(No Model.) 3 Sheets—Sheet 1.

J. F. CHAZOTTE.

GARBAGE CREMATING FURNACE.

No. 520,105. Patented May 22, 1894.

Fig. 1.

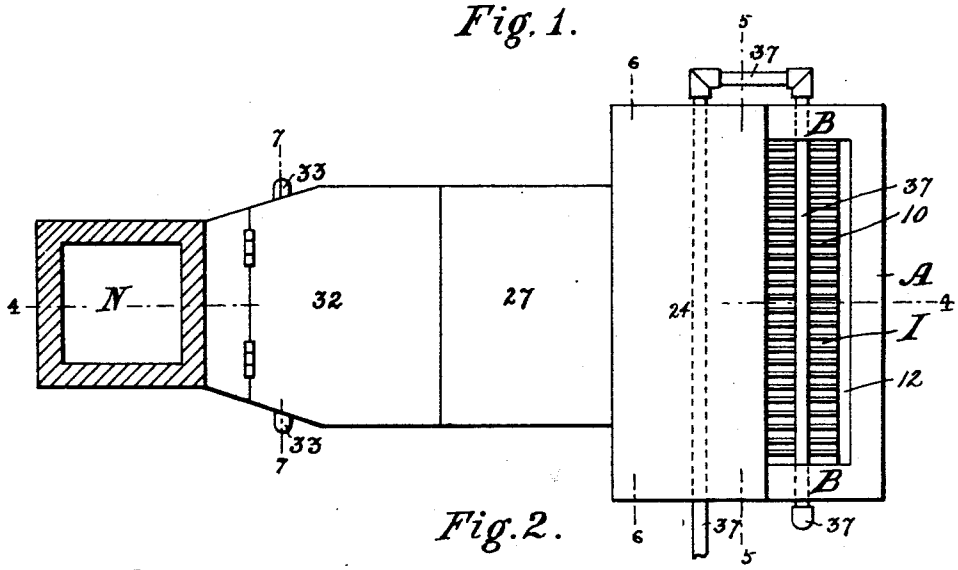
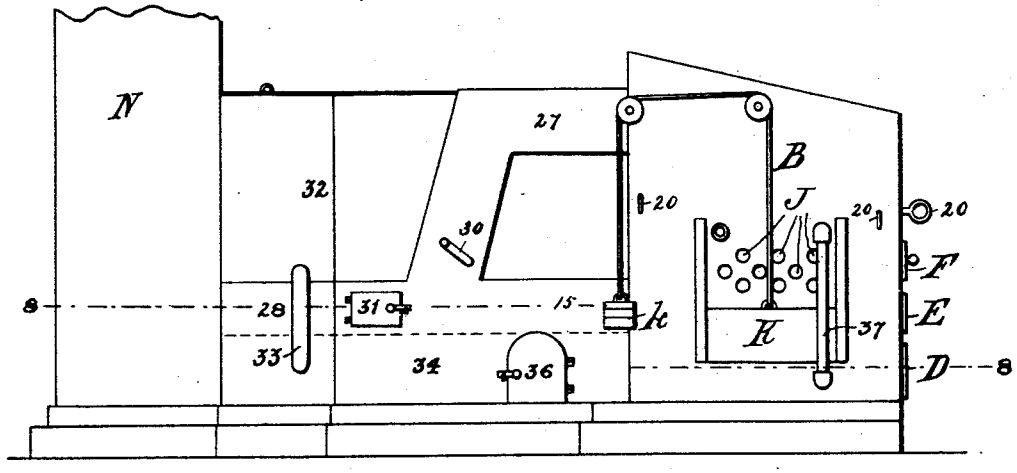


Fig. 2.



Witnesses:
E. Monty.
G. J. Lemaître.

Inventor,
Jean F. Chazotte,
Per J. Coursolle
Attorney.

THE NATIONAL LITHOGRAPHING COMPANY.
WASHINGTON, D. C.

(No Model.) 3 Sheets—Sheet 2.

J. F. CHAZOTTE.

GARBAGE CREMATING FURNACE.

No. 520,105. Patented May 22, 1894.

Fig. 3.

