

C. A. WAKEFIELD.
Earth-Closet.

No. 133,685.

Patented Dec. 3, 1872.

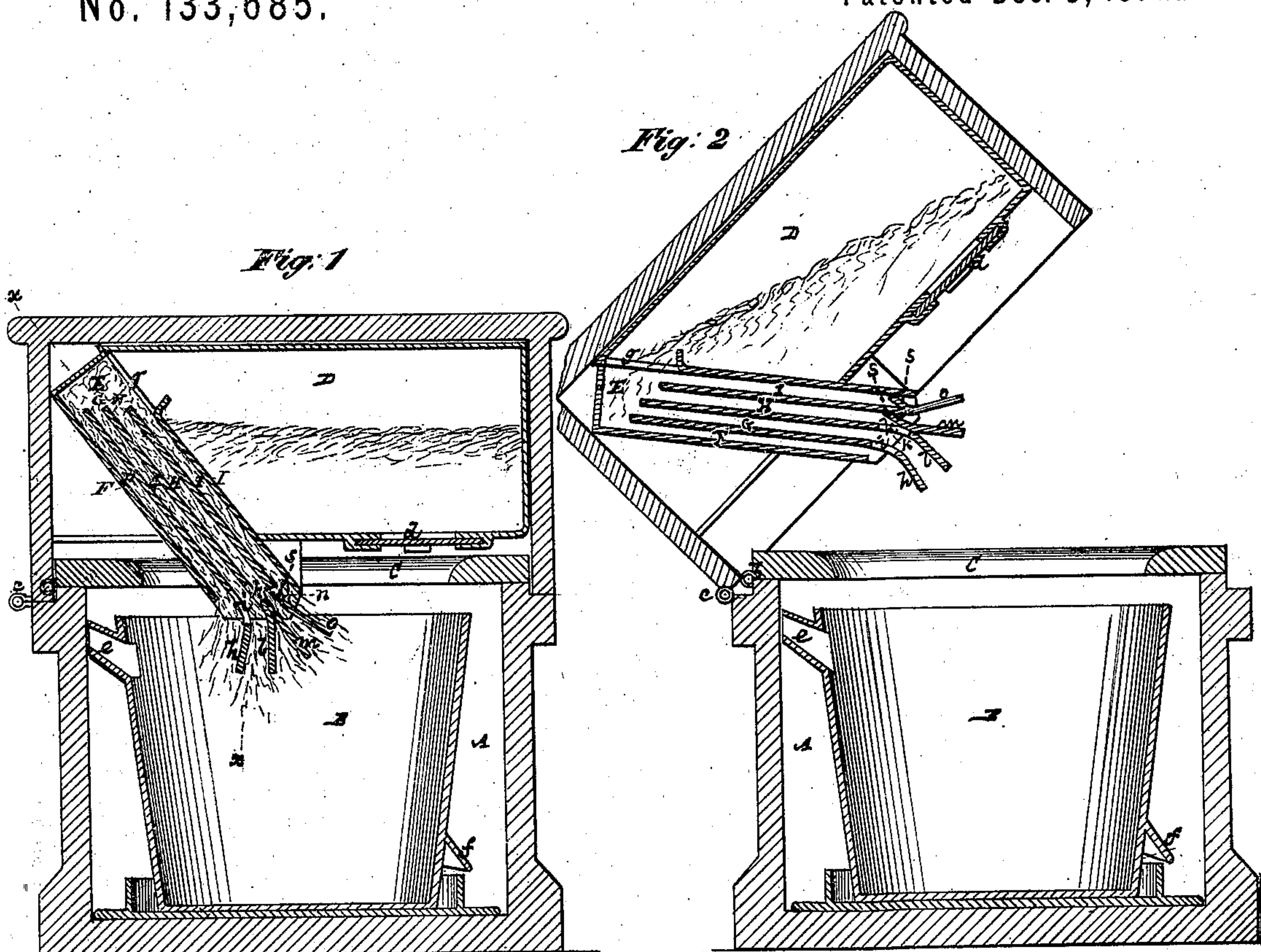


Fig. 1

Fig. 2

Fig. 3

