No. 743,834. PATENTED NOV. 10, 1903.

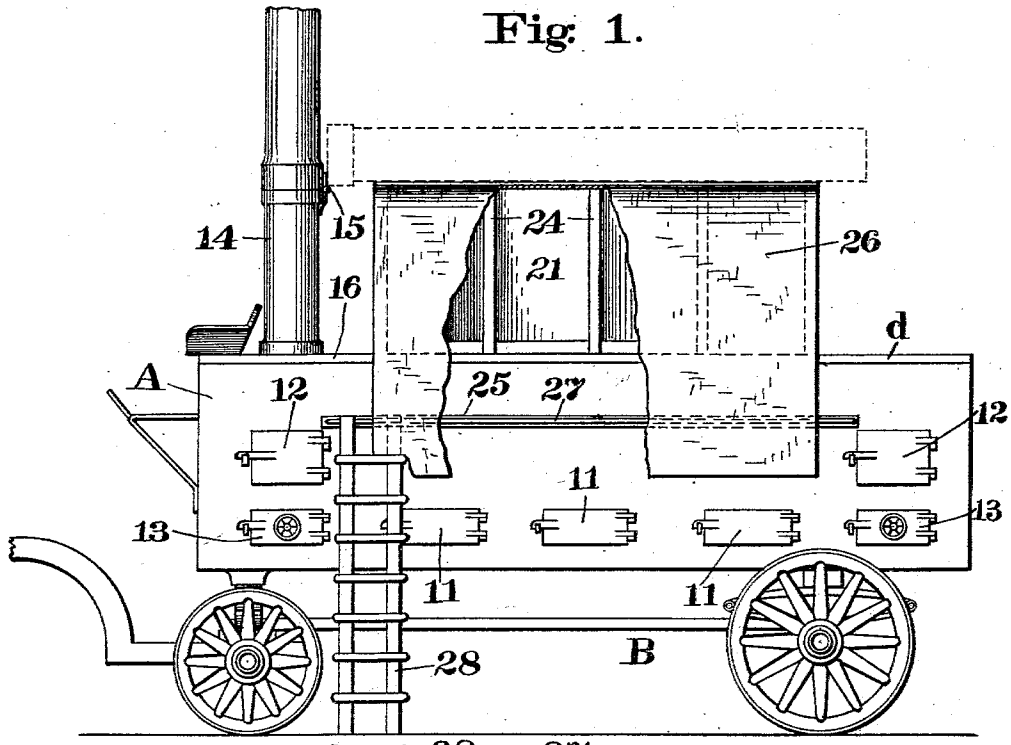
J. DANNER.

PORTABLE DRY CLOSET.

APPLICATION FILED JULY 2, 1903.

NO MODEL. 2 SHEETS—SHEET 1.

Fig. 1.



