

(No Model.)

J. L. MARVIN.
DRY CLOSET OR COMMODE.

No. 518,616.

Patented Apr. 24, 1894.

Fig. 1.

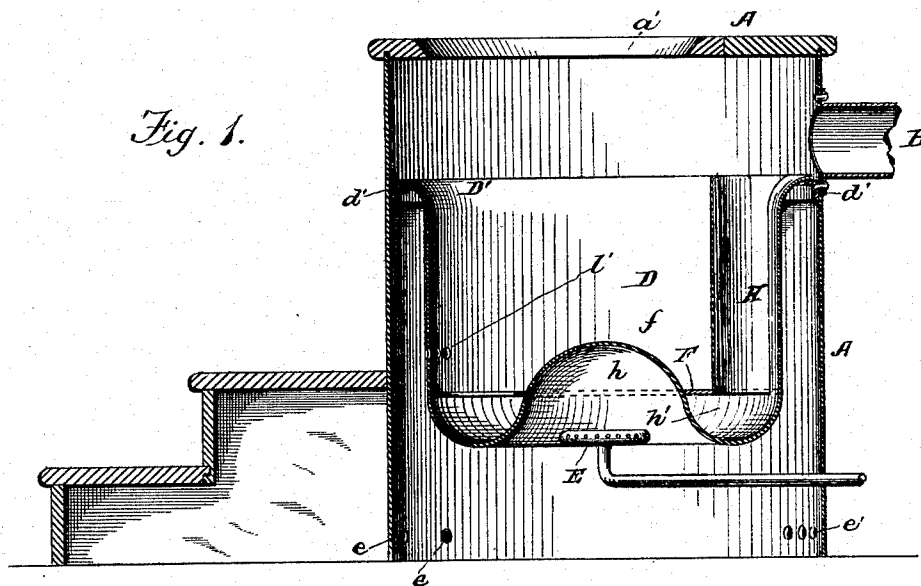


Fig. 2.

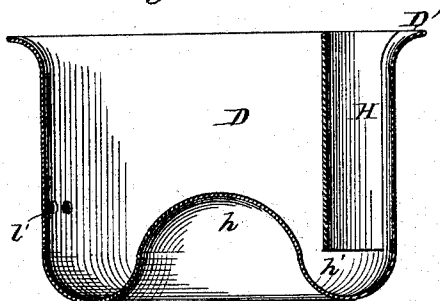


Fig. 4.

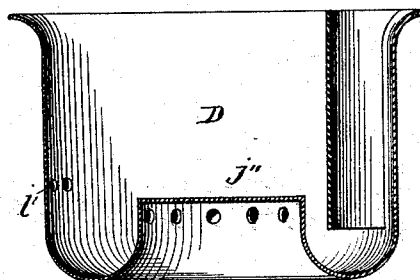
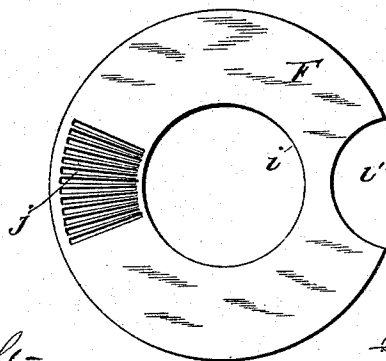


Fig. 3.



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DRY CLOSET OR COMMODO.

SPECIFICATION forming part of Letters Patent No. 518,616, dated April 24, 1894.

Application filed July 8, 1893. Serial No. 479,879. (No model.)

To all whom it may concern:

Be it known that I, JUDSON L. MARVIN, a citizen of the United States, residing at Mauston, in the county of Juneau and State of Wisconsin, have invented certain new and useful Improvements in Dry Closets or Commodes; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

The objects of my present improvements are, first, to provide for the rapid evaporation of urine and drying or burning of the solid excrement; secondly, to insure the direct escape of the steam and odors resulting from the evaporation of the urine or liquid matter without causing the same to pass through the solid excrement and thereby facilitate the drying up of the liquid and solid matters in the commode or dry closet and prevent the escape of noxious odors into the room or apartment; thirdly, to provide for the easy cleansing of the commode; and finally to simplify and cheapen the construction.

