No. 656,194. Patented Aug. 21, 1900.

R. E. L. JANNEY.

DRY CLOSET.

(Application filed Jan. 12, 1899. Renewed Dec. 30, 1899.)

(No Model.)

Fig. 1.

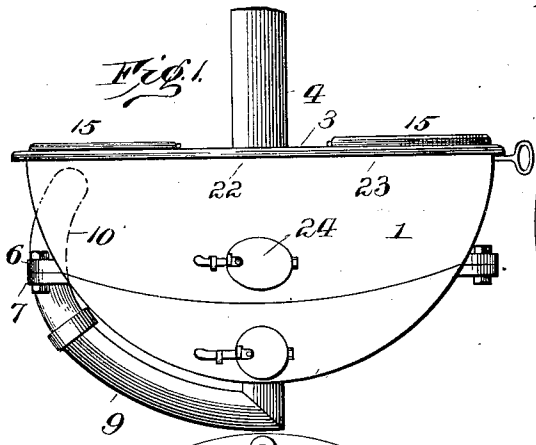


Fig. 2.

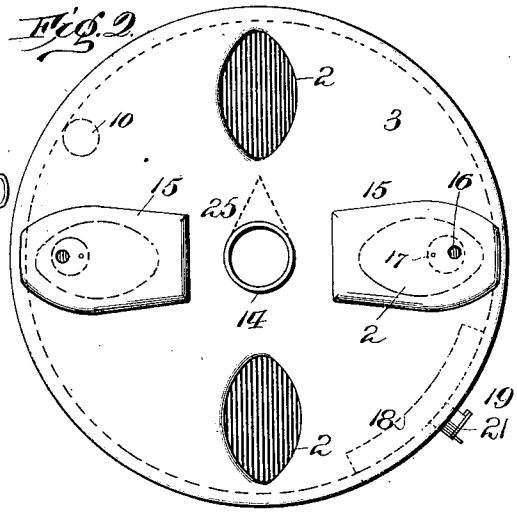


Fig. 4

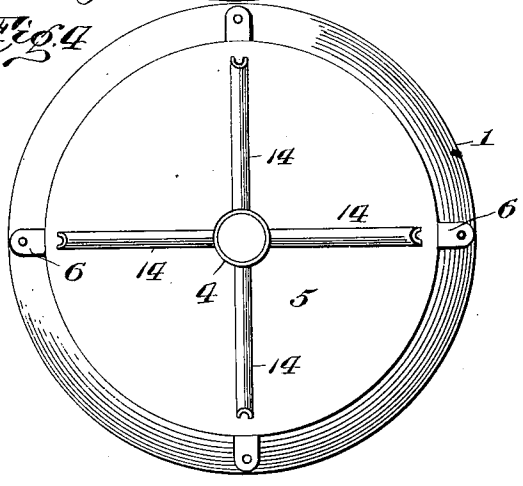
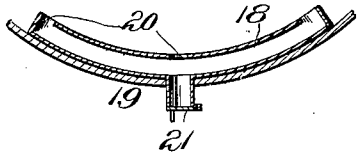


Fig. 5.



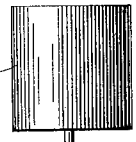
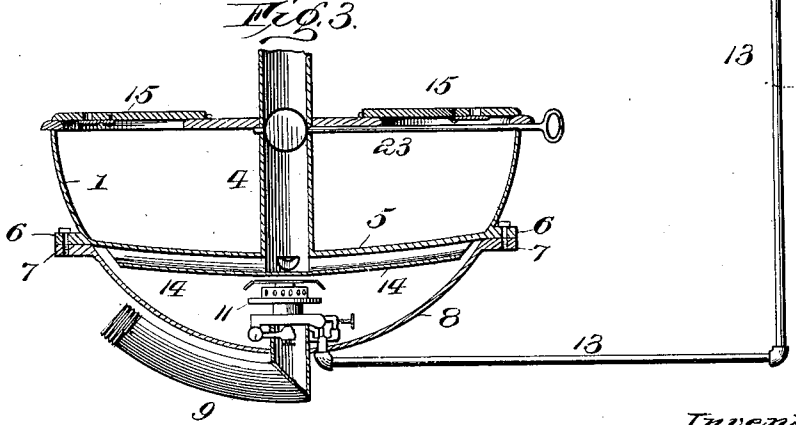


Fig. 3.



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UNITED STATES PATENT OFFICE.

ROBERT E. L. JANNEY, OF NEW YORK, N. Y.

DRY CLOSET.

SPECIFICATION forming part of Letters Patent No. 656,194, dated August 21, 1900.