Fig. 4

Fig. 5

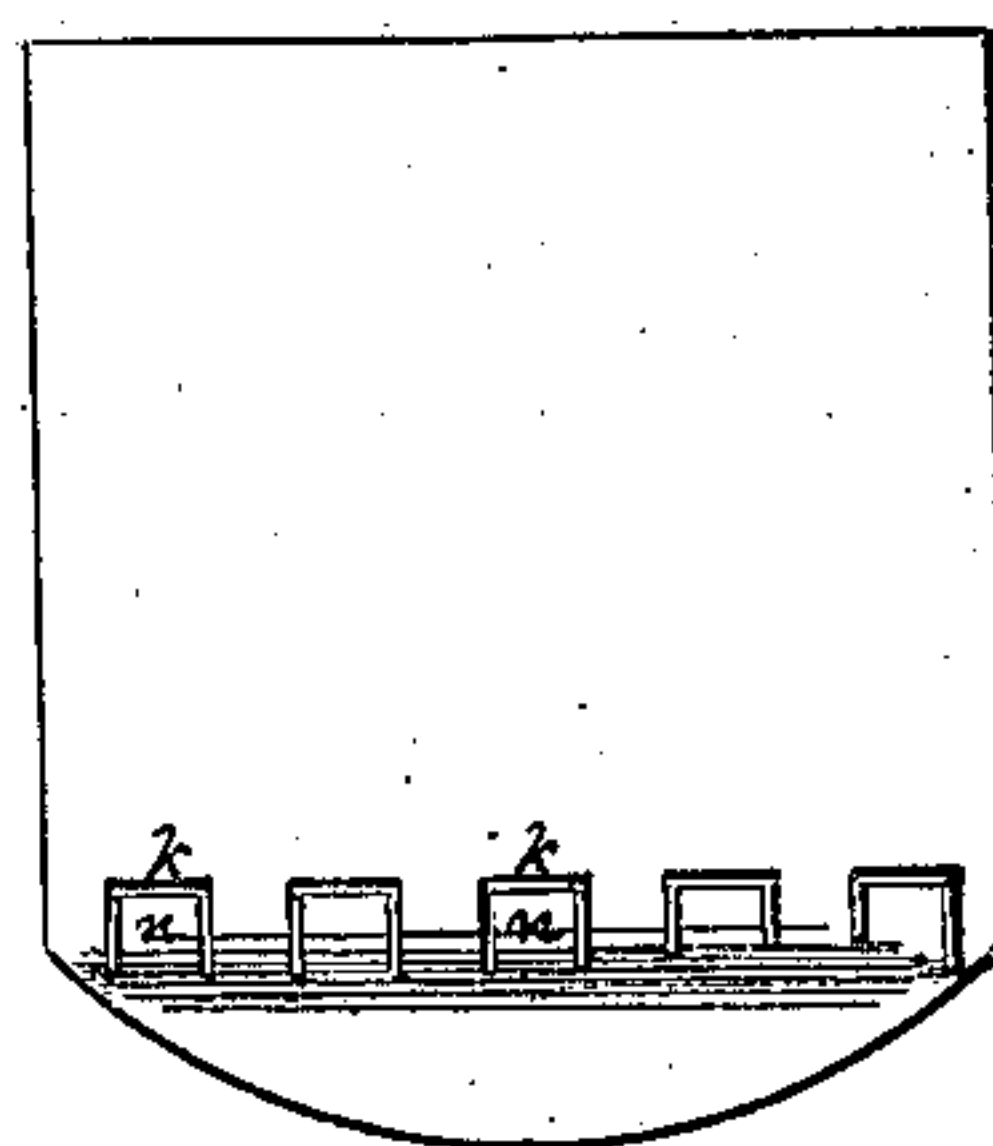