With these ends in view, the improvement consists of an excrement vessel inclosed within an external casing or stool from which leads a pipe or flue that is designed to be connected to a chimney to provide for the escape of noxious odors without their admission into the room or apartment. This excrement vessel has an imperforate bottom formed with a central raised dome and a channel between the vertical walls of the receptacle and said central dome; and over this channel in the bottom of the receptacle is placed a tray constructed to permit the urine or liquid matter to pass through the same into the channeled imperforate bottom and to retain upon itself the solid excrement. Below the imperforate bottom of the receptacle is placed a burner of any suitable form which is designed to heat the bottom of said receptacle and the tray therein, for the purposes of evaporating the urine or liquid matter and for drying or burning the solid excrement on the tray; and to facilitate the escape of the steam and noxious odors resulting from the evaporation of the urine, I provide a separate conduit or flue which leads from the evaporating chamber, formed by and between the imperforate bottom and

the tray, to the flue and chimney so that said steam and odors will not be compelled to pass through the solid excrement and the matter can be more quickly dried and burned. Provision is made for the admission of air by forming suitable inlet ports in the external casing and in the vessel above the evaporating channel therein, and a draft is thus created through the commode into the flues and chimney, which is augmented by the action of the burner situated below the vessel. This vessel and its contained parts, the tray and the flue or conduit, is removable bodily from the external inclosing case, either through the top or side thereof, and the tray is removable from the receptacle, so that the parts can be readily cleansed.

In the accompanying drawings, forming a part of this specification, I have illustrated the preferred embodiment of my invention, in which—

Figure 1 is a vertical sectional view illustrating the commode or dry closet connected with a chimney. Fig. 2 is a detail view of the receptacle. Fig. 3 is a plan view of the removable tray, and Fig. 4 is a detail view of another embodiment of my receptacle.

Like letters of reference denote corresponding parts in all the figures of the drawings.

A is the external casing of my commode or dry closet. The seat or top A of this casing is provided with the usual hole *a'* which can be closed by any suitable cover or stopper, not shown, and from one side of this casing leads a pipe or flue B which can be connected in any suitable way with a chimney, as indicated in Fig. 1. This casing A may be built square, round, or any convenient shape, and it may have one or more steps, but these details can be varied or supplied by a skilled mechanic. Within this casing A is provided the receptacle D and a burner E. The receptacle may be square, cylindrical, or any other preferred style, and it is constructed of a suitable fire resisting material, preferably of metal. Said receptacle is held or suspended within the casing A in a manner to leave air space or chamber between itself and the casing A; one means for suspending the vessel D may consist of the turned flange D' engaging with a suitable ledge *d'* on the inside of the casing A but this particular sus-

pension means can be varied at pleasure. This receptacle is held in the casing in a manner to bring its top edge substantially flush with the opening of the escape flue B to enable the odors to readily pass from the dry closet through the flue B into the chimney, and a circulation of air through the closet is insured by providing air inlet openings *e, e'*, in the casing and the vertical walls of the receptacle, the openings *l'* in said receptacle being at a suitable distance above the evaporating chamber and tray at the bottom. The bottom of said receptacle D is made imperforate and constructed to receive a removable tray F which is arranged therein to form an evaporating chamber *f* between the imperforate bottom and said tray.

In the embodiment of the invention shown by Figs. 1 and 2, the central part of the bottom is raised to form the dome *h* and the bottom between the central dome and vertical walls is depressed and forms the surrounding channel *h'*. The tray F is made to conform to the bottom and it has a central opening *i* which receives the raised central dome *h* so that the tray rests upon and is supported by the dome above and over the channel *h'* to form the evaporating chamber *f*; and said tray is further provided with openings or a grate *j* through which the urine or liquid matter can pass into the channel *h'* on the imperforate bottom of the receptacle.

I preferably locate the burner E in or immediately below the central raised dome *h* as shown in Fig. 1 so that the bottom of the receptacle and the tray F are subjected directly to the action of the heat from the burner. This burner may be of any kind consuming gaseous or liquid fuel, although a gas burner will probably be found most convenient as it can be readily supplied with gas from the pipes in the dwelling house.

