

T. GAMON.
INCINERATOR.
APPLICATION FILED JULY 10, 1911.

1,054,405.

Patented Feb. 25, 1913.

2 SHEETS—SHEET 1.

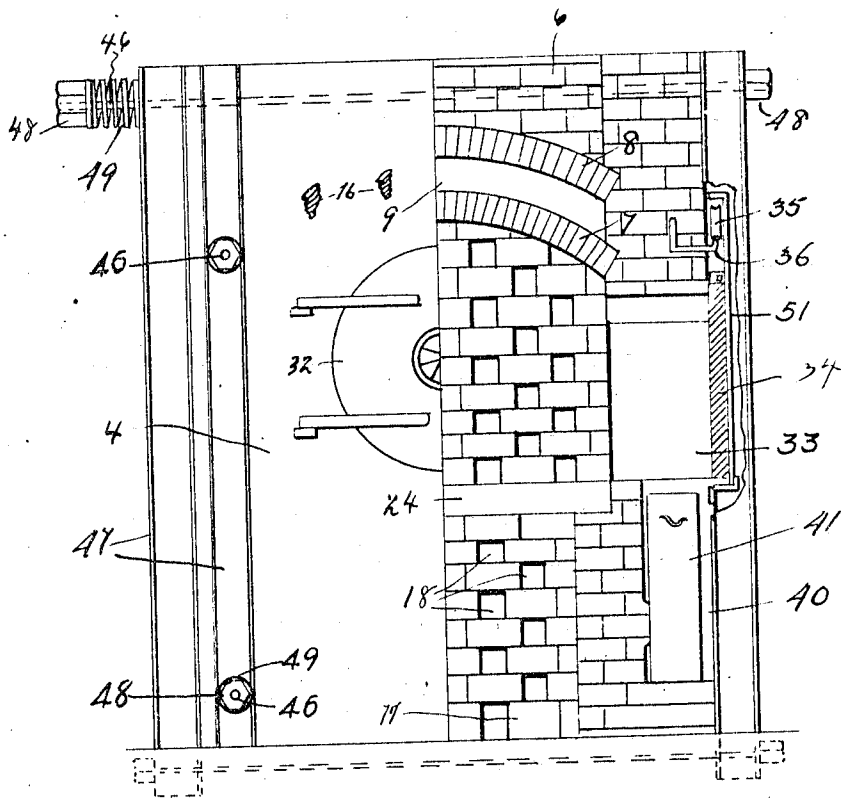


Fig 1

Witnesses
M P Williamson
mayor.

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Inventor
Thomas Gamon
W. W. Williamson
Attorney

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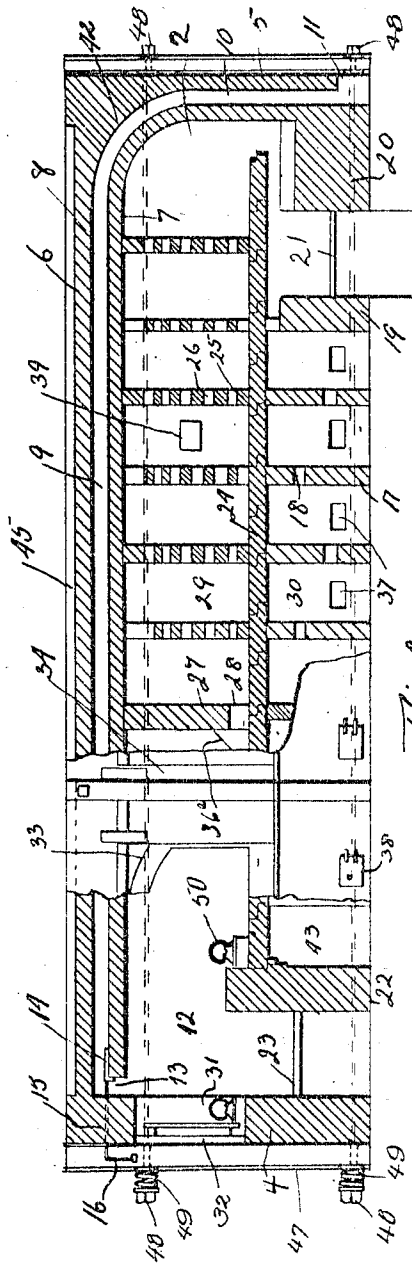


