

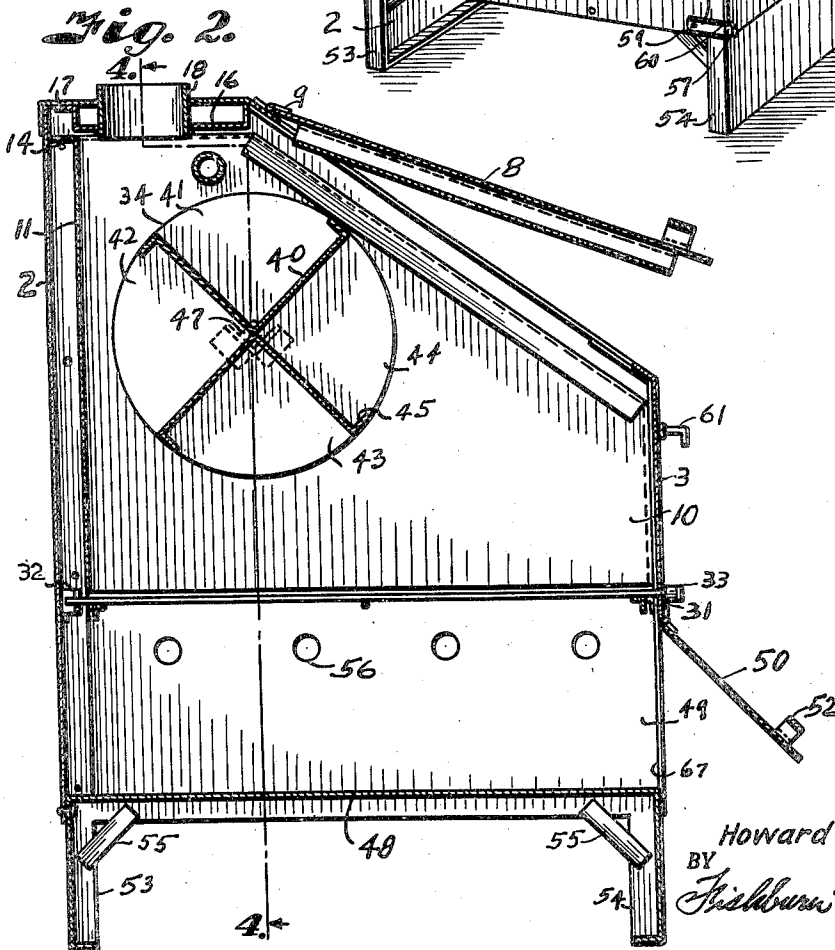
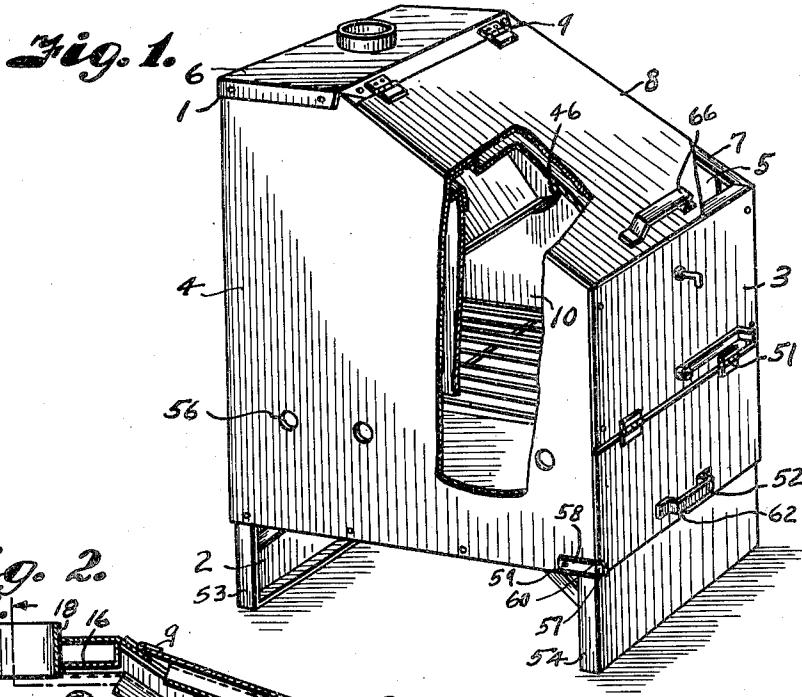
Jan. 17, 1950

