

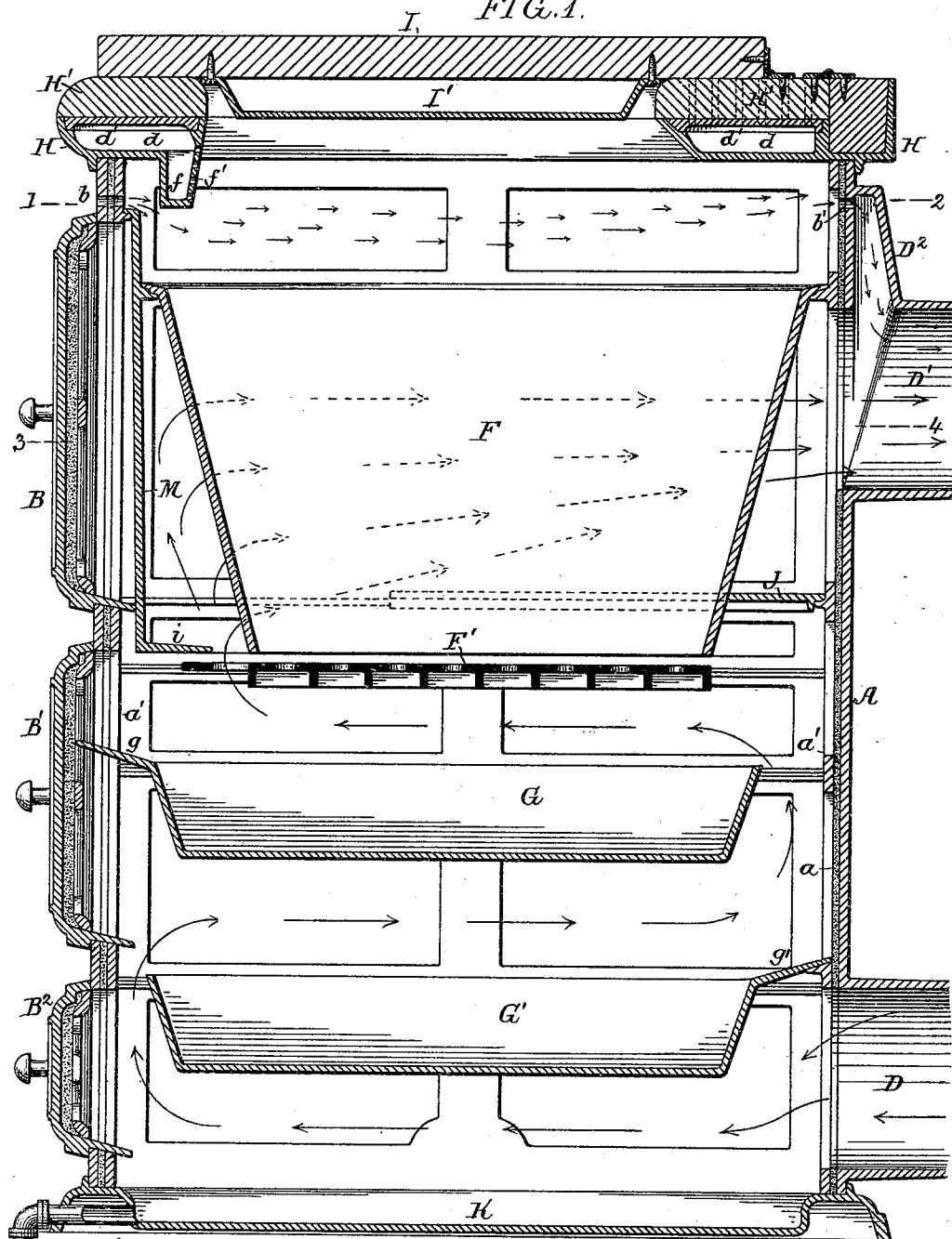
J. H. PARKE.

APPARATUS FOR DRYING OR CREMATING GARBAGE OR FECAL MATTER.

No. 481,147.

Patented Aug. 16, 1892.

FIG. 1.



Witnesses:

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Inventor:

