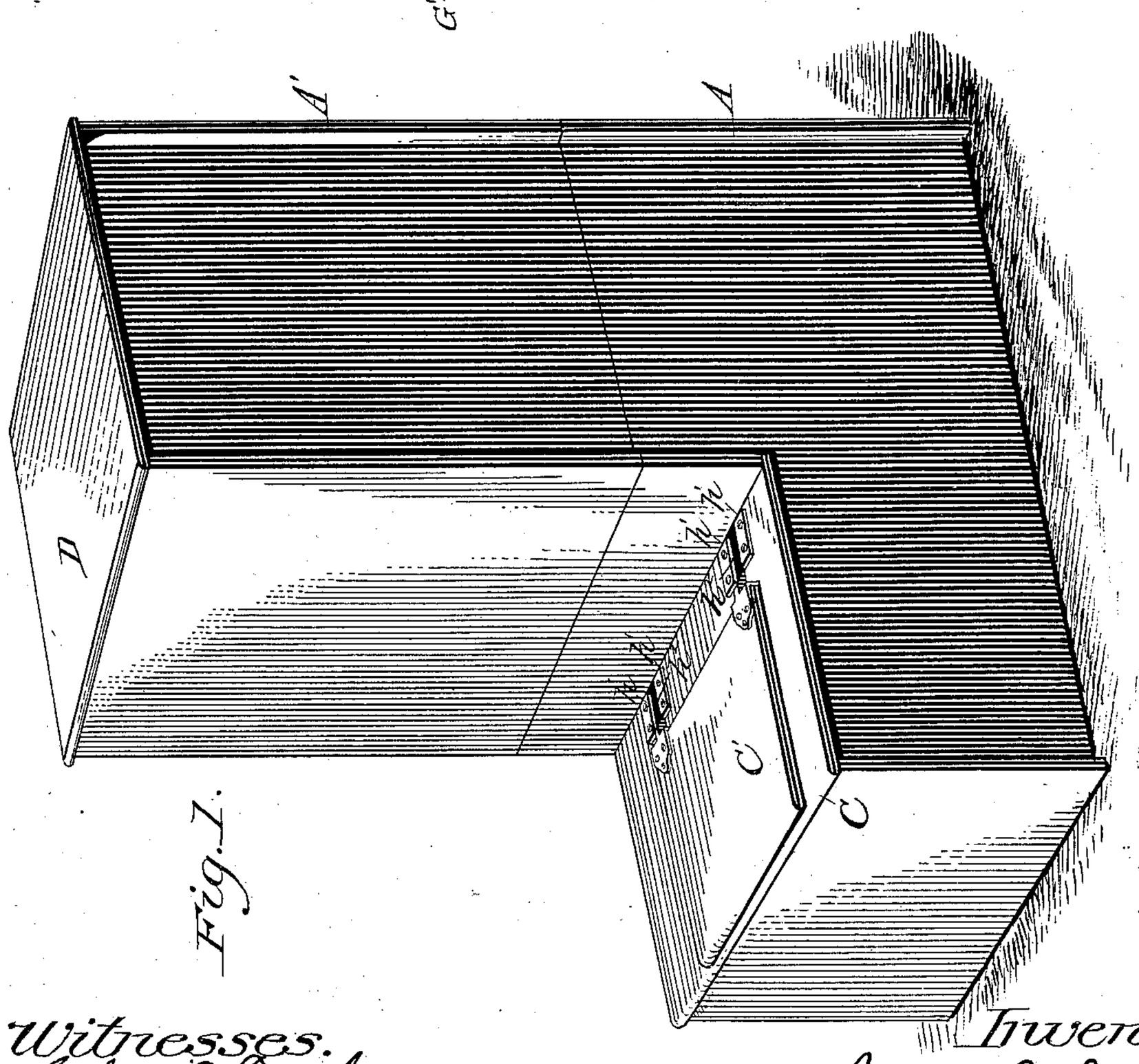

Fig. 1.

Witnesses.
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(No Model.) 2 Sheets—Sheet 2.

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Fig. 3.

