

(No Model.)

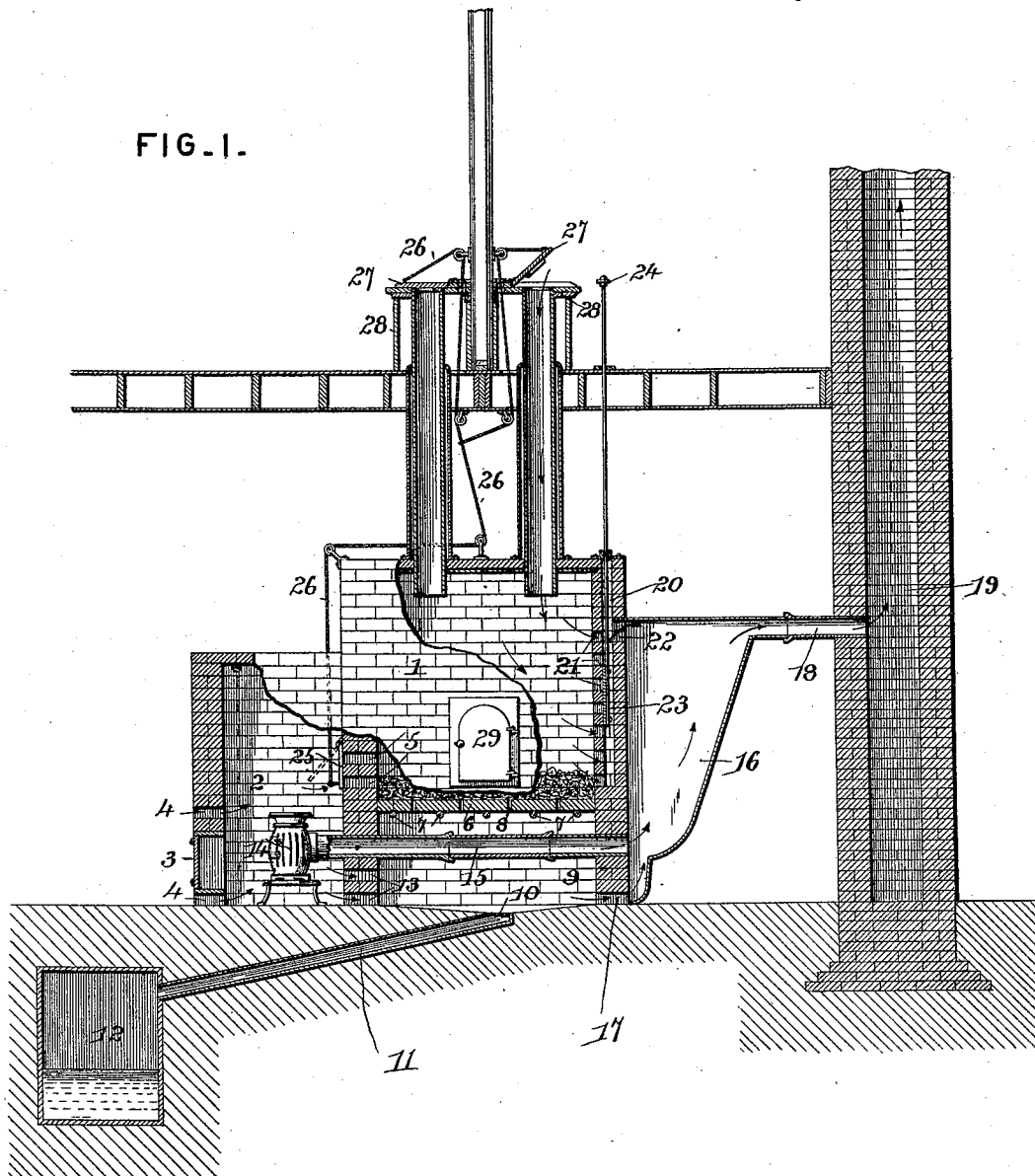
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G. R. SCATES.
DRY AIR CLOSET.

No. 523,379.

Patented July 24, 1894.

FIG. 1.



Inventor

George R. Scates

Witnesses

Jas. H. McLaughlin

D. S. Doyle

By His Attorneys.

C. A. Snow & Co.

(No Model.)