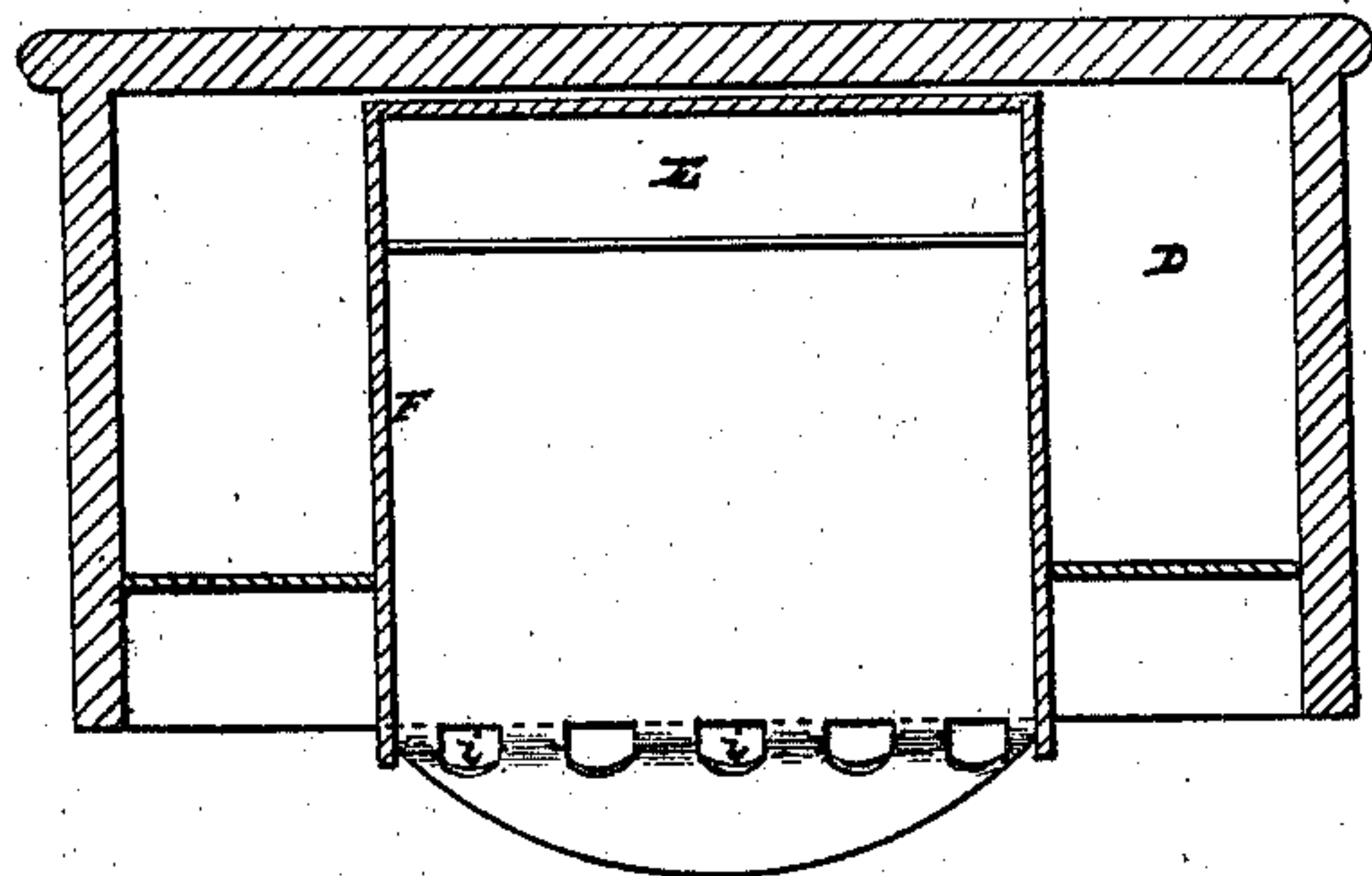
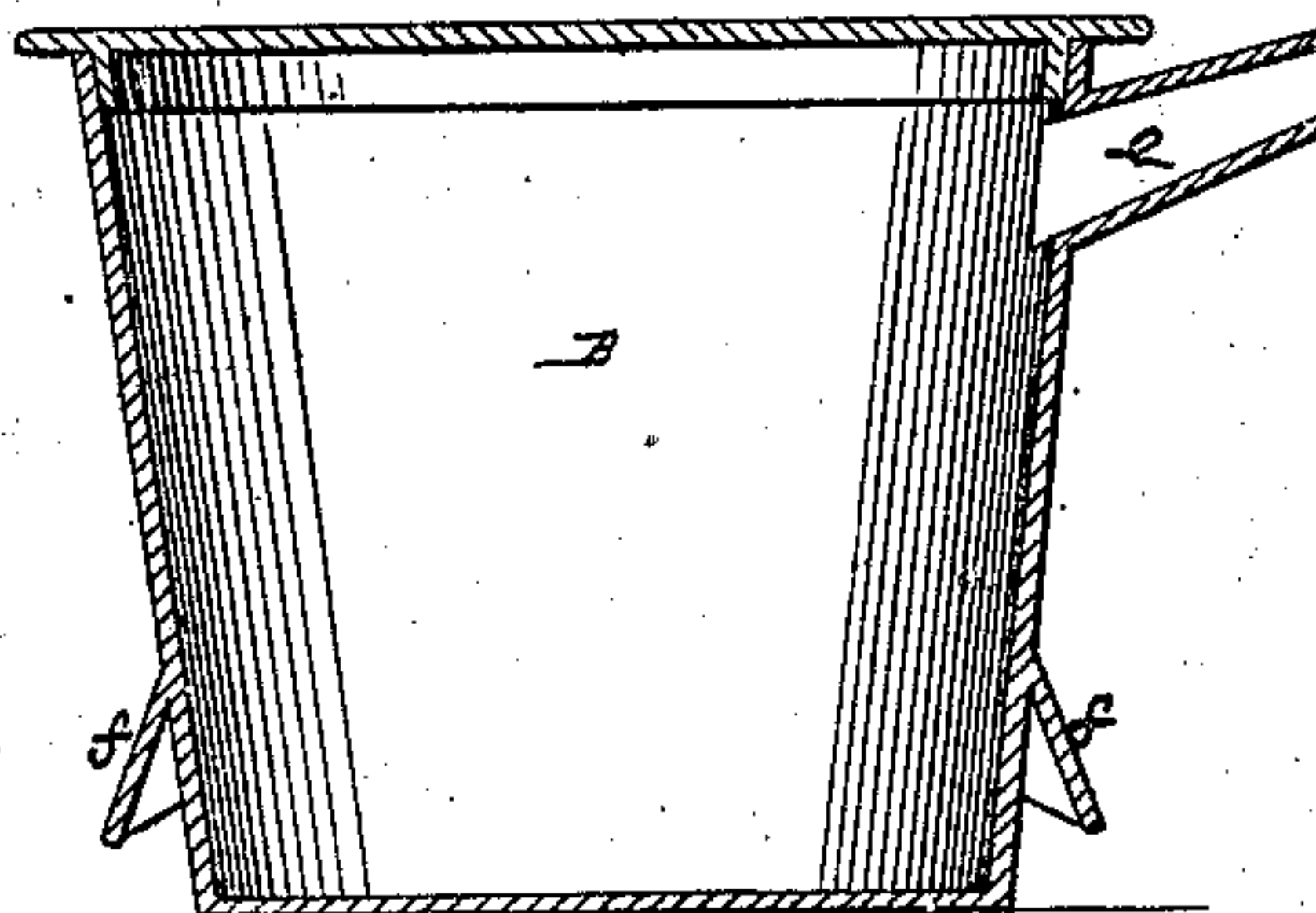