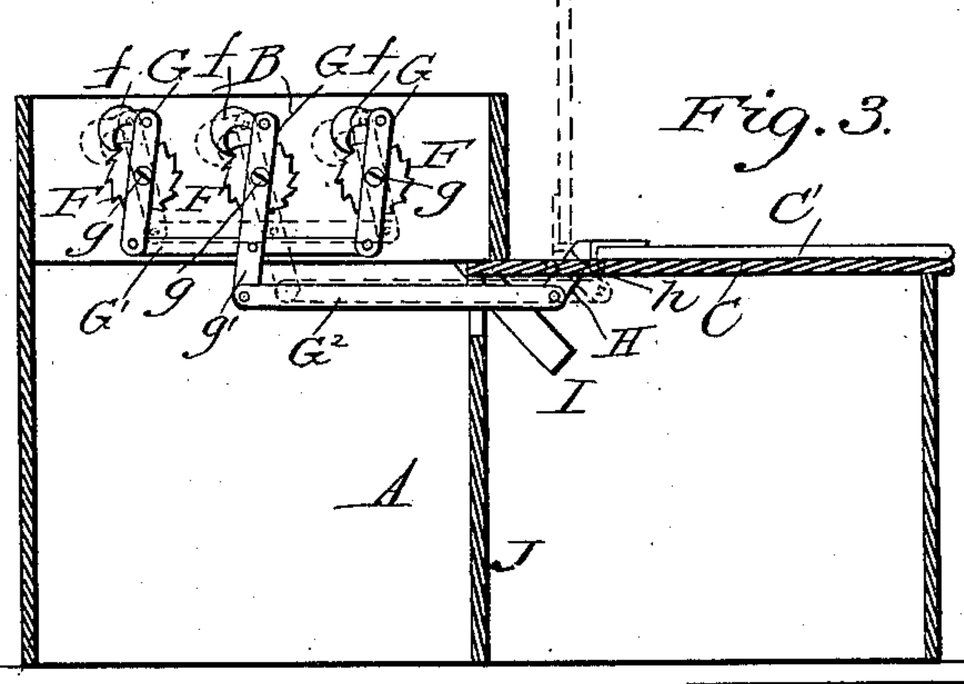


Fig. 5.