H. V. PATTERSON
INCINERATOR

2,495,076

Filed Nov. 9, 1945

2 Sheets-Sheet 1



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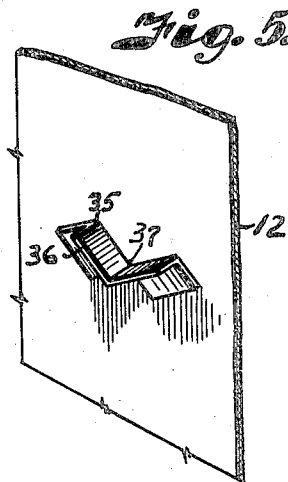
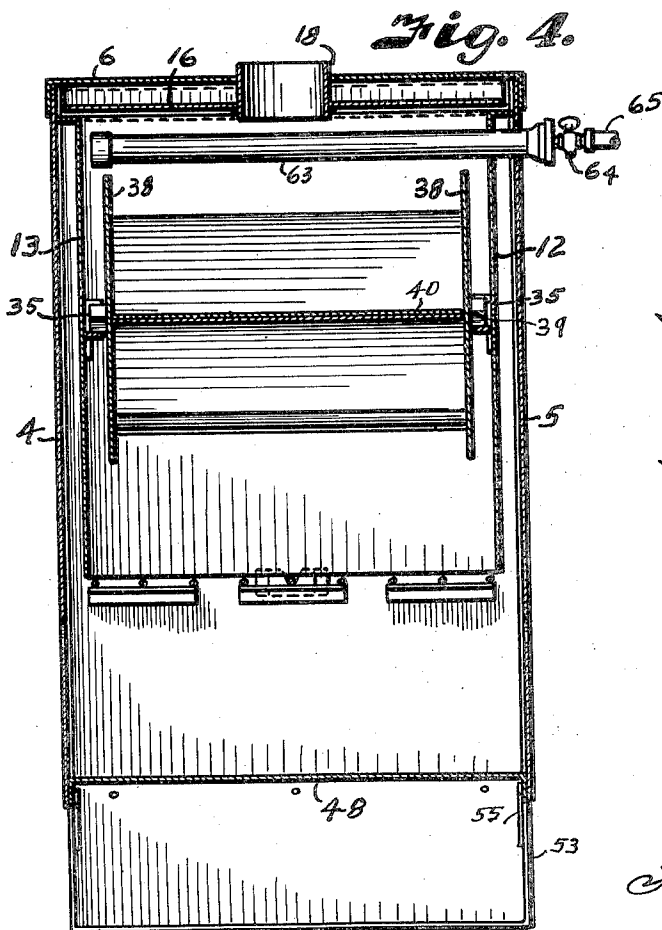
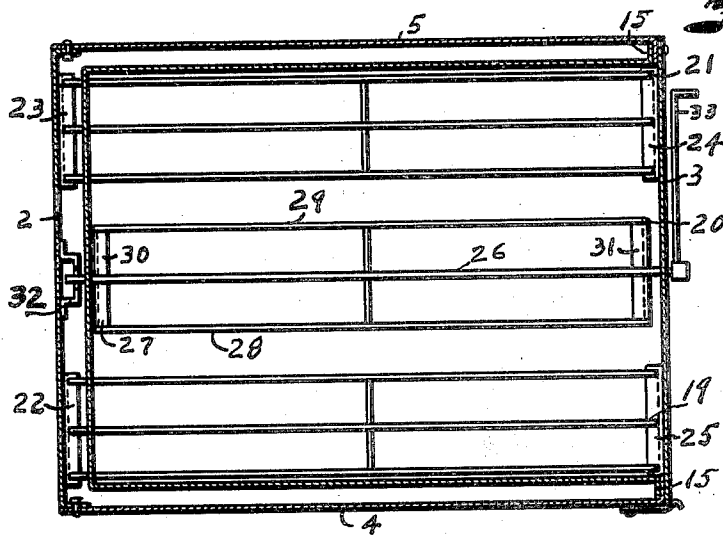
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H. V. PATTERSON
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2 Sheets-Sheet 2



