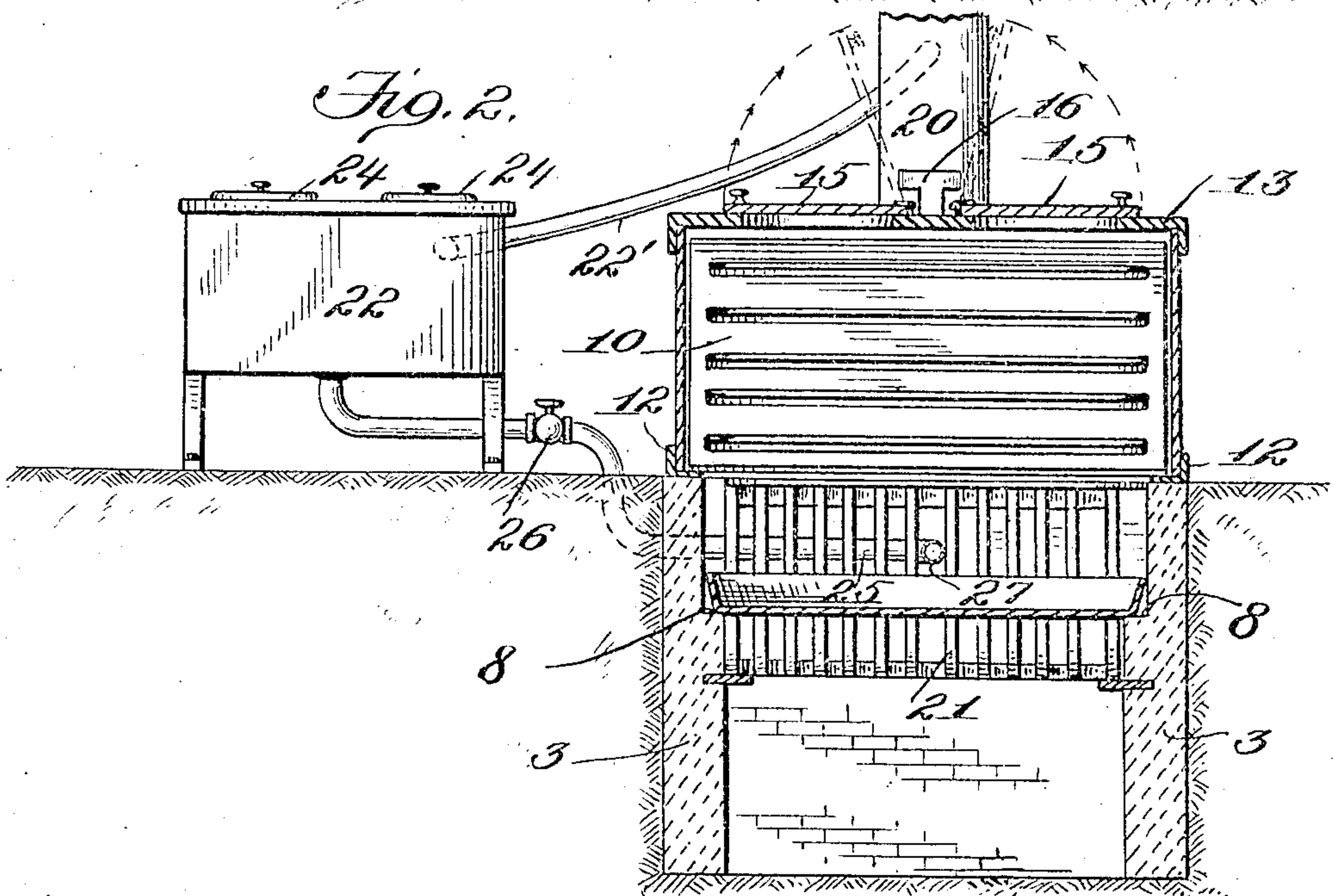