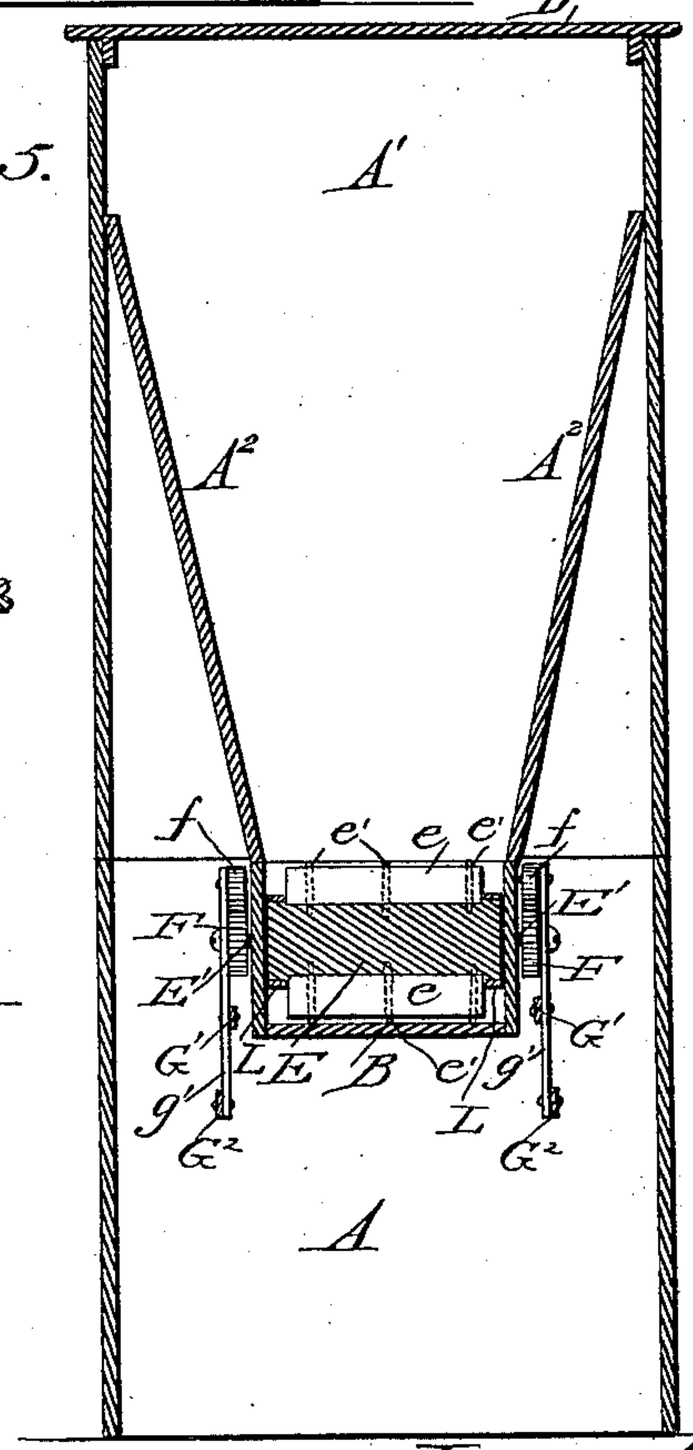
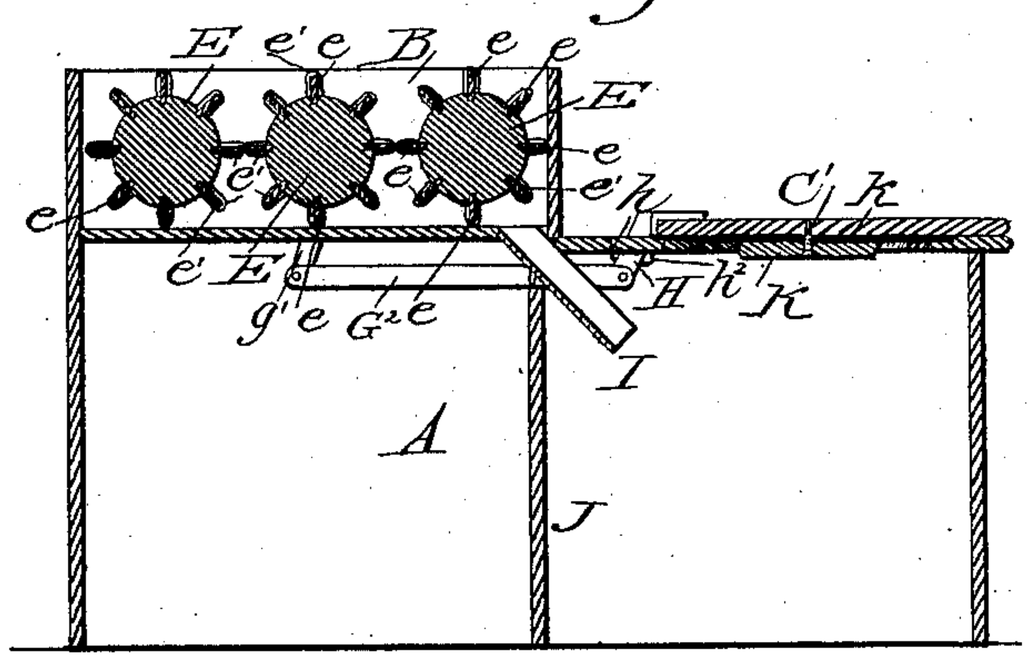


Fig. 4.



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Inventor:
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UNITED STATES PATENT OFFICE.

CYRUS D. LANE, OF BATAVIA, NEW YORK.

EARTH-CLOSET.

SPECIFICATION forming part of Letters Patent No. 362,637, dated May 10, 1887.

Application filed July 3, 1886. Serial No. 207,125. (No model.)

To all whom it may concern:

Be it known that I, CYRUS D. LANE, a citizen of the United States, residing at Batavia, in the county of Genesee and State of New York, have invented a new and useful Improvement in Earth-Closets, of which the following is a specification.

My invention relates to improvements in earth-closets in which earth, coal-ashes, or other deodorizing compound is stored in a receptacle located upon a higher plane than the discharging-spout, so as to fall by gravity from said spout; and the objects of my improvements are to provide an intermittingly earth-moving conveyer coacting with the swinging seat-cover; also, to afford facilities for discharging the deodorizing agent instantly upon the lowering of the seat-cover without opening or closing valves of any kind; also, by means of a weighted cover, to secure the automatic depositing of the deodorizer; also, to prevent dust or effluvia from rising by the use of packing for forming a tight inclosure and permit the use of the closet as an indoor commode. I attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of the closet when closed. Fig. 2 is a top plan view of the closet with the deodorizing-receptacle removed. Fig. 3 is a transverse sectional view taken on a line with the side edge of the cover, showing the mechanism for turning the conveyer-rollers with the different positions assumed by the operating-levers and cover in dotted lines, the deodorizing-receptacle being removed. Fig. 4 is a like view of the closet, taken through the center of the cover and conveying-rollers transversely. Fig. 5 is a vertical sectional view taken through the center of the deodorizing-receptacle and through the longitudinal center of the middle roller; and Fig. 6 is a detail view showing the manner of banding the roller, with a portion of the band extending within the annular groove made in the side of the conveyer-box.