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This invention relates to incinerators, and more particularly to the combination of a trash burner and incinerator for garbage disposal.

The principal objects of the invention are to provide a trash burner having a garbage disposal compartment whereby the burning of the trash will dehydrate or dry out the garbage so that such garbage may be burned in the trash burner; to provide a mounting for the garbage container whereby the container may be rotated to dump the garbage after it has been dehydrated into the burner compartment; to provide means for applying additional heat above the garbage container in the fire box; to provide a fire chamber spaced from the housing of the burner to provide insulation for the housing; to provide a mounting for the grate in the trash burner which may be rotated to cause the ashes to filtrate therethrough; to provide draft to the fire box of the burner; and to provide a device of this character simple, economical to manufacture and efficient in operation.

In accomplishing these and other objects of the present invention, I have provided improved details of structure, the preferred form of which is illustrated in the accompanying drawings, wherein:

Fig. 1 is a perspective view of the invention with parts broken away to better illustrate the device.

Fig. 2 is a cross section of the device shown in Fig. 1.

Fig. 3 is a plan view of the grate showing its mounting in the housing.

Fig. 4 is a cross section taken on a line 4—4, Fig. 2.

Fig. 5 is a perspective view showing the mounting bracket for the garbage container.

Referring more in detail to the drawings:

1 designates an incinerator embodying the features of my invention comprising a housing having a rear wall 2, front 3, sides 4 and 5, and top 6. The top 6 is provided with a forwardly sloping portion 7 provided with a door 8 hinged to the top 6 as indicated at 9. The housing is preferably made of sheet metal and fastened at the corners by providing flange portions by suitable means, such as welding, bolting or the like. The top is flanged to fit over the outside edges of the housing and the front portion of the flange sloped to accommodate the hinges 9 (Fig. 1).

Located within the housing is a fire chamber 10 having a rear wall 11 spaced from the rear wall 2 of the housing and sides 12 and 13 spaced

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from the side walls 4 and 5 to form an insulation space around the fire chamber. The top of the rear wall 11 is provided with an outwardly turned flange 14 for attaching to the wall 2, and the sides 12 and 13 of the fire chamber are fastened at their bottom edges to the front wall of the housing by lateral flanges 15 as best illustrated in Fig. 2. It will be noted that the fire chamber is thus spaced from the rear and side walls of the housing so as to eliminate excessive heat through the outer wall of the housing. A wall 16 is attached to the top 6 of the housing by welding or other suitable means as indicated at 17 (Fig. 2) and spaced from the top to form an insulation space to prevent excessive heat from reaching the top 6. A smokestack 18 is provided which extends through the top 6 and intermediate wall 16 to the fire box 10 for the elimination of smoke and fumes therethrough.

Located within the housing and forming a bottom for the fire chamber 10 are grates 19, 20 and 21. The grates 19 and 21 have their rear ends extending through the wall 11 of the rear of the fire box and are attached to the rear wall 2 of the housing by brackets 22 and 23. The brackets may be secured to the rear wall 2 in any suitable manner, such as by welding or bolting. The front ends of the brackets are attached directly to the front 3 by brackets 24 and 25, the front and rear brackets forming a suspension for the fire chamber in the housing. The grate 20 is provided with a central rod 26 rigidly secured to a frame 27 which comprises slide rods 28 and 29 and end portions 30 and 31. The rod 26 extends through the rear wall 11 of the fire chamber and through the front wall 3 of the housing. The rear end of the rod is loosely mounted in a bracket 32 secured to the rear wall 2 of the housing and the forward end of the rod 26 extends through the wall 3 of the housing and is provided with a handle 33 rigidly secured to the rod in any suitable manner for rotation of the grate 20 to cause sifting of the ashes therethrough. While the grates are formed so that ordinarily the ashes will sift therethrough without assistance, in burning of magazines or like articles it may be necessary to stir up the trash by shifting of the grate. While I have shown only the central grate as rotatable, it will be obvious that all of the grates could be rotated if desired without departing from the spirit of my invention.