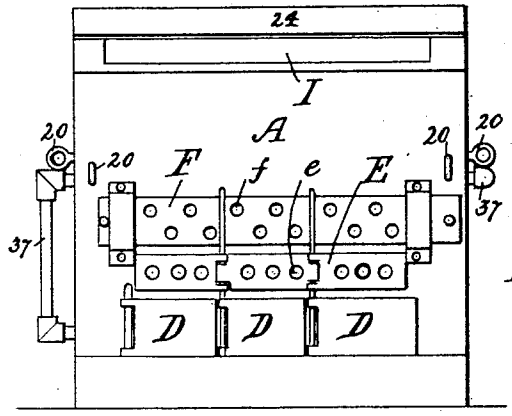


Fig. 5.

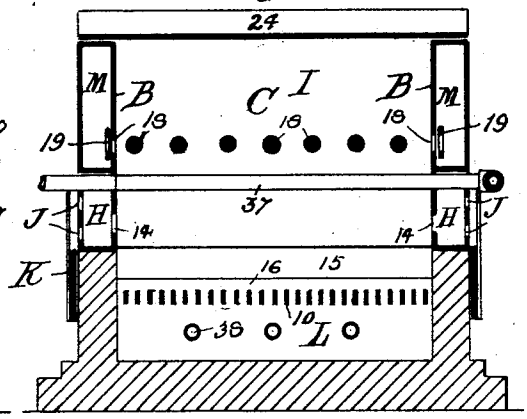
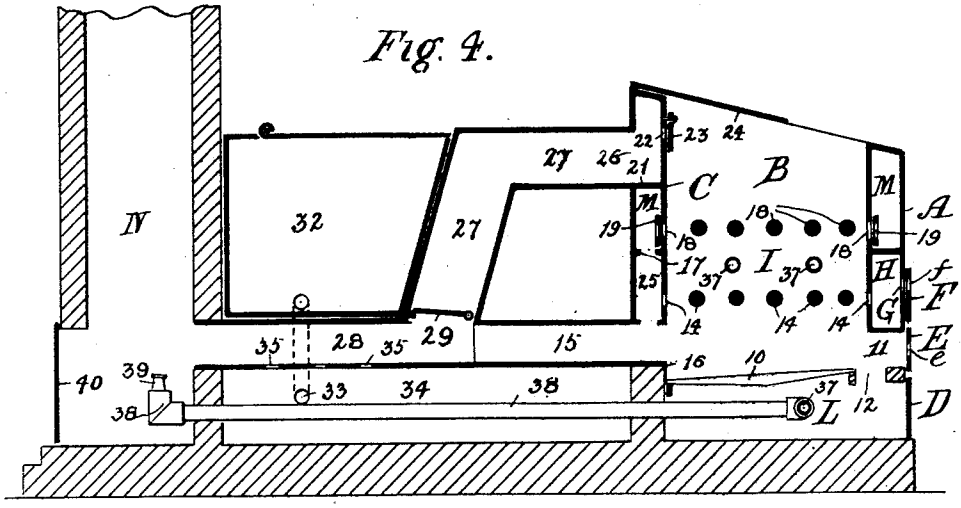


Fig. 4.



Witnesses:
E. Monty
G. F. Lemaître

Inventor.
Jean F. Chazotte
Per J. Coursolle
Attorney.

THE NATIONAL LITHOGRAPHING COMPANY,
WASHINGTON, D. C.

(No Model.) 3 Sheets—Sheet 3.

J. F. CHAZOTTE.

GARBAGE CREMATING FURNACE.

No. 520,105. Patented May 22, 1894.

Fig. 6.

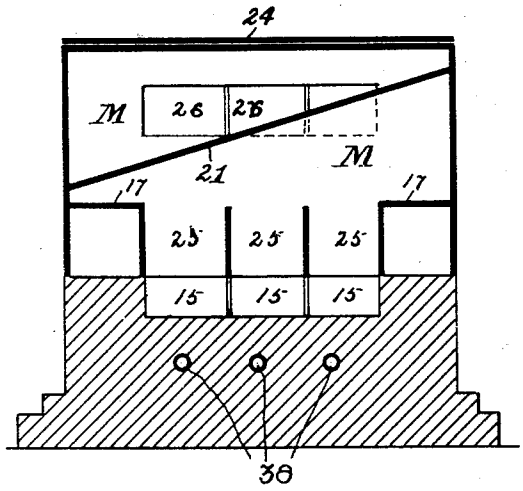


Fig. 7.