Fig. 6



Witnesses:

Frederick H. Hume
R. H. Hume

per Charles A. Wakefield
Brow, Coombs & Attorneys

UNITED STATES PATENT OFFICE.

CHARLES A. WAKEFIELD, OF PITTSFIELD, MASSACHUSETTS.

IMPROVEMENT IN EARTH-CLOSETS.

Specification forming part of Letters Patent No. 133,685, dated December 3, 1872.

To all whom it may concern:

Be it known that I, CHARLES A. WAKEFIELD, of Pittsfield, in the county of Berkshire and State of Massachusetts, have invented certain new and useful Improvements in Earth-Closets; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing forming part of this specification.

This invention more particularly relates to that description of earth-closets or commodes in which a movable earth reservoir or hopper is employed for the purpose of agitating or loosening the earth or other deodorant contained therein, and discharging a proper quantity of the same automatically by the gravitation of such deodorant each time the closet is used. The improvements consist, first, in an earth reservoir or hopper which may be wholly inverted to effect a more thorough agitation or breaking up of the earth in it, and which is provided with a charging-chamber in communication with the interior of the hopper at its top or upper side, and moving in common with the hopper to receive and discharge a load or suitable quantity of deodorizing material each time the closet is used, said material being delivered from the charging-chamber to the excrement pail or receptacle by stationary conductors, chutes, or tubes in said invertible hopper, whereby all additional or separately-movable distributing devices that are liable to become clogged or obstructed may be dispensed with. The arrangement of the charging-chamber and conductors, chutes, or tubes in relation with each other and the hopper is such that when the hopper is inverted the charging-chamber will be filled, and when turned back again the contents of said chamber are prevented from returning to the hopper, and caused to pass down the chutes to the excrement-receptacle. The improvements furthermore consist in a bent construction of the delivery end or ends of the floor or floors of either or all of the chutes, whereby the deodorizing material, in moving down or over the chute, is scattered, and has its course changed to such portion of the excrement-receptacle as otherwise would receive little or none of said material. Furthermore, while no claim is here made to merely slotting or per-

forating the floor of a chute for the purpose of allowing a portion of the deodorizing material passing down the chute to fall through its floor, the improvements include a conductor or chute having a bent delivery-end, so slotted or perforated at such bent part as to cause a portion of the earth passing down an adjacent chute to pass through said perforations to the next chute for the purpose of effecting a more regular scattering or distribution of the deodorizing material. For still more effectually accomplishing this result the improvements likewise consist in a partial slotting or perforating of the chutes, or certain of them, leaving the cut-out portions attached below and projecting upward and outward toward the floor of the adjacent chute, or otherwise intercepting their respective chutes, whereby said cut-out portions serve to arrest a portion of the descending material, whether moving slow or fast, and deliver it through the delivery end of one chute to the next chute.

Having thus specified the object or objects and nature of the invention, its description will be proceeded with in reference to the accompanying drawing.

Figure 1 represents a sectional elevation of an earth-closet or commode with the parts in position after use of the article, and showing the deodorizing material as being distributed within the excrement-receptacle. Fig. 2 is a similar sectional view, but showing the earth reservoir or hopper in the act of being inverted to fill the charging-chamber. Fig. 3 is an irregular sectional view, at the line *xx* in Fig. 1, through the hopper, charging-chamber, and between certain of the chutes. Fig. 4 is a face view of one of the conductors or chutes; and Fig. 5, a vertical transverse section of the same. Fig. 6 is a sectional elevation of an excrement-pail that may be used in the commode.

Similar letters of reference indicate corresponding parts throughout the several figures.

A is the body of the commode, arranged to receive within it an excrement pail or receptacle, B. C is the seat, hinged at *b* to the body A in the rear to provide for insertion and removal of the hod or pail B. D is the reversible earth reservoir or hopper, also hinged at *c* to the body A in the rear. Said