Located within the fire chamber preferably substantially to the rear thereof and above the fire grate, is a garbage receptacle 34 mounted on

the sides 12 and 13 of the fire chamber by brackets 35. The brackets are flanged as indicated at 36 and shaped to form a V-shaped bearing 37 for the garbage receptacle.

The garbage receptacle 34 is cylindrical in form and preferably has ends 38 secured to a shaft 39 which extends through the ends 38 at substantially the centers thereof. The receptacle is provided with longitudinal partitions 40 dividing the receptacle into compartments 41, 42, 43 and 44. The outer edges of the partitions 40 are turned laterally to form flanges 45 so that they will fit in the ends 38 of the receptacle which are also flanged as indicated at 46 (Fig. 1). The flange 45 will also aid in retaining the garbage in the compartments. The shaft 39 is preferably substantially square as best illustrated at 47 (Fig. 2) and the ends extending through the cylindrical ends 38 of the receptacle are adapted to engage in the V-shaped bearing 37 of the brackets 35 so that the edges of the shaft fitting in the V-shaped groove will prevent the receptacle from rotating until moved by the operator as later described.

A bottom 48 is provided for the ash box 49 having a door 50 hingedly connected to the front wall 3 by hinges 51 and having a handle 52. Formed integrally with the bottom 48 and extending downwardly therefrom are legs 53 and 54. While I have here shown the legs as solid and extending across the front and rear of the housing, any suitable legs may be provided. Brace bars 55 are provided at each corner of the bottom of the housing to lend rigidity to the device.

Perforations 56 are provided in the sides 4 and 5 of the housing to allow air to enter the ash pit to provide a draft while burning the trash on the grates. If desired, the door 50 may be opened to add additional draft to the fire chamber. A lug 57 is provided in the lower corner of the door 50 to extend slightly beyond the side 4 of the housing. A latch 58 is pivotally mounted on the side for the housing as indicated at 59 and having a slot 60 in the outer end thereof adapted to engage over the lug 57 for latching the door in closed position. A locking member 61 is provided in substantially the center of the front side 3 of the housing near the top thereof and pivotally connected thereto so that when the door 50 of the ash pit is raised for cleaning out the ashes, the locking member 61 may engage in the notch 62 of the lower edge of the door as best illustrated in Fig. 1.

Extending through the side 5 of the housing and the side 12 of the fire chamber is an elongated burner 63 preferably adapted for the burning of gas as fuel to dehydrate the garbage in the garbage receptacle should the fire from the fire chamber not be sufficient for this purpose. The burner may be of any suitable form and is provided with a valve 64 connected to a pipe or tube 65 leading to a source of fuel supply (not shown).

Operation of a device constructed and assembled as described is as follows:

Trash, such as paper or other dry material, may be placed on the grate in the fire chamber through the opening provided by raising the door 8 by handle 66 and burned in the ordinary manner. The door may be flanged if desired to fit over the sides 3 and 4 of the housing. Should it also be desired to dispose of garbage, wet papers or other material not readily burned, such material may be placed in the top compartment of the garbage receptacle and allowed to remain there during burning of trash in the fire chamber. When the heat from the burning of trash in the fire

chamber has dehydrated or dried the garbage sufficiently to allow burning thereof, the receptacle may be rotated by the hand of the operator to dump the dehydrated garbage onto the grate in the fire chamber for burning. The next compartment of the receptacle may then be available for further storage of garbage for dehydrating.