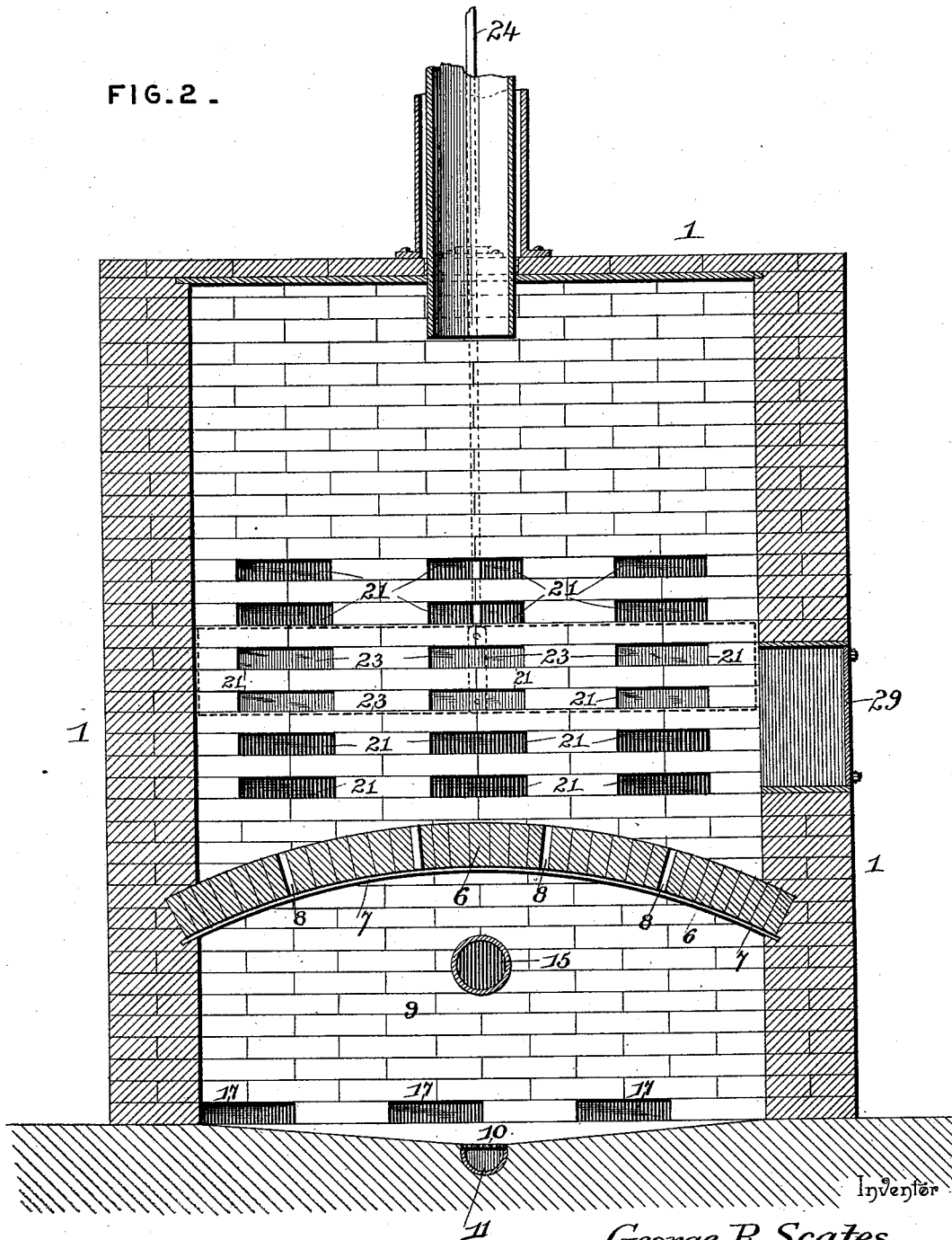
2 Sheets—Sheet 2.

G. R. SCATES.
DRY AIR CLOSET.

No. 523,379.

Patented July 24, 1894.

FIG. 2.



Inventor

George R. Scates

Witnesses

Jas. H. McCallum

By His Attorneys.

[Handwritten signature]

Chas. H. Snow & Co.

UNITED STATES PATENT OFFICE.

GEORGE RANDAULPH SCATES, OF KNOXVILLE, TENNESSEE, ASSIGNOR OF
ONE-HALF TO E. S. ROGERS, OF SAME PLACE.

DRY-AIR CLOSET.

SPECIFICATION forming part of Letters Patent No. 523,379, dated July 24, 1894.

Application filed October 18, 1893. Serial No. 488,527. (No model.)

To all whom it may concern:

Be it known that I, GEORGE RANDAULPH SCATES, a citizen of the United States, residing at Knoxville, in the county of Knox and State of Tennessee, have invented a new and useful Dry-Air Closet, of which the following is a specification.

My invention relates to a dry air or cremating closet, and has for its object to provide a simple, inexpensive and efficient construction adapted to be used in connection with dwellings, whereby the liquid excrement is dried or conducted to an underground cistern and the solid excrement is dried, the fumes being conducted to a chimney or exit flue, and then burned, and the novelty of the invention consists in the arrangement and relative disposition of the parts and in the means for controlling the various draft openings, outlets, &c., to promote a draft through the kiln or cremating chamber, especially when the lids of the stools are open, such draft, in the latter case being supplied through the stool openings, whereby the escape of fumes into the building is prevented.