Application filed January 12, 1899. Renewed December 30, 1899. Serial No. 742,163. (No model.)

To all whom it may concern:

Be it known that I, ROBERT E. L. JANNEY, a citizen of the United States, residing in the borough of Manhattan, in the city of New York, State of New York, have invented certain new and useful Improvements in Dry Closets, of which the following is a specification.

My invention relates to dry closets, and has for its primary object to provide a novel structure arranged in the most convenient and economical form for accommodating a number of persons, and which will at the same time promptly and thoroughly desiccate and incinerate the excrement discharged therein without permitting the escape of any of the noxious vapors or odors or deleterious gases.

Specifically enumerated, my improved structure embodies as its novel features, first, the arrangement of a plurality of seat-apertures in circular form around a common center and discharging into a common pan to which heat is applied; secondly, provision for drawing the entire oxygen-supply for the burner furnishing the heat from the excrement-receiving chamber and causing said oxygen-supply to form a necessary element of the flame-feeding mixture, whereby the noxious vapors or odors carried thereby will be entirely consumed, and, thirdly, provision for causing the products of combustion to impart their heat over the entire under surface of the excrement-receiving pan, so that a maximum of efficiency is obtained from a given number of heat units.

These objects I accomplish in the manner and by the means hereinafter described and claimed, reference being had to the accompanying drawings, in which—

Figure 1 is a side elevation of my improved device. Fig. 2 is a top plan view of the same. Fig. 3 is a detail central vertical sectional view of the same. Fig. 4 is a bottom view of the desiccating-pan. Fig. 5 is a detail view of the supplemental draft-supply pipe.

Similar numerals of reference denote corresponding parts in the several views.

In the said drawings the reference-numeral 1 denotes the upper section or chamber of my improved device, the same being shown provided with a plurality of seat-apertures 2 in its top 3, arranged in circular form around a common draft-pipe 4. The sides of said section 1 converge inward and unite with the bottom 5, the latter forming a common receiving-pan for all the seat-apertures of the structure and being slightly concaved, so that the excrement will be carried toward the center thereof. Said section is provided with a series of lugs 6, that register with similar lugs 7 on the lower section or chamber 8, through which bolts may be passed to fasten the two together. The lower section 8 consists, preferably, of a bowl-shaped bottom portion having tapped thereinto an air-supply pipe 9, the same extending upward and being united by a suitable coupling with a similar pipe 10, that passes through the side of the upper section 1 and has its open mouth terminating in the interior thereof, as shown. Located immediately over the mouth of pipe 9 is a gas or gasolene burner 11 of any suitable construction, the body of said burner forming a continuation of pipe 9. In Fig. 3 of the drawings I have illustrated a gasolene-burner supplied from a tank 12 through pipe 13, the same being suitably constructed for volatilizing the gasolene or hydrocarbon in a manner well understood by those skilled in the art, and as the details of the same form no part of my present invention further description thereof will be omitted.

Fixed in a central aperture in the pan 5 and leading upward through the top 3 of upper section 1 to a suitable height is the draft-pipe 4, hereinbefore mentioned, while carried by the under side of pan 5 are a series of four or more pipes 14, all opening into draft-pipe 4 at their inner ends and extending almost to the outer wall of the lower section 7, where they are open to receive the products of combustion and lead them to pipe 4.

Each of the seat-apertures 2 is provided with a suitable lid 15, having a small aperture 16 therein provided with a damper 17 for regulating the flow of air therethrough.

In one side of the upper section 1, just below the top thereof, is placed a pipe-section 18, closed at its ends and curved to fit the configuration of the interior of the said upper section and provided with a central pipe 19, leading through the side wall of said upper section to the outside, said pipe-section being

provided with apertures 20, its object being to provide for an additional air-supply to the interior of upper section when necessary. Said pipe-section 18 is preferably located on the side of the upper section opposite to the draft-pipe 10, and pipe 19 is provided with a damper 21 to regulate or cut off the air-supply.

A damper 22 is provided for draft-pipe 4, operated by a rod, running to the outside of upper section 1, while doors 23 and 24 are provided in the sides of the upper and lower sections, the door 23 being for the purpose of giving access to burner 11, while door 24 provides for removing the desiccated excrement by means of a rake or other device. The side of the pipe 4 opposite door 24 in upper section 1 is provided with a V-shaped projection 25, so that the rake can reach all parts of the structure.