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by his Attorneys
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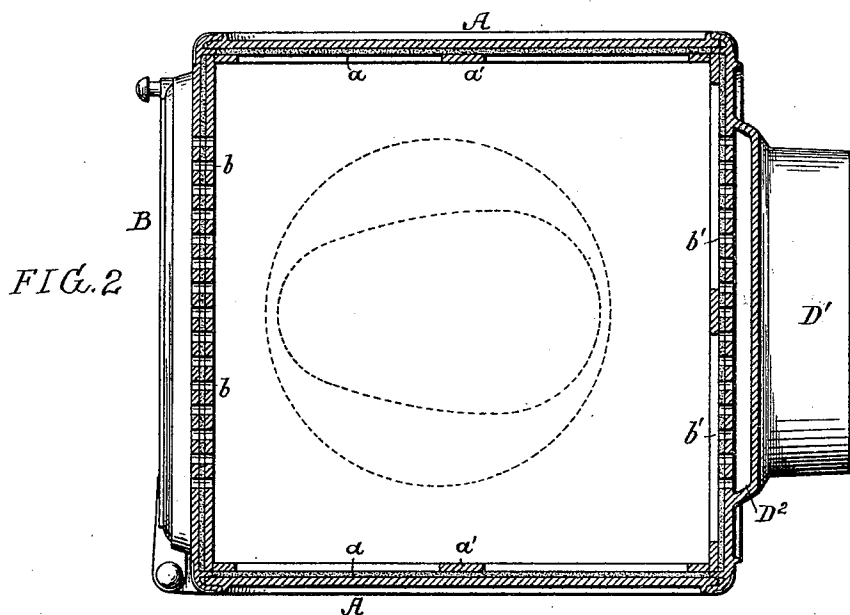
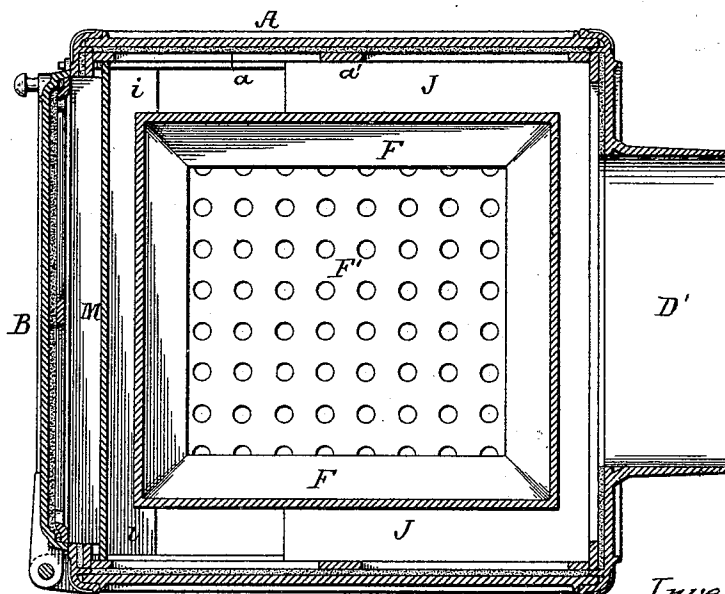


FIG. 3.



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(No Model.)

3 Sheets—Sheet 3.

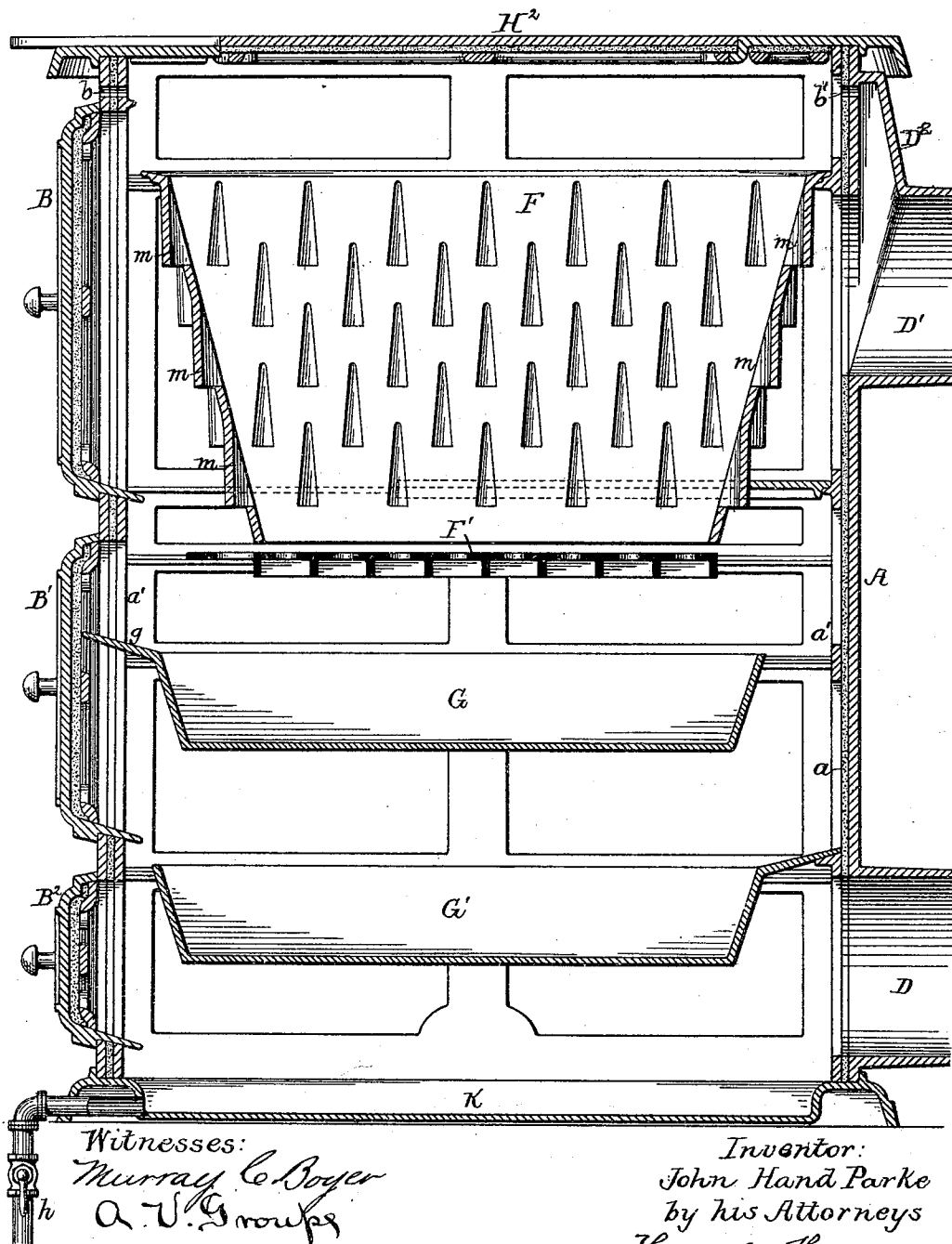
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FIG. 4.