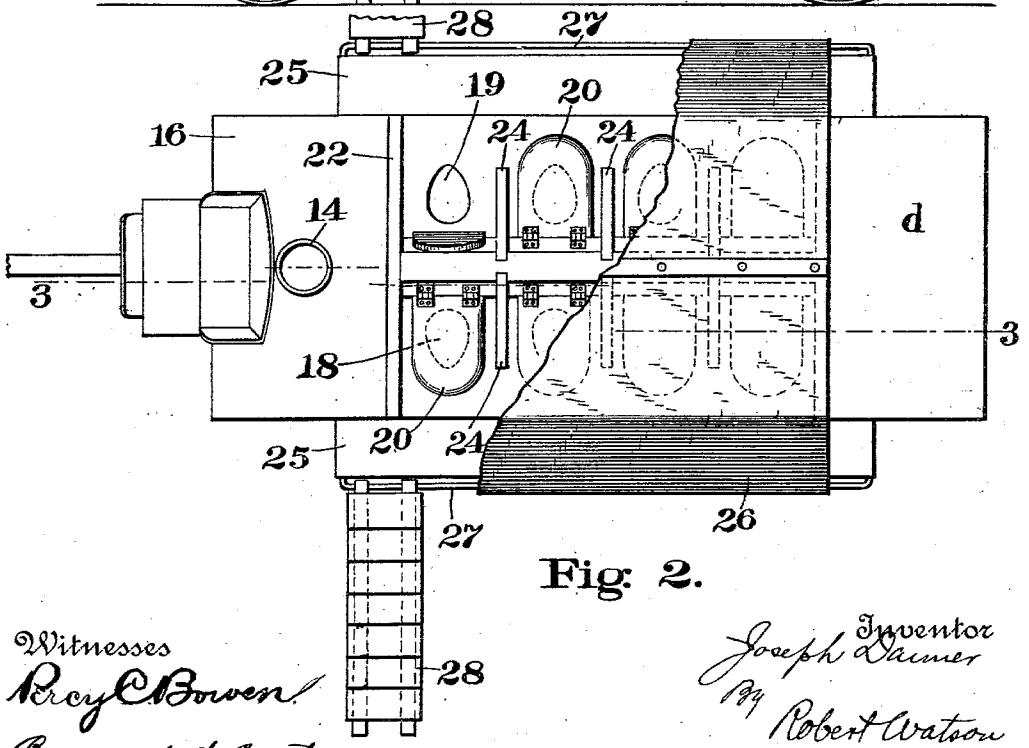


Fig. 2.

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No. 743,834. PATENTED NOV. 10, 1903.

J. DANNER.

PORTABLE DRY CLOSET.

APPLICATION FILED JULY 2, 1903.

NO MODEL. 2 SHEETS—SHEET 2.

Fig. 3.

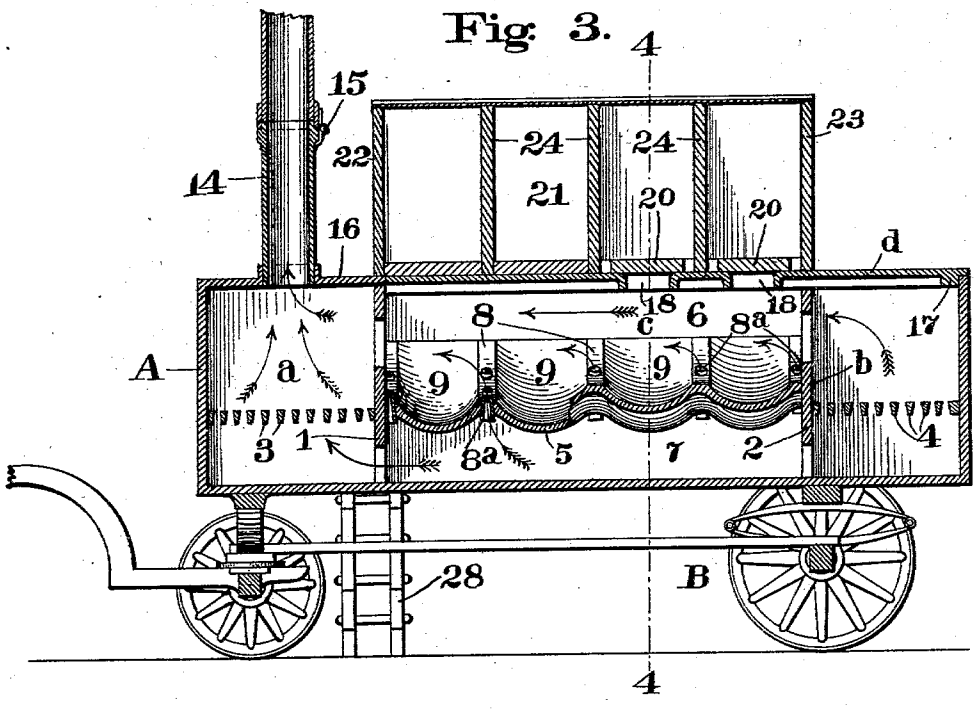


Fig. 4.