From the above description the operation will be understood to be as follows: The seat-openings 2 being located around a common center and over a common pan 5, the excrement from all of them will fall upon said pan, the concave configuration of which causes said excrement to tend toward the center thereof, the point where the greatest heat is experienced. Now the burner 11 being lighted and in full operation receives its entire air-supply through pipes 10 and 9 from the interior of upper section 1, the result being that when the dampers 17 in seat-lids 13 are open air will be drawn down through apertures 16, so that there will be no upward escape of offensive gases or odors from the interior of upper section 1, it being of course understood that each seat-lid 13 is so arranged as to close automatically when its seat is unoccupied. Should the supply of air through apertures 16 at any time not prove sufficient, an additional supply may be admitted through pipes 18 and 19, and the same will follow a path horizontally across the interior of upper section 1 to the mouth of pipe 10, carrying with it the noxious gases rising from the excrement. The pipe 9, carrying the air to burner 11, in effect extends up into the said burner, as shown in Fig. 3, so that said air forms the sole oxygen-supply to the burner and uniting with the volatilized hydrocarbon constitutes the mixed gas that is burned, the result being that not only is there a strong downdraft created in pipes 9 and 10, whereby the offensive gases or odors are positively drawn down said pipes from the interior of upper section 1, but also said gases become an essential part of the combustion and are entirely consumed, a result not heretofore attained where the gases are simply passed over or through the source of heat. The heat and products of combustion from burner 11 spread out horizontally beneath pan 5, thus acting directly on the excrement deposited on top thereof and are forced to pass into the outer open ends of pipes 14 in order to pass into draft-pipe 4, being thus compelled to traverse from the center to substantially the outer edge of pan 5. While in their passage through pipes 14 to draft-pipe 4 they again impart their heat within a limited radius to said pan 5, a maximum efficiency being thus obtained. The various valves of burner 11 can be regulated through door 23, while door 24 affords access to the interior of upper section 1 and the top of pan 5 for removing the desiccated excrement by means of a rake or other suitable tool, as hereinbefore described.

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

1. A dry closet, consisting of an upper and a lower chamber, an intermediate excrement-receiving pan, a gas or vapor burner in said lower chamber for applying a heating-flame to said pan from beneath, and an air-supply pipe leading from the interior of said upper chamber into said lower chamber and extended into and forming a part of the mixing-chamber of said burner, whereby the air-supply from said upper chamber becomes the sole oxygen-supply element of the burning flame, substantially as set forth.

2. A dry closet, consisting of an upper and a lower chamber, an intermediate excrement-receiving pan, a heat-supply located centrally beneath said pan, and means for causing the products of combustion to spread from the center to the outer edge of the pan and beneath the same, then back to the center of said pan and still beneath the same, and finally through a central draft-pipe up through said pan and through said upper chamber, substantially as set forth.

3. A dry closet, consisting of an upper and a lower chamber, an intermediate excrement-receiving pan, a heat-supply located beneath said pan in said lower chamber, draft-ducts communicating with said lower chamber at approximately the outer edge of and beneath the excrement-pan, and a draft-pipe communicating solely with said ducts at the ends opposite to their point of communication with the lower chamber, said pan being exposed to the direct action of the heat during the entire passage of the products of combustion from the burner to the draft-pipe, substantially as set forth.

4. In a dry closet, the combination with an upper and a lower chamber, an intermediate excrement-receiving pan, a heat-supply located centrally beneath said pan in said lower chamber, of a series of pipes extending radially from the center to the circumference of and immediately beneath said pan and opening into said chamber at their outer ends, and a central draft-pipe extending down through said upper chamber and pan and communicating solely with the inner ends of said pipes, substantially as set forth.

5. In a dry closet, the combination with an upper and a lower chamber, said upper chamber having a plurality of seat-apertures therein arranged in circular form around a common center, an excrement-receiving pan

intermediate said chambers and common to all said apertures, a burner in said lower chamber for supplying heat to said pan, draft-ducts communicating with said lower chamber at approximately the outer edge of and beneath the excrement-pan, and a draft-pipe communicating solely with said ducts at the ends opposite to their points of communication with the lower chamber, said pan being exposed to the direct action of the heat during the entire passage of the products of combustion from the burner to the draft-pipe, substantially as set forth.

6. A dry closet, consisting of a closed upper chamber having a plurality of seat-apertures therein, lids for closing said apertures, said chamber having valved air-inlet apertures therein, a closed lower chamber, an intermediate excrement-receiving pan, a burner in said lower chamber located centrally beneath said pan, an air-supply pipe leading from the interior of the upper chamber into the lower chamber and extended into the burner-pipe, radial pipes beneath said pan opening at their outer ends into said lower chamber, and a draft-pipe extending through said upper chamber and pan and communicating at its lower end solely with said radial pipes, substantially as set forth.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

ROBERT E. L. JANNEY.

Witnesses:
HENRY CLAIR,
JOSEPH B. GRANT.