hopper is fitted with a slide or lid, *d*, on its under side to provide for filling or replenishing it with earth. The same pail *B* that serves to receive the excrement may also be used, when empty, for filling the hopper. For this purpose it is made with a spout, *e*, near its top, and handles *f* near its bottom, so that on introducing the spout into the opening covered by the lid *d* of the hopper, after the latter has been inverted, earth, with which the pail has been filled, may be conveniently transferred to the hopper *D*, after which the lid *d* is closed, the lid of the pail placed in the body *A*, and the pail let down to its place on its lid within the body. Said pail is provided with the usual bail for carrying it from and to the commode. *E* is the charging-chamber, arranged within the reversible hopper *D* near its rear, and in communication with the interior of the hopper at its top or upper side by a front opening, *g*, so that, on first raising and then throwing down or back the folding hopper till it is completely inverted or made to occupy a reverse position to that shown for it in Fig. 1, the charging-chamber *E* is filled or supplied with a proper quantity of earth for a single discharge, and so that, when the hopper is returned to its original position in Fig. 1, such earth is prevented from passing back into the hopper again. By the complete inversion of the hopper the earth in it is more thoroughly broken up or disintegrated, and its distribution, as required, secured. The charge of earth thus supplied to the chamber *E* is distributed, when shutting down the hopper, to or over the excrement in the pail by means of fixed conductors, tubes, or chutes leading down from the charging-chamber to and through the under side of the hopper. These chutes, of which there may be two or more in a series, are arranged in advance of each other, to effect a distribution of the earth to different portions of the pail. Thus the extension of the back of the charging-chamber *E* is made to form a floor or back of a rear chute, *F*, in advance of which are other chutes *G*, *H*, and *I*. The floors or backs of these latter chutes are arranged to extend at their delivery-ends beyond the delivery-end of the floor of the rear chute *G*, and are otherwise peculiarly constructed, as hereinafter described, to provide for a more regular or even distribution of the earth from the charging-chamber *E* over the contents of the pail. To this end the back or floor of the chute *G* is turned or bent backward at its delivery-end *h*, and provided with a series of perforations, *i*, whereby the earth descending through the rear chute *F* is partly diverted to the rear of the pail by the bent portion *h*, and partly projected by the perforations *i* into and down

through the adjacent chute *G*. The floor of the next chute *H* is also similarly provided with perforations *k* and with a backwardly-bent delivery end or portion, *l*; also with a forwardly-inclining or straight delivery-end, *m*. A like construction, by perforations *n* and a straight or forwardly-inclining delivery-end, *o*, applies to the floor of the advance chute *I*; and the perforations *k* and *n* are both formed by cut-out portions attached at their lower ends to the floors they constitute part of, but otherwise free or detached therefrom, and bent or inclining upwardly and forwardly to constitute intercepting lips *s* within their respective chutes. These lips serve to partially arrest the earth, whether moving slow or fast, descending through the chutes, and divert portions of it through the perforations from one chute to the next in rear of it, thereby aiding in more evenly distributing the earth over the whole area of the pail, the perforations and bent delivery-ends of the chutes assisting in such distribution.

What is here claimed, and desired to be secured by Letters Patent, is—

1. The reservoir or hopper *D*, made capable of inversion and provided with a charging-chamber, *E*, arranged within the upper portion of the hopper for reception of measured quantities of the deodorizing material and discharge of the same by the action of the hopper and the gravitation of said material, substantially as specified.

2. The combination of the discharging-chute or chutes *F G H I* with the charging-chamber *E* and reversible hopper *D* for receiving and discharging measured quantities of the deodorizing material by the gravitation of the latter by the movement of the hopper, essentially as shown and described.

3. The construction of the floors of the chutes, or certain of them, with backwardly-bent delivery ends or portions *h* or *l*, for diverting the course of the deodorizing material, or a portion of it, passing down a rear chute, substantially as specified.

4. The discharging-chutes arranged one in advance of the other, and constructed, or certain of them, with perforations at or near their bent delivery ends or portions, for passage of deodorizing material from one chute to another, essentially as described.

5. The intersecting lips *s*, in combination with the perforations *k* or *n* of the chutes, or certain of them, substantially as and for the purposes specified.

CHAS. A. WAKEFIELD.

Witnesses:

M. L. PARKER,

R. B. BARDWELL, Jr.