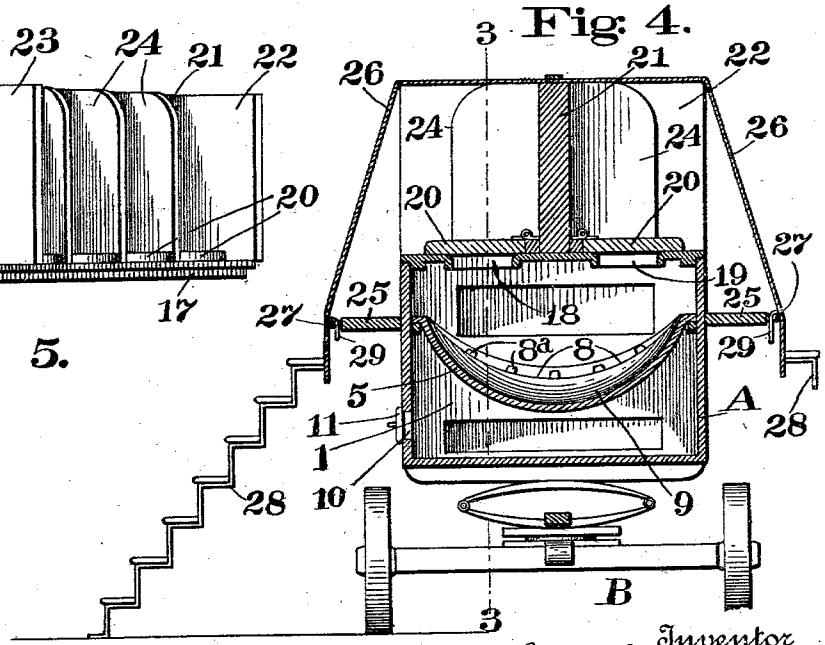


Fig. 5.

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No. 743,834. Patented November 10, 1903.

UNITED STATES PATENT OFFICE.

JOSEPH DANNER, OF SCRANTON, PENNSYLVANIA, ASSIGNOR OF TWO-THIRDS TO JAMES J. CROGHAN AND ALFRED TURNER, OF SCRANTON, PENNSYLVANIA.

PORTABLE DRY CLOSET.

SPECIFICATION forming part of Letters Patent No. 743,834, dated November 10, 1903.

Application filed July 2, 1903. Serial No. 164,033. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH DANNER, a citizen of the United States, residing at Scranton, in the county of Lackawanna and State of Pennsylvania, have invented certain new and useful Improvements in Portable Dry Closets, of which the following is a specification.

The purpose of my invention is to provide a portable and sanitary dry-closet system for army use or for use wherever a large number of persons are temporarily located or camped and where no permanent sanitary closet system is available.

In the accompanying drawings, which illustrate my invention, Figure 1 is a side view of the apparatus, the flexible curtain or covering being partly broken away. Fig. 2 is a plan view of the same with the covering partly removed. Fig. 3 is a longitudinal section through the apparatus on the line 3 3 of Figs. 2 and 4. Fig. 4 is a transverse section on the line 4 4 of Fig. 3, and Fig. 5 is a perspective view of the removable top of the casing.

