

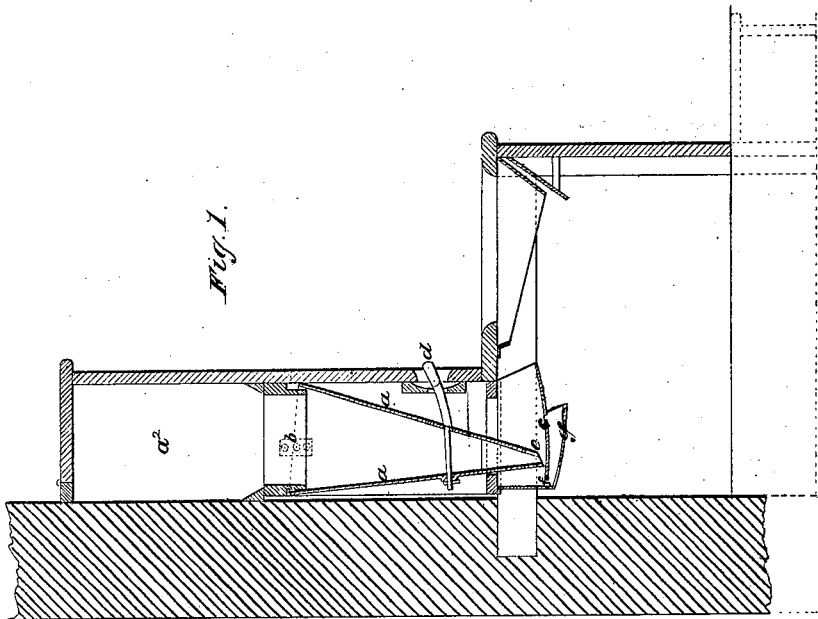
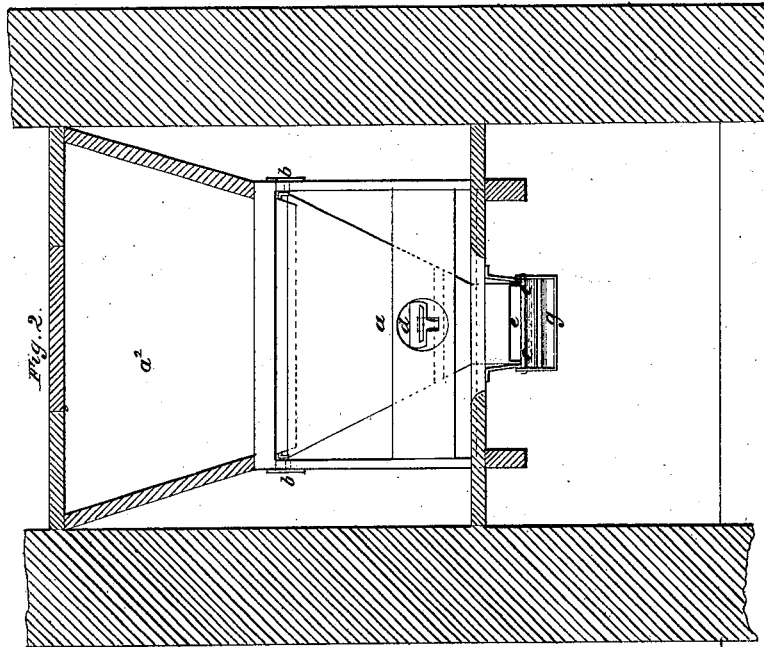
2. Sheets, Sheet 1.

H. J. & J. W. Girdleston,

Earth Closet.

No. 107,358.

Patented Sept. 13. 1870.