H is the flue or conduit which leads directly from the evaporating chamber *h* to the flue B for escape of the steam and noxious odors resulting from evaporation of the urine or liquid matter without passing through the solid excrement contained on the tray F. This conduit H is fast with the inner face of the receptacle on the side thereof adjacent to the flue B, and its upper end is arranged to discharge into said flue B while its lower end terminates above the channel *h'* in the imperforate bottom of the receptacle. One side of the removable tray is cut out or formed with a recess, at *i'*, to accommodate the flue H, and thus the tray F can be removed and replaced without interfering with the flue H.

The external casing A is constructed to permit the receptacle D to be removed whenever it is desired to clean the same. The receptacle can be lifted out bodily through the top of the casing, or through one of the sides thereof; and as the tray F and escape flue H are contained within the receptacle D, they are removed from the casing A when the receptacle D is taken out so that ready access can be had

to the tray F to remove it from the receptacle and clean the dried excrement therefrom.

For the purpose of more quickly drying the excrement on the tray F, I may provide air inlet holes *l'* in the vertical wall of the receptacle just below or above the tray so that hot air can pass directly over or above the matter on the tray.

In the embodiment of my invention shown by Fig. 4, the central dome *h* of the receptacle is extended a short distance above the level of the dome, and in the vertical walls of this extended dome a series of openings *j''* is provided for the ingress of hot air from the burner which is caused to pass over the solid matter on the tray, said openings *j''* being some distance above the channel *h'* and the tray F to prevent either solid or liquid matter from passing through the receptacle upon the burner or to the bottom of the closet.

The operation of my invention will be readily understood from the foregoing description taken in connection with the drawings.

I am aware that changes in the form and proportion of parts and details of construction of the devices herein shown and described as an embodiment of my invention can be made without departing from the spirit or sacrificing the advantages thereof, and I therefore reserve the right to make such changes and alterations therein as fairly fall within the scope of the same.

I do not limit myself to the use of any particular kind of burner as it is evident that heat can be supplied by means of a steam-heated coil, or by a hot water coil, or by hot air when the closet is used in or adjacent to a building heated by a system of pipes, nor do I confine myself to the precise arrangement of the vertical flue herein described as it is also evident that the position of the receptacle relative to the external casing may be varied, thus requiring a change in the position of the vertical flue, it only being necessary to so dispose the flue as to lead the steam, &c., from the evaporating chamber to the outlet pipe or flue.

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

1. In a dry closet, a receptacle provided with a dome and a surrounding channel in its bottom, combined with a removable tray arranged in said receptacle and forming therein an evaporating chamber, and an escape flue leading from said chamber, as and for the purpose described.

2. In a dry closet, the combination of a receptacle, having an imperforate bottom formed with a raised dome, a removable tray fitted within the receptacle, around the dome therein, and forming with the bottom an evaporating chamber and provided with openings to permit the passage of liquids into said chamber, an escape flue leading from said evaporating chamber, and a suitable heater, as and for the purposes described.

3. The combination with an external casing having the outlet pipe, of a removable receptacle having an imperforate bottom, a detachable tray supported within said receptacle and forming, with its bottom, an intermediate chamber, a flue leading from said intermediate chamber and connected with the outlet pipe, and a suitable heater below the receptacle, substantially as and for the purposes described.

4. In a dry closet, a receptacle having an imperforate bottom formed with a central dome and a channel, combined with an external casing, a removable tray seated within the receptacle, over the channel therein, and forming the intermediate chamber, a heater situated below the dome of the receptacle, and a flue leading from the chamber between

said tray and the bottom of the receptacle, substantially as described.

5. In a dry closet, the receptacle having a channel and a central dome which has openings near its upper end, combined with a tray seated in the receptacle around the dome, below the openings therein, and over the channel, a flue leading from the space between the channel and tray, and a suitable heater situated below the dome of the receptacle, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

JUDSON L. MARVIN.

Witnesses:

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