Referring to the drawings, A indicates an inclosed wagon body or casing constructed mainly of metal and mounted upon a wheeled truck B, to which horses or other motive power may be attached for the purpose of transporting the apparatus from place to place. Within the casing, near its ends, are arranged transverse partitions 1 and 2, and grate-bars 3 and 4 are located between said partitions and the adjacent ends of the casing. The portions of the casing between the transverse partitions 1 and 2 and the ends of the casing constitute furnace chambers or compartments *a* and *b*, and the intermediate portion *c* of the casing between said partitions serves as a vault to receive the fecal matter and in which this matter is dried and burned. A concave partition 5 divides the vault *c* into an upper compartment 6 and a lower compartment 7. This concave partition, as shown, has a series of raised portions or ribs 8 extending transversely of the partition and intermediate depressions or channels 9. Small openings 8^a extend through the raised portions of the partition to permit air to pass through from the lower compartment 7 into the upper compartment 6. In one side of the casing a series of openings 10 are formed for the purpose of permitting access to the compartment 7 and of admitting air to said compartment. Doors 11 are provided for closing these openings and for regulating the draft therethrough. Furnace-doors 12 and 13 are also provided in one side of the wagon body or casing at each end, through which the fires on the grates may be given proper attention and the draft regulated. A stack 14 is connected to the furnace-chamber *a*, and this stack is preferably made in two sections, connected by a hinge-joint 15, so that while the apparatus is being transported the upper section of the stack may be folded back out of the way of trees and other obstructions, as shown in dotted lines, Fig. 1.

The top of the wagon body or casing is made in two parts. The forward top piece or part 16 is suitably secured in position, and this fixed part covers the furnace-chamber *a* and supports the stack 14. The vault and rear furnace-chamber are covered by a removable top piece or plate *d*, which rests upon the sides and rear end of the casing and is held against lateral and end movement by ribs 17, secured to the lower side of said top piece near its edges. When in position, these ribs fit against the inner walls of the casing. Two series of seat-openings 18 and 19, having hinged covers 20, are formed in the top piece *d* at opposite sides of an upright partition 21, which extends longitudinally along the central line of the removable top piece, these openings when the top piece is in position being located over the channels or depressions 9 in the partition 5. Partitions 22 and 23 are arranged upon the top piece *d* transversely at the ends of the central partition, and intermediate transverse partitions 24 are arranged between the adjacent seat-openings of each series, thus dividing the removable top into a number of stalls or closets, each having a seat-opening over the vault. Footboards 25 are arranged longitudinally of the sides of the casing opposite the seat-openings and at a suitable distance below the top of the casing to provide a support for the feet of individuals using the apparatus. These footboards extend to a short distance beyond the end partitions of the series of closets. For

the sake of privacy a canvas or other flexible covering or curtain 26 is arranged transversely of the casing over the partitions, and the ends of the flexible covering extend downwardly at the sides of the casing and to a short distance below the footboards. A rod 27 extends along the edge of each footboard, and step-ladders 28 are provided with hooked ends 29, which may be hooked over the rods and form hinge-joints therewith. When the apparatus is in use, a step-ladder is arranged at one end of each footboard, and persons may then pass from the ground onto the end of a footboard, and thence pass along the footboard between the curtain and the partitions and enter the closets. The ends of the curtains may, if desired, be tied to the rods 27.

In use a fire is kept constantly burning in the furnace-chamber *a* to create a draft through the vault and destroy the odors and gases coming from the vault and also to evaporate moisture from the upper and lower chambers of the vault. Sand, sawdust, or other absorbent material is placed upon the bottom of the lower compartment of the vault, and any excess of liquid in the upper compartment passes through the openings in the concave partition and falls upon this absorbent material. One or more of the doors 11 are left open and air entering therethrough continually evaporates the moisture from the absorbent material. Part of this air passes into the furnace-chamber *a* below the grate and part passes through the openings in the concave partition and, on account of its proximity to the matter upon said partition, carries off considerable moisture therefrom and passes thence into the furnace-chamber *a*. When the channels in the concave partition of the vault are filled to the level of the ribs or raised portions of the partition, a fire is started in the furnace-chamber *b*, and the heat and flames from this fire, passing through the vault to the chamber *a*, dry the material in the vault and consume it. If necessary, in order to aid combustion, kerosene or other inflammable liquid may be poured through the seat-openings onto the sediment in the concave partition. In order to remove the ashes from the concave partition when an accummulation occurs, the top piece *d* may be removed and the contents of the upper compartment of the vault shoveled out. The absorbent material in the lower compartment of the vault may be removed when necessary and replaced with clean absorbent material by shoveling it through the openings 10.