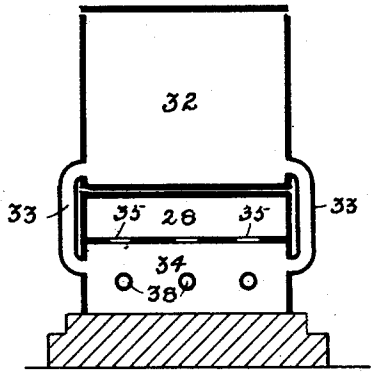
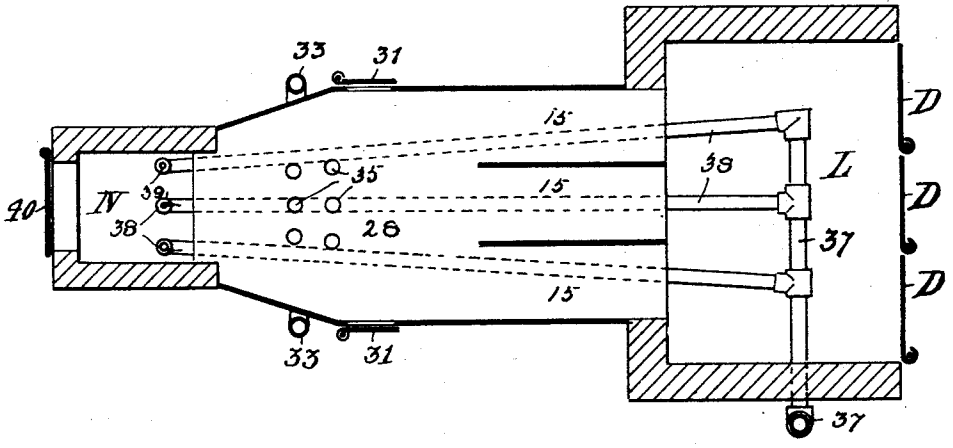


Fig. 8.



Witnesses:
E. Monty.
G. J. Lemaître.

Inventor.
Jean F. Chazotte,
Per J. Coursolle
Attorney.

THE NATIONAL LITHOGRAPHING COMPANY,
WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

JEAN FRANCOIS CHAZOTTE, OF MONTREAL, CANADA, ASSIGNOR OF TWO-THIRDS TO GUSTAVE DES TROIS MAISONS AND ANTOINE ROY, OF SAME PLACE.

GARBAGE-CREMATING FURNACE.

SPECIFICATION forming part of Letters Patent No. 520,105, dated May 22, 1894.

Application filed June 17, 1893. Serial No. 477,892. (No model.)

To all whom it may concern:

Be it known that I, JEAN FRANCOIS CHAZOTTE, a subject of the Queen of Great Britain, residing in the city and district of Montreal, in the Province of Quebec, Canada, have invented certain new and useful Improvements in Garbage-Cremating Furnaces; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part hereof.

The object of my invention is to provide a device whereby garbage, rubbish, and all kinds of fecal matter may be cremated and includes a device for drying any matter that is too moist to be put into the furnace.

Referring to the drawings,—Figure 1 is a top view of my improved furnace. Fig. 2 is a side elevation of the same. Fig. 3 is a front elevation. Fig. 4 is a longitudinal section on line 4 4, Fig. 1. Fig. 5 is a transverse section through the furnace on line 5 5, Fig. 1. Fig. 6 is a transverse section on line 6 6 Fig. 1. Fig. 7 is a transverse section on line 7 7 Fig. 1. Fig. 8 is a horizontal section through the furnace on line 8 8 Fig. 2.

The furnace consists of the outer walls, A, B, and C. The front wall A is provided with tight fitting ash doors D, above which are the low doors E for stirring up the material in the combustion chamber I. These doors have apertures *e* for the introduction of air. Above these doors is a long sliding ventilating plate F having apertures *f* adapted to register with or close apertures G formed in the front wall A. These apertures communicate with a chamber H formed on the front and sides of the combustion chamber I. In the side walls B are apertures J communicating with the chamber H. Vertically sliding plates K balanced by the weight *k*, in order that they may be more easily manipulated, close these apertures. The front wall A is lower than the rear wall C and the sides B slope upwardly from front to rear.

The combustion chamber I is formed with a grate 10 sloping from front to rear. Openings 11 in front connect with the doors E which supply a certain amount of air. Openings 12 are made in front of the grate, whereby any ashes raked out of the grate fall into the ash chamber L below. Apertures 14 are formed in the front and sides of the combustion chamber which communicate with the chamber H and by means of which any necessary supply of air may be admitted to the said combustion chamber.