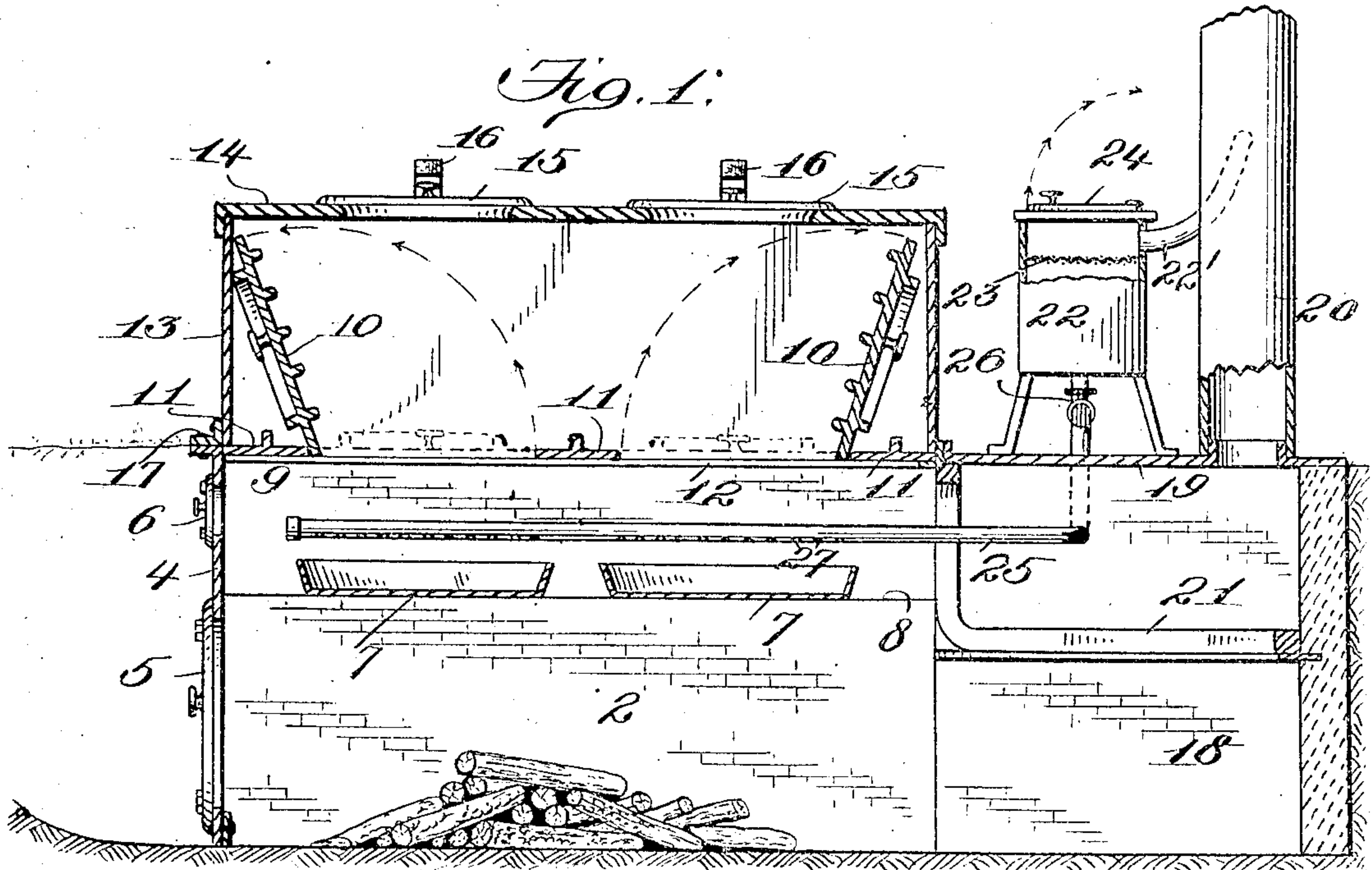