Similar letters refer to similar parts throughout the several views.

A represents the lower portion of the case, containing the ordinary seat and the special operating mechanism, which will be hereinafter described.

A′ represents the outer walls of the earth, coal-ashes, or other deodorizing-receptacle, which, for convenience of describing, will herein be termed "ash-receptacle."

A^2 are inclined pieces within the ash-receptacle, arranged for conducting the ashes or other material within the conveyer-box B.

C represents the seat, C′ the seat-cover, and D the cover to the ash-receptacle.

E are the ash-conveying rollers, journaled to the side pieces of the box B, so as to revolve therein.

e are metallic blades running lengthwise of and secured to the periphery of the roller by staples *e′*. Each roller carries a sufficient number of these blades to move forward the ashes by the partial revolution of the roller as it shall be operated upon by the mechanism coacting with the movement of the seat-cover, as hereinafter described.

E′ are reduced portions upon each end of the roller E, which act as journals upon which the roller turns, the sides of the box B forming bearings for the same. Upon each end of these journals are secured notched disks F, which are made in form of a ratchet, within the notches of which the tooth of the pawl *f* enters, causing the roller to turn by the forward movement of the pawl, but not in the backward actuation of the same, as the face of the ratchet-tooth confronts rearwardly.

G are a series of levers pivoted to either end of each roller, at the center thereof, and are held in pivotal relation to the roller by the headed bolt *g*. Upon the top end of each of these levers are pivoted the pawls *f* at a point sufficiently remote from the roller's pivotal connection to allow the engagement of the tooth of the pawl with the ratchet by the force of gravitation, without the use of springs or equivalent devices.

G′ is a horizontally-placed bar, which pivotally links the series of levers at the lower end, so as to cause them to work in unison.

The lever which operates the center roller has a tail-extension, (designated *g′*,) to which is pivotally attached at its rear end another horizontal bar, (designated G^2,) while the forward end of the said bar is hinged to an arm, H, which runs diagonally forward and upward through a slot, *h*, in the seat-top, and by means of a flanged end is fastened to the seat-cover.

h are plates secured to the seat-top upon either side of the slots *h*, and provided with ears h^2 at right angles with the plate portion, said ears being pivotally connected to the arm H at a point near the under side of the seat-top, and upon either side of said arm, so as to form a hinge for the swinging of the seat-cover.

I is a discharge-spout, secured at the top end to the bottom of the box B, and running diagonally forward of the dividing-partition J sufficiently far to convey the ashes or other deodorizing agent upon the excrement deposited in any convenient removable receptacle placed beneath the opening made in the seat for the depositing of the same.

K is a weight placed upon the under side of the seat-cover, the same entering within the opening when the cover falls, and by means of said weight the cover is automatically brought down in the closed position, and, through the lever-operating mechanism connecting with the rollers, the said rollers are given a partial revolution, which causes a portion of the deodorizing material stored within the receptacle above the seat to be deposited within the excrement-receptacle at each closing of the seat-cover.

k is a circularly-shaped packing of rubber or other suitable material, and is secured to the cover over the seat-opening, so as to snugly close the same upon the dropping of the cover, thus preventing any escape of such offensive effluvia as may arise during the interim in the disinfection by the deodorizing agency.

L are bands upon each end of the rollers, and projecting beyond the ends thereof, and entering within an annular channel made in the sides of the box, thus excluding dirt from the joints and preventing friction.

If desired, a single conveyer-roller may be used instead of the three, as herein shown.

Having now described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination of the seat-cover, the cover-hinge provided with the diagonal arm below its pivotal connection with the ears that form the hinge, the levers G G′ G^2, and the pawl pivoted to the lever G and coacting with the disk-ratchet axially mounted upon the end of the conveyer-roller, all arranged and operating substantially as described.

2. The combination, in an earth-closet, of the conveyer-box placed beneath the horizontal roller provided with a series of peripheral blades, and having a band upon each end of the roller, the said band reaching within the annular channel in the side of the conveyer-box, and the operating mechanism consisting of the pawl *f*, and levers G G′ G^2, all coacting with the seat-cover, substantially as described, and for the purpose set forth.

CYRUS D. LANE.

Witnesses:
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E. J. MOCKFORD.