Fig. 2

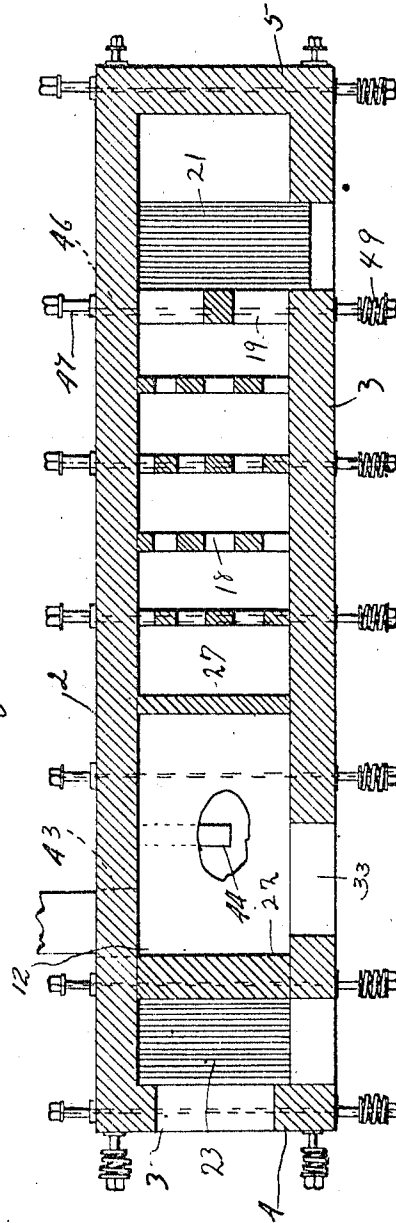


Fig. 3

Witnesses

W. P. Williamson
mayor

Inventor
Thomas Gamon

384

W. P. Williamson

Attorney

UNITED STATES PATENT OFFICE.

THOMAS GAMON, OF PHILADELPHIA, PENNSYLVANIA.

INCINERATOR.

1,054,405.

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To all whom it may concern:

Be it known that I, THOMAS GAMON, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented a certain new and useful Improvement in Incinerators, of which the following is a specification.

My invention relates to new and useful improvements in incinerators, and has for its object to provide a device of this character in which cadavers or animal matter may be burned without perceptible odor, and in which the least amount of residue or ashes will remain, said residue being odorless.

A further object of the invention is to so construct the incinerator as to secure complete combustion in order that no visible fumes may pass from the flue, and such gases as pass from the flue have no perceptible odor.

A further object of the invention is to provide an incinerator having novel means for mixing the fumes from the cadavers in their passage from the loading chamber over the secondary fire and to the flue, said means comprising perforated walls, the perforations of one wall being off-set from the perforations of the adjacent wall.

Another object of the invention is to provide means for taking care of the expansion and contraction in the walls of the incinerator.

A still further object of the invention is to provide an air inlet and passage way, said passage way passing over the primary heating or burning chamber so that said air may be heated to the proper degree before passing into the burning chamber.

With these ends in view, this invention consists in the details of construction and combination of elements hereinafter set forth and then specifically designated by the claims.

In order that those skilled in the art to which this invention appertains may understand how to make and use the same, I will describe its construction in detail, referring by letter to the accompanying drawing forming a part of this specification, in which—

Figure 1, is an end view of the incinera-

tor, one-half showing a front elevation, the other half being sectioned away to show the interior construction. Fig. 2, a reduced longitudinal vertical sectional view, a portion thereof remaining in elevation; and Fig. 3, a longitudinal horizontal sectional view thereof.

In carrying out my invention as here embodied, 2 and 3 represent the side walls and 4 and 5 the front and rear end walls respectively.

6 denotes the double walled arched roof consisting of the crown 7, an outer roof 8 forming between them an air space or passage way 9 which is continued downward through the rear end wall as at 10 and communicates with the outer atmosphere through the inlets 11, formed in proximity to the lower edge of said rear end wall. The front end of this air space or passage way communicates with the loading chamber 12 through the space 13 between the crown wall and the front end wall, and the size of this space 13 is regulated by suitable dampers shown here as comprising sliding damper plates 14 to which are fastened rods 15, said rods passing through the front end wall and having damper handles 16 attached thereto for manipulating said dampers.

The interior of the incinerator is divided into a number of chambers by the lateral partitions 17 having perforations 18 therein, the perforations of one wall being off set from the perforations of the adjacent walls. At the rear of the incinerator are built the walls or partitions 19 and 20, between which is mounted a grate 21 for the secondary fire. At the front of the incinerator is built a wall 22 between which and the front end wall is placed a grate 23 for the primary fire. On these partitions and walls is built the longitudinal horizontal partition 24, preferably formed of rabbeted terra-cotta tiles. From this partition to the crown wall of the device, are built the lateral partitions 25 having perforations 26 so that said partitions are similar to those described for the lower chamber, and these partitions are built just above the partition 17. Some distance forward of the front partition 25 is built a wall 27 having a passage way 28 there-through, at the bottom thereof or adjacent the partition 24. From this description it

will be seen that two longitudinal chambers 29 and 30 are formed by the partition 24, and each of these chambers is sub-divided by partitions having perforations therein, through which the fumes from the burning cadavers must pass, and in so passing are broken up or sub-divided and thoroughly mixed, causing complete combustion to take place before reaching the flue.