No. 882,410.

PATENTED MAR. 17, 1908.

J. H. McCALL.
SANITARY APPLIANCE.
APPLICATION FILED OCT. 15, 1906.



Witnesses:
C. D. Kester
J. B. Keefe

Inventor
James H. McCall
By
James L. Norris
Att'y

UNITED STATES PATENT OFFICE.

JAMES H. McCALL, OF HUNTINGDON, TENNESSEE.

SANITARY APPLIANCE.

No. 882,410.

Specification of Letters Patent.

Patented March 17, 1908.

Application filed October 15, 1906. Serial No. 339,074.

To all whom it may concern:

Be it known that I, JAMES H. McCALL, a citizen of the United States, residing at Huntingdon, in the county of Carroll and State of Tennessee, have invented new and useful Improvements in Sanitary Appliances, of which the following is a specification.

This invention relates to sanitary appliances of the same general type as that disclosed in Letters-Patent No. 790,701 granted to me May 23, 1905, and to which reference may be had.

The present appliance has for its objects those set forth in the patent and certain additional objects, one of which is the effective disposition of urine and another of which is the consumption of gases generated in the combustion chamber of the device when the latter is being burned out.

The device possesses other advantages which with the foregoing will be considered at length in the following description.

In the drawings accompanying and forming a part of this specification I represent in detail one form of embodiment of the invention which to enable those skilled in the art to practice the same will be fully set forth in said description, while the novelty of the invention will be included in the claims succeeding said description.

Referring to said drawings, Figure 1 is a longitudinal sectional view of a sanitary appliance including my invention. Fig. 2 is a transverse sectional view of the same.

Like characters refer to like parts throughout the figures.

As stated hereinbefore I illustrate in the drawings one form of embodiment of the invention. This is done for the purpose hereinbefore mentioned and for the further purpose of indicating the utility accompanying the apparatus thus illustrated. As will be apparent a number of changes may be adopted within the scope of my claims. For example, the present device like the one shown in the Letters-Patent to which I have hereinbefore referred includes in its make-up a chamber which is used alternately as a combustion space and as a vault. In said patent I have designated this chamber as a combustion chamber and I shall use the same designation hereinafter. This combustion chamber may be formed in any desirable way. It may, as will hereinafter be set forth, comprise side walls of masonry or ce-

ment or the chamber may be formed by a pit dug directly in the ground. This is one of the variations to which I allude. Others may suggest themselves.

The combustion chamber shown in the drawings is denoted in a general way by 2 and this chamber serves as will be understood the offices performed by the vault of a dry closet. The sides of the combustion chamber are denoted by 3 and they may be formed of brickwork or be of cement, this from what has been hereinbefore stated being simply a matter of conditions to be met. For example, at a fixed military station or post, the walls 3 would preferably be of masonry. In camp or on the march this would not be feasible in which event the pit to which I have referred can be utilized as a combustion chamber.

The forward wall of the combustion chamber is designated by 4 and it may as shown consist of a plate inexpensively made by casting, said plate having an opening covered by a door as 5 by opening which fuel may be introduced into the combustion chamber. This fuel may be of any desirable character; for example, wood, coal or petroleum. The door 5 is normally closed. The fuel in the combustion chamber when alighted incinerates the fecal contents as well as evaporates the urine led into said chamber as will hereinafter appear. I may if desired form in the front 4 above the door 5 a sight opening normally closed by a door as 6 by opening which the process or combustion in the chamber 2 may be readily ascertained. When the doors 5 and 6 are closed all entrance to the chamber 2 below the privy box hereinafter described is closed so that flies cannot enter said chamber nor can odors escape therefrom below the said box, means being provided above the chamber to insure the two results set forth as I will hereinafter specify.

In the chamber 2 I mount excrement catching means which may be of any desirable character and I use the word "excrement" in a broad sense to include fecal and urinary discharges, although I prefer as I will hereinafter describe to dispose of urinary discharges other than by their deposition originally on said excrement catching means. The latter are represented as consisting of two plates each designated by 7 and of shallow pan-like form, said plates being shown as supported at their opposite ends by should-

ders at 8 on the side walls 3. These plates or shallow pans rest simply on the shoulders so that when occasion requires they can be easily lifted from place.