Witnesses:
Chas. E. Warren
Ed. Smith

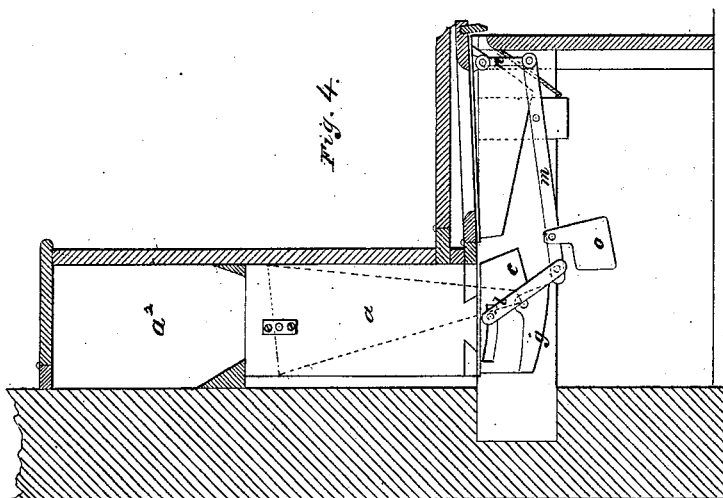
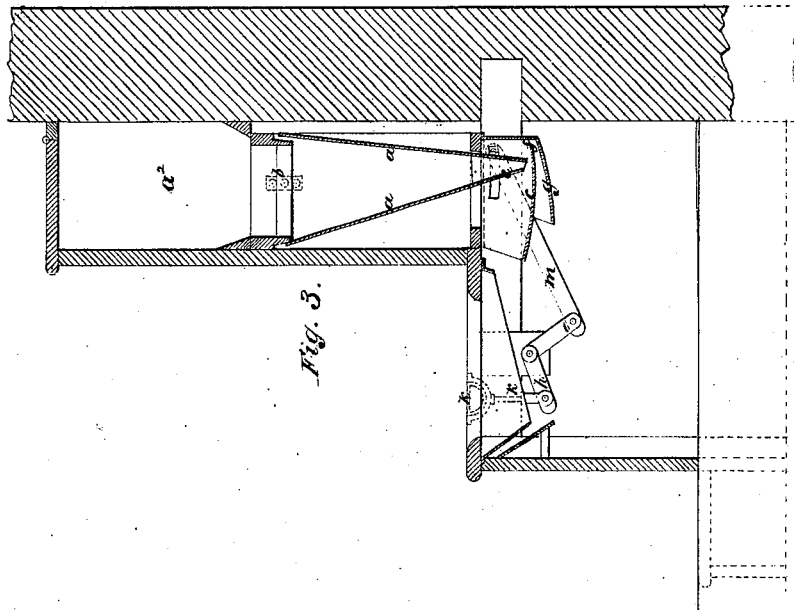
Inventors:
H. J. & J. W. Girdleston.
By att. J. McEntire

H. J. & J. W. Girdleston, ^{2 Sheets, Sheet 2,}

Earth Closet.

No. 107,358.

Patented Sept. 13, 1870.



Witnesses.
Chas. Warren.
Ed. Smith.

Inventors:
H. J. & J. W. Girdleston
By atty. J. A. McIntire

UNITED STATES PATENT OFFICE.

HENRY JOHN GIRDLESTONE AND JOHN WARD GIRDLESTONE, OF LONDON, ENGLAND, ASSIGNORS TO THE EARTH-CLOSET COMPANY, OF HARTFORD, CONNECTICUT.

IMPROVEMENT IN EARTH-CLOSETS.

Specification forming part of Letters Patent No. **107,358**, dated September 13, 1870.

We, HENRY JOHN GIRDLESTONE and JOHN WARD GIRDLESTONE, both of London, England, have invented certain Improvements in Earth-Closets, of which the following is a specification:

Our invention relates to certain improvements in apparatus employed for discharging, casting, or distributing a regulated supply or quantity of earth or other disinfecting, deodorizing, or absorbent substance over excremental matter in closets or commodes and urinals.

Previous to our invention this kind of apparatus for closets and commodes has been made with a supply-hopper mounted on pivots, so that it could vibrate slightly, to insure the feeding down of the earth, and with a swinging or vibratory "chucker" or distributor, so arranged and operating beneath the lower open end of the supply-hopper that each time the closet was used a charge of earth would be thrown from the chucker into the excrement-chamber, and a further supply fed down into the chucker from the shaken feed-hopper.

Our invention consists in the employment, in combination with a vibratory or swinging supply-hopper or earth-receptacle, open at its lower end, of a stationary tray or platform, located beneath the lower open end of said hopper, the two so arranged and operating that whenever the said hopper is swung forward a quantity of the earth will be swept off from the tray into the excrement-chamber, as will be hereinafter more fully described.

To enable those skilled in the art to make and use our invention, we will proceed to describe it more fully by reference to the accompanying drawing, in which—

At Figures 1 and 2 is shown, in vertical section and sectional elevation, one of our improved dry-closets; while at Figs. 3 and 4 are shown vertical sections of a similar closet, but having different means applied for working the vibratory case or hopper, which will be presently explained.