10 In the upper chamber 29 at the forward end thereof, is produced the loading chamber 12 herein before spoken of, which is in direct communication with the primary fire. This loading chamber has two entrances; 15 one a door way 31 produced in the front end wall and closed by a hinged door 32, the other being a door way 33 in one of the side walls and preferably closed by sliding doors 34 which carry brackets 51 having 20 grooved pulleys 35 journaled thereto, said grooved pulleys running upon a track 36 embedded in the side wall of the incinerator. The door 33 is generally used for small parts which may be readily carried in small 25 sized cans or buckets, while the front end door way 31 is used for longer parts or complete bodies which are placed in the loading chamber by rolling them upon the rollers 50 stationarily mounted in the chamber.

30 In the loading chamber and against the partition 27 is placed a guard 36^a to prevent the receptacles containing the cadavers from coming in contact with said partition 27 which would close the opening 28. Each 35 of the chambers formed between the lower walls 17 is provided with outlet openings 37 closed by doors 38, these openings permitting any residue to be cleaned from the chambers. The upper chambers formed by 40 the walls 25 are provided with inspection holes 39 so that a person may readily ascertain what is going on within the incinerator.

In one of the side walls below the floor of the loading chamber 12 is formed a bucket 15 cavity 40 for the reception of the bucket 41 into which may be placed the residue after the burning is completed. The meeting of the rear end wall and the roof is preferably 50 arched as indicated by 42 which will assist in deflecting fumes downward and will not hinder the passage of the air.

In the lower chamber 30 adjacent the flue outlet 43 is built a solid wall 44 which extends partway across the chamber 30 to produce a flue check. The roof is built below 55 the upper edges of the walls, thereby producing a cavity 45 in which is placed sand to prevent radiation of the heat.

In devices of this character it is often 60 found that because of the great heat, the walls expand and contract, thereby loosening said walls and weakening the same. I have found that this expansion and contraction may be compensated for through

the tie rods 46 which extend both laterally 61 and longitudinally through the walls of the incinerator and through I-beams 47 which lie vertically against the outer surfaces of the walls. On the ends of these tie rods are 70 threaded the nuts 48 and between one of said nuts and the I-beam is placed a helical spring 49 which is coiled about the tie rods so that when the walls expand these springs will be compressed and as the walls cool off and contract, these springs will force the 75 walls to their normal positions.

The operation of the device is as follows: The fires having been run for some time, the perforated walls become very highly heated and when the entire incinerator has become 80 thoroughly heated, the material is introduced into the loading chamber 12. The heated air passing over the material causes combustion of said material, and as the same is disintegrated the fumes pass off. These 85 fumes are carried through the perforated walls where they are broken up, thoroughly mixed and raised to a very high temperature, so that as they are carried over the secondary fire they will be completely 90 burned, but should any of them escape they will be again broken up as they pass through the lower perforated walls and because of the heat of these walls complete combustion will take place, and that which passes off 95 through the flue will have no perceptible odor and will be practically invisible.

Of course I do not wish to be limited to the exact details of construction as here shown, as these may be varied within the 100 limits of the appended claims without departing from the spirit of my invention.

Having thus fully described my invention, what I claim as new and useful, is—

1. An incinerator consisting of a housing 105 divided into an upper and lower chamber communicating at their rear ends, said upper and lower chambers being sub-divided by perforated partitions for breaking up and heating the fumes passing through said partitions, a primary fire place in communication 110 with the upper chamber, a secondary fire place in communication with the lower chamber, and a flue leading from said lower chamber for carrying off the products of 115 combustion.

2. An incinerator consisting of inclosing walls, said walls having an air inlet therein running from the lower end of the rear wall to the forward end of the top wall, a damper 120 for controlling the flow of air through said air inlet, a longitudinal horizontal partition dividing the interior into two compartments, vertical partitions provided with perforations for sub-dividing each of said compartments, a fire place situated at the forward 125 end of the incinerator and having communication with the upper compartment, a sec-

secondary fire place formed in the lower compartment adjacent the rear end of the incinerator and over which passes the fumes, and a flue leading from the lower compartment at the end farthest removed from the secondary fire place.

In testimony whereof, I have hereunto

affixed my signature in the presence of two subscribing witnesses.

THOMAS GAMON.

Witnesses:

J. B. JARDELLA,

M. E. YOST.