5 The top of the combustion chamber is denoted in a general way by 9 and while the same may be of any desirable character it is shown as composed of two similar wide plates 10 and three narrow plates 11 which
10 may be conveniently cast and which, for strength are ribbed. These plates rest upon angle irons as 12. They are not positively connected to said angle irons, but simply are supported by the same and within the privy
15 box 13 which is ordinarily made of metal and the top or seat of which is denoted by 14. This top or seat 14 generally has two rows of holes, the covers of which are designated by 15 and which when up as shown by dotted
20 lines in Fig. 2 rest against stops or props as 16, the latter being so positioned that when the said covers are up they will stand at an outward angle whereby when an occupant
25 frees the same they will drop by their own weight. The privy box 13 is mounted over the chamber or vault 2 and may rest on the angle irons 12 to which I have before referred and which are upon two sides and the inner
30 end of said box. The front end of the box may be bolted as at 17 to the front 4. Under normal conditions the two plates 10 are up and they are held in such relation by the
35 ends of the box 13 as clearly shown in Fig. 1 so that the device can be used as a closet, matter entering the chamber 2 by the way of
40 the openings in the top 14 of the box 13 passing onto the plates 7 and through openings separating the inner plate 11 and the two outermost plates 11. I, therefore, form
45 in effect openings in the top of the combustion chamber which are normally uncovered, but which may be closed by the lowering of the plates 10 which serve as flaps or closures
50 for said openings in said top and which when down occupy a horizontal position as shown
55 by dotted lines in Fig. 1 in alinement with plates 11. When said plates 10 are down they with the plates 11 present in effect a continuous top for the combustion chamber
60 2 so that the contents of said chamber can when all said plates are in horizontal alinement be burned out. During the burning out operation I prefer to remove the top 14 for
65 the same is ordinarily constructed of wood. The box 13, however, may be made of metal so that it is unnecessary to take the same from place when the contents of the combustion chamber are being incinerated.

From the combustion chamber 2 a flue as
60 18 leads and this flue is preferably, though not necessarily, of the same depth as the combustion chamber and its surrounding
65 wall may like the side and inner end walls of the combustion chamber be formed of brick-work. The top of the flue is denoted by 19

and consists preferably of a plate equipped with an outlet from which a smoke stack or pipe as 20 rises, the pipe being, therefore, in communication with the combustion chamber by way of the flue 18. When, therefore, 70 the doors 5 and 6 are shut and when the plates 10 and 11 are in horizontal alinement a fire can be started in the combustion chamber 2, the products of combustion passing from said chamber 2 to the flue 18 and thence
75 to the smoke or draft pipe 20 and then to the atmosphere. The flue 18 in addition to serving as such also in the present case serves another important function; it constitutes a combustion chamber for I have shown
80 mounted in said flue or auxiliary combustion chamber 18 a grate as 21. This grate is adapted primarily for wood or coal as a fuel. In case oil is employed as a fuel, of course, I
85 will have to employ a different type of burner, the grate being considered as one type of burner. Prior to burning out the contents
90 of the combustion chamber or vault 2, I place on this grate 21 either coal or wood or both and kindle the same. After this, or the
95 operations may occur in different order, I kindle a fire in the combustion chamber for burning out the fecal contents thereof. The gases generated in the act of burning out the
100 combustion chamber pass, of course, into the flue 18 and travel toward the pipe 20. They do not, however, pass the fire in said flue for this fire or the flame consumes or vitiates the
105 gases entering said flue so that no obnoxious gases are carried out of the pipe 20 into the atmosphere. The grate 21 acts as a screen and when fire is not kindled thereon this
110 grate may be utilized to prevent paper and articles being drawn out into the atmosphere by the suction developed in the pipe 20. The grate, therefore, serves as a screen when not
115 used as a burner. By arresting the movement of toilet paper and like articles from the flue the grate or screen serves to hold these papers in the flue so that their consumption is assured.