Further objects and advantages of my invention will appear in the following description, and the novel features thereof will be particularly pointed out in the appended claims.

In the drawings: Figure 1 is a vertical sectional view of a closet embodying my invention. Fig. 2 is a vertical section at right angles to the plane of Fig. 1.

Similar numerals of reference refer to corresponding parts in the drawings.

1 designates the kiln or cremating furnace, which may be of any preferred shape, and 2 a hot air room, provided with a door or means of ingress, 3, and having inlet openings, 4, above and below the door, to admit air, and outlet openings, 5, in the opposite wall for communication with the kiln or cremating furnace. The floor of the kiln is arched, as shown at 6, the same being built upon the arched supporting bars, 7, and the bricks forming the floor are separated to form draining openings, 8. The subjacent heating chamber, 9, which is roofed by the above described arch, is provided with a centrally depressed

floor having a drain, 10, to which is connected a drain-pipe, 11, communicating with a cistern, 12, and the chamber communicates with the hot air room, 2, by means of openings, 13, arranged near the floor of the latter. Within the hot air room is placed a furnace, stove, or similar heating device, 14, provided with a smoke pipe, 15, which extends longitudinally through the heating chamber, 9, parallel with the roof thereof, and communicates with a drum, 16, which is located upon the opposite side of the kiln or crematory. An outlet opening, 17, is arranged near the floor of the heating chamber to communicate with the lower end of the said drum. The drum communicates, at its top, by a horizontal pipe, 18, with the smoke flue or stack, 19.

20 represents a flue which is formed in the rear wall of the kiln and communicates with the interior of the latter by means of a vertical series of outlet openings or vents, 21, and communicates, at its top, with the upper part of the drum through the opening, 22.

23 represents a slide, arranged in the flue to close a part of the openings or vents, 21, whereby the current of air through the kiln, as shown by the arrows in the drawings, may be caused to pass close to or through the contained excrement. This slide valve, 23, is provided with a handle, 24, whereby it may be operated from the vicinity of the stool.

A hinged valve, 25, is shown in connection with the openings 5 between the hot air room and the kiln, and is connected, by means of the cord, chain, or other flexible device, 26, to the lids or covers, 27, of the stools, 28, whereby when the latter are closed said valve is open, and when the lids are open the valve is closed, in order that when the stools are in use there may be a draft downward therethrough, as indicated by the arrows. One of the stool lids is shown open in the drawings to show the direction taken by the draft.

The excrement being received upon the arch forming the floor of the kiln, the liquid portion thereof is either dried or drained into the subjacent heating chamber, and the solid portion is retained upon the arch, exposed to the heat and current above and to the heat in the hot air room, heating chamber and drum.

The slide valve is adjusted, as the quantity of excrement accumulates, to cause the draft to pass close to the surface thereof, and after the contents have become dried to the combustion point they may be ignited, (access 5 being provided through the door-way 29,) and burned, the products of combustion escaping through the drum to the smoke flue or stack.

Various changes in the form, proportion, 10 and minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

Having thus described my invention, I 15 claim—

1. In a dry-air closet, the combination of the kiln or cremating furnace arranged beneath the stools and provided with an arched, perforated floor, a subjacent heating chamber 20 provided with a drain communicating with a waste cistern for liquid excrement, a hot air room arranged at one side of the kiln and communicating therewith and with said heating chamber, a heating device arranged in 25 said hot air room, a drum located adjacent to the opposite side of the kiln and communicating therewith and with the heating chamber, a smoke pipe connected to said heating device, extending horizontally through the 30 heating chamber and communicating with said drum, and a smoke flue or stack with

which the drum communicates, substantially as specified.

2. In a dry air closet, the combination of the kiln having an arched floor, a subjacent heating chamber, a dry air room communicating 35 by openings, 5, with the kiln and containing a heating device having a smoke pipe which extends horizontally through the heating chamber beneath the arched floor of the kiln, 40 a drum with which said smoke pipe communicates, and which in turn communicates with a smoke flue or stack, a flue being formed in the wall of the kiln, connected at its upper end with the drum and provided with side 45 openings into the kiln, a slide valve arranged to close certain of the said openings to direct the draft through the kiln whereby it will pass close to the contained excrement, a valve arranged to close said openings 5, and lids or 50 covers for the stools, connected to said valve, whereby when the covers are open the valve is closed to cause a downward draft through the stools, substantially as specified.

In testimony that I claim the foregoing as 55 my own I have hereto affixed my signature in the presence of two witnesses.

GEORGE RANDAULPH SCATES.

Witnesses:

W. K. ANDERSON,
C. H. BROWN.