UNITED STATES PATENT OFFICE.

JOHN H. PARKE, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR OF ONE-HALF TO OSCAR D. MCCLELLAN, OF SAME PLACE.

APPARATUS FOR DRYING OR CREMATING GARBAGE AND FECAL MATTER.

SPECIFICATION forming part of Letters Patent No. 481,147, dated August 16, 1892.

Application filed September 29, 1891. Serial No. 407,185. (No model.)

To all whom it may concern:

Be it known that I, JOHN HAND PARKE, a citizen of the United States, and a resident of Philadelphia, Pennsylvania, have invented certain Improvements in Apparatus for Drying or Cremating Garbage and Fecal Matter, of which the following is a specification.

The object of my invention is to provide an effective apparatus for the drying or cremation of garbage, fecal matter, and offal generally, the apparatus being capable of being constructed on a large scale, although intended principally for domestic use, where the heat may be derived from an ordinary kitchen-range or from an ordinary heating stove or furnace, the operation being carried on without the escape of any offensive odor into the outside atmosphere or into the air of the room or apartment in which the apparatus is situated.

The apparatus is also especially adapted for carrying out the operation of artificial nitrification and utilization of drain-waters and wastes of farm-houses or villages situated in agricultural districts.

In the accompanying drawings, Figure 1 is a longitudinal sectional view of apparatus constructed in accordance with my invention for the purpose of an odorless dry closet for the reception of fecal matter. Fig. 2 is a sectional plan view, on a reduced scale, on the line 1 2, Fig. 1. Fig. 3 is a sectional plan view, on a reduced scale, on the line 3 4, Fig. 1. Fig. 4 is a longitudinal sectional view of apparatus constructed in accordance with my invention for the purpose of destroying garbage.

In Fig. 1, A represents an outer casing, preferably of metal, having a lining *a* of some non-conducting and heat-resisting material, which lining is held in place by an internal framework *a'*, bolted or otherwise secured to the casing A.

In the front of the casing are a series of openings closed by doors B B' B², which are likewise lined with non-conducting and heat-resisting material, held in place by an internal finger.

With the casing, close to the bottom of the same, communicates a pipe D, which is in communication with the flue or chimney for

the discharge of the products of combustion from the stove, heater, or furnace, the communication being, by preference, of the character described hereinafter, so that the products of combustion may be caused to pass either directly or indirectly from said stove or furnace into the casing A, from the upper portion of which they escape to the chimney or stack through a discharge-pipe D'. The pipe D may, however, receive a supply of hot air instead of products of combustion, although the latter are preferred.

Mounted in the upper portion of the casing is a hopper F, and directly beneath the same is a grating F', and beneath the latter are two pans or trays G G', one above the other, these pans or trays being mounted upon suitable guides in the casing, so that they can be readily withdrawn when necessary.

The hopper can be constructed of wire, if desired, and with the pan or tray permanently attached thereto, without departing from the spirit of my invention.

In the front of the casing above the upper door B are a series of openings *b*, and in the rear of the casing, near the top of the same, are like openings *b'*, the latter communicating with an enlargement or hood D² upon the discharge-pipe D'.