From what has been hereinbefore stated I prefer not to deposit urine in the plates 7, but utilize for such a purpose vessel or receptacle such as 22 within which is a screen as 23
120 to prevent flies and foreign substances reaching the fluid in said vessel or receptacle. This vessel has one or more hinged lids as 24 by which the fluid in question can be initially put into the vessel or receptacle. From
125 the latter a pipe as 25 is shown as leading and as extending into and along the chamber 2 over the plates or pans 7. Between the combustion chamber 2 and the vessel or receptacle 22, the pipe 25 is equipped with a
130 hand valve as 26 which is normally closed so as to retain the contents of the vessel 22 therein. When, however, this valve is opened the fluid in said receptacle or vessel can pass therefrom and into the pipe 25, the lat-

ter having within the combustion chamber 2 and directly over the pans or plates 7 perforations as 27 for the emission of such fluid. The valve 26 as stated is normally closed, it being only opened when the contents of the chamber 2 are being burned out, at which time the heat in said chamber can be utilized to evaporate the urine. It will be assumed that there is a fire in said combustion chamber and that it is desired to dispose of the contents of the vessel 22. To do this the valve 26 is opened so that the fluid can pass along the pipe 25 and be discharged from the same by way of the perforations 27 into or over the pans or plates 7 for evaporation. Should the fluid escape from the pans no injury can result, owing to the fact that the heat in the chamber will consume the same.

The urine receptacle 22 is preferably connected with the pipe or stack 20 by a conduit or tube as 22', by virtue of which said receptacle 22 may be properly ventilated for all odors and gases created in said receptacle are conducted by the conduit or tube 22' into the stack 20.

The excrement catching means, consisting in the present case of the pans or plates 7, are preferably located above the bottom of the main chamber 2 in order that fuel may be placed under said pans or plates. Two of the latter are shown, but this number is not essential for in some cases only one need be employed while in other cases more may be provided.

The device hereinbefore described is sanitary and practically odorless. There is no possibility of its spreading contagion and flies cannot obtain access to any of the parts. All solid and fluid discharges can be thoroughly, quickly and readily consumed at the places where they are deposited.

What I claim is:

1. In a sanitary appliance, a combustion chamber having an excrement catching device, a privy box in coöperative relation with said combustion chamber, means for closing communication between the privy box and combustion chamber when it is desired to incinerate the contents of said combustion chamber or for opening communication between the privy box and combustion chamber to obtain deposit of matters in said chamber from said box, a second combustion chamber in communication with said first mentioned combustion chamber, and a urine receptacle outside of said first mentioned chamber and provided with a pipe for conveying the contents of the same into said first mentioned chamber.

2. In a sanitary appliance, a combustion chamber having excrement catching means,

a stack in communication with said combustion chamber, a urine receptacle exterior to the chamber, a ventilating tube connecting said urine receptacle and said stack, a pipe for delivering the contents of said urine receptacle into said combustion chamber, and a privy box arranged in coöperative relation with said combustion chamber.

3. In a sanitary appliance, a combustion chamber, an excrement catching pan in said chamber, a urine receptacle outside of the chamber, and a pipe for conducting the contents of said receptacle into said chamber, said pipe being perforated, and the perforated portion extending across said pan.

4. In a sanitary appliance, a combustion chamber, excrement catching pans in said chamber, a privy box supported above the combustion chamber, a urine receptacle outside the chamber, and a valved pipe for conducting the contents of said receptacle into said chamber, said pipe extending across the pans and being perforated to deliver the urine into said pans.

5. In a sanitary appliance, a combustion chamber, a privy box associated with said combustion chamber, a urine receptacle outside the combustion chamber, a conduit for conducting the contents of said receptacle into said chamber, a stack in communication with said combustion chamber, and a ventilating pipe extending from said urine receptacle into said stack.

6. In a sanitary appliance, a combustion chamber having an excrement catching device, a privy box in coöperative relation with said combustion chamber, means for closing communication between the privy box and combustion chamber when it is desired to incinerate the contents of said combustion chamber or for opening communication between the privy box and combustion chamber to obtain deposit of matter in said chamber from said box, a second combustion chamber in communication with said first mentioned combustion chamber, a stack leading from said second mentioned chamber, a urine receptacle outside said first mentioned chamber, a ventilating pipe connecting said receptacle and stack, and a pipe for conveying the contents of said receptacle into said first mentioned combustion chamber.

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

JAMES H. McCALL.

Witnesses:

HEATH SUTHERLAND,
BERNARD P. VASHON.