At Figs. 1 and 2, *a* is the vibratory swinging supply hopper or case, which is generally arranged immediately below the usual box *a*², and which is mounted or hung near its upper end in pivots *b* in such a manner that its lower end may be readily vibrated forward and back

by means of a handle, *d*, with which it is, for that purpose, provided, and which protrudes through the front of the case of the closet or commode, as clearly shown.

The vibratory hopper or case *a* is made with its front side cut away at *e*, or, in other words, the back and two tapering sides of said case *a* are extended down somewhat lower than the front, as clearly shown, so as to leave an opening at *e*, through which the earth can escape, as will be presently explained.

Immediately beneath the lower end of case or hopper *a* is located a tray or platform, *c*. This tray *c* is made with two sides and a back, open at top and in front, as shown, with its surface formed in the arc of the circle in which the lower extremity of case *a* vibrates, so that the latter, as it is swung back and forth, will just swing clear of said tray *c*.

At the rear portion of tray *c* is cut a slot or opening, *f*, and underneath said tray is arranged an auxiliary tray, *g*. The objects and operation of this slot *f* and auxiliary tray *g* will be presently explained.

The seat, excrement-chamber, and other parts of the closet or commode are all made about as usual. Our invention relating only to the mechanism employed for the distribution of the earth, we need only particularly describe that part of the closet.

The operation of our improved apparatus will be understood to be as follows: The hopper or case *a* and the box *a*², through which the earth is supplied to said hopper, being filled with the dry powdered earth or other deodorant or absorbent, when the earth-closet is used the occupant, by moving the handle *d* in and out, will cause the case *a* to be vibrated or swung forward and back on its pivots *b*. The charge of earth which had flown out onto the tray *c*, through the opening *e* of the hopper *a*, is, by the forward stroke of the latter, swept off and scattered over the excrement in the chamber, while, as the hopper makes its backward stroke, a suitable quantity will flow out at *e* and cover the tray *c*, to serve for the next operation of covering the excrement with the deodorant, and so on each time the closet is used, and the handle *d* pulled out and in, the deodorant is discharged into the excrement-chamber. Of course, the hopper may

be worked forward and back as often as desired each time a deposit is made; but it is designed to have the supply or charge swept off from the tray *c* each time sufficient for the proper deodorizing of each excrementitious deposit.

To prevent any clogging up of the working parts by any accumulation of the powdered earth in the rear of the lower end of hopper *a*, we provide the opening *f*, through which all matter that escapes between the tray *c* and lower end of case *a*, and which is pushed back, will fall downward into the auxiliary tray *g*, from whence it will escape freely by gravity into the excrement-chamber.

It will be understood that, although we have spoken particularly of fine powdered earth, our improved apparatus is adapted and intended for use with any kind of deodorant which can be fed from a hopper and scattered over the excrement, such as charcoal, lime, &c.

At Fig. 3 we have shown a modification of our improved apparatus, in which, in lieu of having the handle *d*, (seen at Figs. 1 and 2,) the hopper or case *a* is worked by having a link or bar, *m*, one end of which is pivoted to its lower portion, and the other end coupled to one end of the bell-crank *h*, which is in turn connected, as shown, to an ordinary pull-up handle, *k*.

In this modification, when the closet is used the vibration of the hopper *a* and the consequent discharge of the deodorant, as already

explained, is effected by the pulling up of the handle *k*.

At Fig. 4 is shown another modification, in which the hopper is worked by means of a depressible seat and counteracting weight *o*, through the medium of the bars *m* and *l* and rod *n*, in a manner well known.

It will be understood that, in carrying out our invention, either one of the three means shown, or any other, for effecting the vibration of the case *a* may be employed.

Having fully explained our invention and the manner in which we have practiced it successfully, what we claim as new, and desire to secure by Letters Patent, is—

1. A vibratory or swing deodorant case or hopper, in combination with a stationary tray, *c*, whereby the deodorant may be discharged into the excrement-chamber, substantially as set forth.

2. Also, in combination with the swinging hopper and stationary tray *c*, an auxiliary tray, *g*, and an exit or opening, *f*, as and for the purpose described.

In testimony whereof we have hereunto set our hands this 6th day of July, 1870.

H. J. GIRDLESTONE.

JOHN WARD GIRDLESTONE.

Witnesses:

H. K. WHITE,

60 Chancery Lane.

W. S. WYNN,

24 Royal Exchange, London.