The top H of the casing carries a hinged seat H' with opening similar to that of an ordinary water-closet, said top H having a corresponding opening formed in it. The top H' is hollow, so as to form a chamber *d*, with detachable cap-plate *d'*, this chamber being intended for the reception of disinfecting material, and the top has at the front of the seat-opening a depending portion *f*, the inner shell of which is perforated, as at *f'*, for the escape of the disinfecting-vapors into the casing A, the cap-plate *d'* and seat H being also perforated, as shown by dotted lines in Fig. 1, for the escape of disinfecting gas or vapors into the room or apartment containing the apparatus.

Hinged to the seat H' is a lid or cover I, which has secured to its under side a box or chamber I' for containing disinfectant, this box fitting within the seat-opening when the lid is lowered.

The trays G G' extend completely across the casing transversely, and the lower tray

has a flange g' extending to the rear wall of the casing, while the upper tray has a flange g , extending to the lining of the door B' , a space, however, being presented between the front of the casing and the front of the lower tray G' , and between the back of the casing and the back of the upper tray G .

Extending across the casing between the back wall of the same and the rear of the hopper F is a partition J , which also extends forward part way along each side of said hopper, as shown in Figs. 1 and 3. The fecal matter is deposited in the hopper F , the solid portions being retained by the grate F' , and the urine and liquid portions of said fecal matter passing through the grating and into the upper tray G , and, if sufficient in quantity to more than fill said tray, overflowing into the lower tray G' . These trays are amply sufficient in capacity to contain all of the liquid matter likely under any circumstances to accumulate in the apparatus; but in order to provide for the introduction of an excessive quantity of liquid matter into the apparatus within a short period, such as would cause the lower tray also to overflow, the bottom K of the casing is dished and is provided with a valved outlet-pipe h , leading to a sewer or any convenient receptacle for such liquid matter. The heated products of combustion entering the casing through the pipe D pass first under the lower tray G' , then up at the front of the same, then rearward above said tray and beneath the upper tray G , then upward at the rear of said tray G and forward over the top of the same and beneath the grate F' , thence up in front of the hopper F and along each side of the same to the rear, whence they escape through the outlet-pipe D' , the said heated products of combustion being prevented from rising around the hopper into the space above the same, owing to the contact of the flange around the upper edge of said hopper with the supporting ledge or shelf around the inner shell or lining of the main casing. The products of combustion are also, by preference, prevented from gaining access to the upper door B by means of a guard-plate M , interposed between the hopper and the lining of the casing A , this guard-plate having, by preference, at the bottom an inwardly-projecting flange i to deflect the products of combustion toward the hopper. It will be understood, therefore, that the solid matters deposited upon the grate F' and the liquid matter in the trays G G' will be subjected to such heat and will expose so much surface that the solid matter will be readily and thoroughly desiccated and the liquid matters evaporated, the products of combustion rendering inodorous the emanations from the fecal matter, and also, by reason of their heat, de-

stroying any germs of disease which might otherwise be carried into the atmosphere. Cold air enters the casing through the openings b near the top and passes directly across the casing above the hopper to the openings b' at the rear, through which it escapes into a discharge-pipe D' , and any of the heated products of combustion which find their way through the grate F' and through or around the solid fecal matter deposited in the hopper F are caught by this current and carried with it into the discharge-pipe, so as to prevent any discomfort to the occupant of the seat H' .

In constructing the apparatus for use simply as a garbage or offal cremator the seat and lid shown in Fig. 1 are dispensed with, and the casing has a plain top provided with a movable cover H^2 , and the hopper has in its sides hooded openings m , so as to provide for the more effective drainage of the contents of said hopper as well, as for the entrance of the products of combustion into the mass contained in the hopper. In either case the tray or trays beneath the hopper provide convenient receptacles for the chemical or carbonaceous matters intended to be used in carrying out the process of artificial nitrification and for fostering organisms which feed upon that portion of the refuse which would otherwise become offensive and dangerous. In some cases the hopper for fecal matter and the hopper for garbage may be placed side by side in the same casing.

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

1. The within-described apparatus for cremating or drying garbage or fecal matter, the same consisting of a casing having an inlet and outlet for hot air or products of combustion, a grated hopper for receiving the garbage or fecal matter, and one or more trays or pans beneath said hopper, said hopper and trays being interposed in the path of the hot air or products of combustion in its passage through the casing, substantially as specified.

2. The within-described dry closet, the same consisting of a casing having inlet and outlet for hot air or products of combustion, a grated hopper contained within said casing, means for causing the hot air or products of combustion to circulate around said hopper, and a seat containing a chamber for disinfecting material, substantially as specified.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOHN H. PARKE.

Witnesses:

H. F. REARDON,
JOS. H. KLEIN.