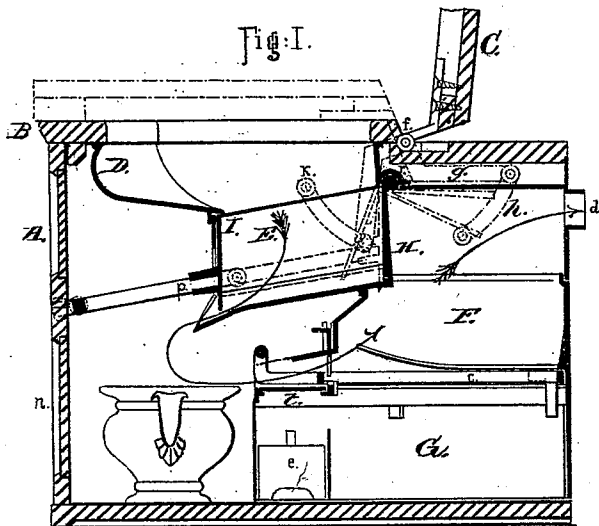
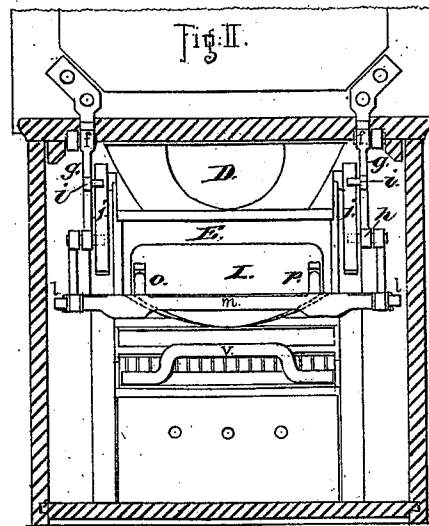


A. HANEL.

DEODORIZING FUMIGATORY CLOSET.

No. 187,270.

Patented Feb. 13, 1877.



12 11 10 9 8 7 6 5 4 3 2 1 0
"Engl."

Fig. III.

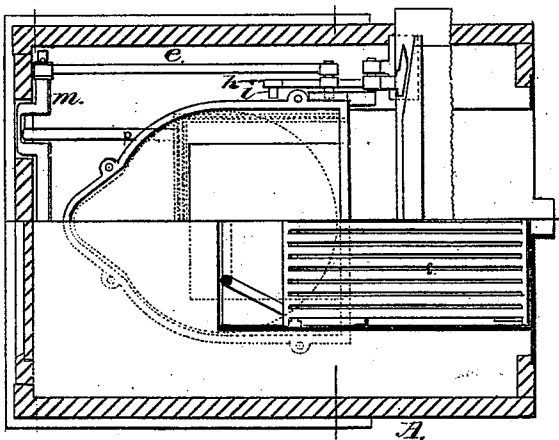
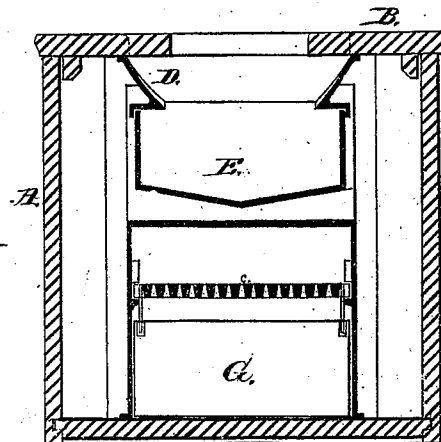


Fig. IV.



Witnesses.

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ARNOLD HANEL, OF BERLIN, GERMANY.

IMPROVEMENT IN DEODORIZING FUMIGATORY CLOSETS.

Specification forming part of Letters Patent No. **187,270**, dated February 13, 1877; application filed November 22, 1876.

To all whom it may concern :

Be it known that I, ARNOLD HANEL, of the city of Berlin, German Empire, have invented certain Improvements in Deodorizing Fumigatory Closets or Commodes, of which the following is a specification :

The present invention relates to a closet or commode, either portable or permanent, in which the fæces or excrementary matters are dried and deodorized by heat, and the gases or effluvium consumed, so as to obviate the defects of the ordinary closets.

The invention consists in a receiving-basin arranged below a movable closet seat and cover, and in advance of a grate or fire-chamber, in combination with a sliding scraper and a hinged or pivoted valve at the rear of the receiving-basin, said scraper and valve being so combined and connected with the closet-cover that when the latter is raised and the closet is being used the valve will close the rear of the receiving-basin and the scraper be located at the front thereof. When the seat-cover is thrown down, the scraper will be moved to the rear of the basin and the valve opened or thrown in an upward direction, thus permitting the fæces or excrements to be delivered into the fire-chamber to be dried and deodorized. The fire-chamber consists of a metallic box, which is perfectly isolated from the surrounding closet, and it contains a grate and a movable ash-box, the front portion of which is occupied by a lamp which furnishes the heat and flame. The invention also consists in other minor details of construction which will be hereinafter fully described, reference being had to the accompanying drawings forming part of this specification, in which—

Figure 1 represents a longitudinal section of a closet constructed according to my invention. Fig. 2 is a cross-section of the same. Fig. 3 is a plan view, partly in section ; and Fig. 4 is a cross-section.