In transporting the apparatus the upper section of the stack is swung into a horizontal position and supported by the closet-partitions, as shown in the drawings, and the flexible curtain or covering may be rolled up. The step-ladders may also be swung upward on their hinge-joints and tied together over the top of the apparatus.

As this portable-closet system dispenses with the improvised and insanitary trenches and closet arrangements usually resorted to by armies and others in camp, and as the fecal matter as well as the odors and gases therefrom are burned, the large amount of sickness in camp life resulting from such causes is averted.

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

1. In a portable dry-closet system, an inclosed wagon body or casing mounted upon a suitable truck and having a top provided with a longitudinal series of seat-openings, partitions extending upwardly between said seat-openings, and means for creating a draft through said casing, comprising a furnace-chamber arranged in one end of the casing and a stack communicating with said chamber.

2. In a portable dry-closet system, an inclosed wagon body or casing mounted upon a suitable truck and having a top provided with a longitudinal series of seat-openings, partitions extending upwardly between said seat-openings, a footboard extending along the side of said casing below its top and opposite said seat openings, and means for creating a draft through said casing, comprising a furnace-chamber arranged in one end of the casing and a stack communicating with said chamber.

3. In a portable dry-closet system, an inclosed wagon body or casing mounted upon a suitable truck and having a removable top provided with a longitudinal series of seat-openings, partitions extending upwardly between said seat-openings, and means for creating a draft through said casing, comprising a furnace-chamber arranged in one end of the casing and a stack communicating with said chamber.

4. In a portable dry-closet system, an inclosed wagon body or casing mounted upon a suitable truck and having a top provided with a longitudinal series of seat-openings, transversely-arranged partitions extending upwardly between said seat-openings, a flexible covering arranged over the edges of said partitions, and means for creating a draft through said casing, comprising a furnace-chamber arranged in one end of the casing and a stack communicating with said chamber.

5. In a portable dry-closet system, an inclosed wagon body or casing mounted upon a suitable truck and having a top provided with a longitudinal series of seat-openings, a vertical partition extending upwardly between the two series of seat-openings, partitions arranged transversely between adjacent seat-openings in each series, a flexible cover extending over the edges of the transverse partitions, footboards extending along both sides of the casing below the top and opposite said seat-openings, and means for creating a draft through said casing, comprising a furnace-chamber arranged at one end of the

casing and a stack communicating with said chamber.

6. In a portable dry-closet system, an inclosed metal wagon body or casing mounted upon a suitable truck, said casing having a top provided with a series of seat-openings and partitions between said openings, a vault within the casing beneath said openings, furnace-chambers at both ends of said vault, and a stack communicating with one of said furnace-chambers.

7. In a portable dry-closet system, an inclosed metal wagon body or casing mounted upon a suitable truck, said casing having a top provided with a longitudinal series of seat-openings, partitions extending upwardly from said top between said seat-openings, a footboard extending along the side of said casing below its top and opposite said seat-openings, and a step-ladder detachably connected to said footboard.

8. In a portable dry-closet system, an inclosed metal wagon body or casing mounted upon a suitable truck, said casing having a removable top piece provided with a series of seat-openings and partitions between said openings, a vault within the casing beneath said openings, and means for creating a draft through said casing comprising a furnace and stack arranged at one end of the casing.

9. In a portable dry-closet system, an inclosed metal wagon body or casing mounted upon a suitable truck, said casing having a removable top piece provided with a series of seat-openings and partitions between said openings, a vault within the casing beneath said openings, furnace-chambers at both ends of said vault, and a stack communicating with one of said furnace-chambers.

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

JOSEPH DANNER.

Witnesses:
WILLIAM A. GEIGER,
ALBERT HEIER.