Flues 15 are formed in the rear wall C of the combustion chamber just above the grate, a step 16 being formed to prevent ashes from being drawn too readily into the flues. These flues are shown corresponding with the three sets of doors, but it is evident that more or less may be used according to the amount of work to be done.

Above the chamber H is formed a horizontal wall 17, and above this wall is a flue M passing around on all sides. A series of apertures 18 are formed on all sides of the combustion chamber I, communicating with the said flue M, perforated "hit and miss" plates 19 operated by rods 20 passing through the outer walls of the furnace close or open the said apertures. At the rear this flue is divided by a wall 21 rising from the low corner at one side of the furnace to the high corner at the other, the apertures 18 in the rear of the combustion chamber communicate with the lower part of the flue. Two or more apertures 22 are formed in the upper part of the rear of the combustion chamber, adapted to be closed or opened at will by means of hinged plates 23, draw off any smoke or steam that may arise from the garbage as it is being consumed.

The top of the combustion chamber may be partially covered by a cover 24 as shown in Fig. 4.

In the rear of the combustion chamber are formed three vertical flues 25, which connect the flue M with the flues 15. Above the sloping wall 21 are apertures 26 connected with flues 27 which pass horizontally for a short distance and then turn down and communicate with the horizontal flue 28 into which the flues 15 run. A damper 29 is placed in the flue 27 which is operated by means of levers 30, from either side of the furnace. The flue 28 which is broad and low, runs for a short distance and then communicates with the chimney N. Doors 31 are formed in the side

walls of this flue for cleaning purposes. Above this flue 28 is placed a closed vessel 32 into which all garbage and other matter too moist to be readily consumed in the furnace, is deposited. Tubes 33 are connected to the bottom of this vessel and to a chamber 34, formed beneath the flue 28. Any liquid or steam that drains or is given off from the vessel 32 descends through the tubes 33 into the chamber 34 where it is evaporated by the heat of the flue 28, the steam escaping through apertures 35 in the top of the chamber, into the flue 28. Doors 36 are formed in the sides of this chamber 34 through which the residue may be taken and burned.

In order to assist the burning of the garbage in the combustion chamber and also to increase the draft, I make use of steam from any convenient source. The steam pipe 37 enters through one of the side walls of the furnace passes through the combustion chamber below the wall 17 and out through the opposite wall where it is returned and passes again through the combustion chamber and through the wall where it is turned down and passes into the ash chamber L where three or more branches 38 are connected to it. These pipes 38 pass through the evaporating chamber 34, assisting the evaporation of any liquid matter there and then discharge into the base of the chimney.

A door 40 is formed in the base of the chimney N for access to the flue 28 and cleaning purposes.

The operation of the device is as follows: Any garbage that is dry enough is dumped into the combustion chamber, a small fire being made on the grate if necessary. Any matter that is not sufficiently dry is placed in the closed vessel 32 until it is dry, when it is dumped in the combustion chamber and consumed. It will be seen from the construction of the flues that the base of the garbage only is burned, the flues being almost on a level with the grate. Smoke may be given off from the mass of garbage in the chamber that the lower flues do not carry off, the apertures 18 communicating with the flue M carrying it off, and if any smoke should rise above the garbage the apertures 22 will effectually carry it off, either by way of the flues 25 or down through the flues 25 into the main flues 15 if the damper 29 is closed. The steam pipes passing through the garbage prevent too great pressure on the grate when it is being burned and also assist in expelling any moisture that may be in the garbage. The flue M also assists in this matter. The steam being discharged into the chimney assists the draft by means of nozzles 39. The flues and chambers are all accessible so as to be easily cleaned.

Having now fully described my invention, what I claim is—

1. In a garbage cremating furnace the combination with the main flue leading from the combustion chamber to the chimney of the closed vessel 32, the tubes 33 connecting the said closed vessel with the chamber 34, the chamber 34 formed under the said main flue, and apertures 35 connecting the said chamber 34 with the said main flue, substantially as set forth.

2. In a garbage cremating device the combination with the combustion chamber of the doors E having apertures *e*, the air chamber H, means for regulating the supply of air to the said air chamber, the flue M passing around the said combustion chamber, the slanting wall 21, apertures 18 and 22 communicating with the said flue M, means for closing the said apertures flues 25 connecting the flue M with the flue 15, and flue 27 and damper 29, substantially as set forth.

Signed at Montreal this 12th day of June, 1893.

JEAN FRANCOIS CHAZOTTE.

In presence of—

J. EM. LANGLAIS,

A. BOUCHARD.