The closet A, exhibited in the present instance, is of the portable or commode form, and it is provided with a hinged seat, B, and a hinged seat-cover, C. The seat has a basin, D, attached thereto, which is curved or rounded at the front, made rectangular at the rear, and provided with an open bottom. Said

basin can be raised with the seat when it is desired to obtain access to the interior of the closet. Below the seat-basin there is arranged a second receiving basin or box, E, made, generally, of a rectangular form, and consisting of two side panels and an inclined or sloping bottom, with an outlet at the front part for the urine. In rear of the receiving-basin is located a box or chamber, F, for deodorizing and fumigating the fæces, said box consisting of two solid side panels and a solid back panel, to which is attached a cast-iron ventilator-pipe, *d*. Near the bottom of the box F is arranged a sliding grate, *c*, having a handle at its front end. Below the grate and also inside the box F is placed an ash-box, G, which receives in its larger compartment the dried excrements and ashes and in its front or smaller compartment the petroleum lamp *e*.

The excrement-receiver forms part of the fire or deodorizing chamber, and the latter is made entirely independent of the external closet or casing A, so that it can be introduced into the same and removed when desired. At the rear end of the excrement or receiving-basin there is attached, by means of hinges, a valve or flap, H, which serves to close the open rear end of said basin when the seat-cover is down. The hinges *f* of the cover are formed into bell-crank levers or downwardly-projecting arms *g*, which are provided with lower knees *h* and studs *i*, that are disposed on the opposite sides of curved arms *j*, projecting from the axis of the valve H. When the cover is raised the elbow levers will serve to raise or open the valve through the intervention of the devices set forth, and at the same time a slide or scraper, I, moving on the bottom or floor of the excrement-receiver will be pushed to the rear of the same for discharging the fæces or excrements onto the grate. The slide is operated through the medium of longitudinal rods *l*, which are connected with the elbow levers and a front cross-rod, *m*, itself connected with the slide or scraper by the rods *o p*. It will be perceived that the act of opening the seat-cover will both open the valve and move the scraper to the rear for delivering the excrements into the fire-chamber in the manner already set forth. A reverse movement of the cover will

tend to close the valve and move the scraper to the front of the excrement-receiver. There is a sufficient space between said receiver and the scraper to permit the urine to run into a porcelain vessel or into a drain or discharge pipe. The petroleum lamp, situated in the ash-box, produces a black smoke, and serves to ignite paper or other easily combustible fuel placed on the grate, so that the solid excrements thrown on the latter will be highly heated, dried, and perfectly deodorized. The gases or effluvium arising from the excrements are also consumed by the fire, and the smoke and vapors conducted into the ventilator-pipe, which may communicate with a flue or chimney leading into the open air. The excrements, after having been dried, carbonized, or charred, are collected in the ash box by drawing the grate outward through a door, *n*, in the front of the closet. The spaces between the grate-bars are cleaned by means of toothed metallic scrapers, one of which is fast and the other loose. A loose plate, *t*, arranged above the lamp, is always highly heated, and is so located that a current of air is produced in the direction of the arrows, thus effecting the ventilation of the closet-basin and excrement-receiver, by drawing the gases downward and out through the escape-pipe.

By the present invention all gases are consumed or absorbed within the closet, and the excrements dried and deodorized without smell and with little or no labor. The excrements themselves are mingled with the coal and ashes of the fuel and can be utilized as a fertilizer.

The closet illustrated in the present instance is intended to be portable and adapted for a small family, but I also contemplate constructing permanent closets on the same general principle, in which case the ash-box is replaced by a funnel and pipe leading into a subterranean receptacle. The heating apparatus is, of course, made to suit the increase of size, and when several closets are arranged

adjacent to each other, as in hospitals, hotels, &c., they may be combined with a grate and heating apparatus common to all the closets; and a single waste-pipe may also be used.

I do not desire to claim broadly the idea of drying excrements in closets, this having been heretofore proposed, but never carried into successful practice because no suitable and practicable apparatus has ever been devised, until the making of the present invention; but

What I do claim, and desire to secure by Letters Patent, is—

1. The combination, in a deodorizing closet or commode, of an excrement-receiver, a sliding scraper, a hinged valve, a fire-chamber, a hinged seat-cover, and mechanism, substantially as described, for connecting the seat-cover with the scraper and valve, as and for the object stated.

2. The combination of the hinged seat-cover, having elbow levers and studs, with the pivoted and armed valve and the excrement receiver or basin, substantially as and for the purpose set forth.

3. The combination of the longitudinal sliding-rods and the cross rod with the sliding scraper, excrement-receiver, and the hinged seat-cover, having elbow levers or projecting hinge-arms, as and for the purpose specified.

4. In a deodorizing closet, the combination of the independent fire chamber or box, sliding grate, ash-box, and lamp, with the external casing or closet, and a basin for receiving the excrements preparatory to their delivery into the fire-chamber, as and for the purpose set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

ARNOLD HANEL.

Witnesses:

BERTHOLD ROJ.

SILAS G. PRATT.