To facilitate burning of the trash in the fire chamber the center grate 20 may be rotated by the handle 33 and also to sift the ashes to the ash chamber. The ashes may be removed from the ash chamber through the opening 67 in the front of the housing by raising of the door 50.

While I preferably form my device from sheet metal or the like, it will be obvious that any suitable material may be used and the various parts flanged and secured together in any suitable manner.

My device may be adapted for either inside or outside burning of trash and wet material. When it is desired for operation in an enclosed space, the smokestack is available for disposing of fumes or smoke.

It will be obvious from the foregoing that I have provided an improved incinerator in which dry material as well as wet material may be disposed of by one operation.

What I claim and desire to secure by Letters Patent is:

1. An incinerator for disposing of trash and garbage comprising, a housing having a top, bottom, front, back and side walls, the lower portion of said housing forming an ash receptacle, a fire chamber in said housing having a top, back and side walls spaced from the walls of said housing, means for mounting the fire chamber in said housing, a horizontal grate carried by the front and back walls of said housing and forming a bottom for said fire chamber above said ash receptacle for burning of trash on said grate, said side walls having apertures therein below the grate for supplying air thereunder, a flue outlet in the top of said fire chamber and said housing, a horizontal axis garbage rack having a plurality of open radially arranged compartments adapted to receive garbage for drying, said rack being carried by the sides of the fire chamber and rotatably mounted thereon, said rack being located in said fire chamber whereby the products of combustion from said grate will flow directly around said rack to said flue outlet for drying garbage in said rack, a burner mounted in said fire chamber above said rack for supplying additional heat to the garbage in said rack, and a door hingedly connected to the top of the housing providing access to the rack and grate in said fire chamber.

2. An incinerator for disposing of trash and garbage comprising, a housing having bottom, front, back and side walls, the front wall being shorter in height than the back wall, said side walls having inclined upper edges extending from the top of the front wall upwardly toward the back wall and terminating in spaced relation thereto, inturned flanges on the upper edges of the front wall and inclined edges on the side walls, a top wall on the housing extending from the back wall to the inclined edges of said side walls, a flue connection on said top wall communicating with the interior of the housing, a door hingedly mounted on the top wall and adapted to engage the flanges on the side and front walls to close the upper portion of the housing, a horizontal grate supported on the

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walls of the housing and spaced from the bottom wall to divide the housing into a fire chamber above and ash receptacle below said grate, the side walls having apertures below the grate for supplying air thereunder, a garbage rack having a plurality of radially arranged open compartments for receiving wet garbage, and means for mounting the garbage rack for rotation in a horizontal axis transversely of the housing, said axis being substantially in vertical alignment with the front edge of the top wall whereby said rack is in the path of products of combustion moving from material burning on the grate to the flue, said rack being rotatable in either direction for dumping dried garbage onto the grate.

3. An incinerator for disposing of trash and garbage comprising, a housing having bottom, front, back and side walls, the front wall being shorter in height than the back wall, said side walls having inclined upper edges extending from the top of the front wall upwardly toward the back wall and terminating in spaced relation thereto, intumed flanges on the upper edges of the front wall and inclined edges of the side walls, a top wall on the housing extending from the back wall to the inclined edges of said side walls, a flue connection on said top wall communicating with the interior of the housing, a door hingedly mounted on the top wall and adapted to engage the flanges on the side and front walls to close the upper portion of the housing, a horizontal grate supported on the front and back walls and supported from the bottom wall to divide the housing into a fire chamber above and an ash receptacle below said grate, said side walls having apertures below the grate for supplying air thereunder, vertical liner walls spaced from the back and side walls and extending upwardly from adjacent the grate

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to form a double wall construction to the back and sides of said fire chamber between the grate and top wall, a garbage rack having a plurality of radially arranged open compartments for receiving wet garbage, means on the liner walls for mounting the garbage rack for rotation in a horizontal axis transversely of the housing, said axis being substantially in vertical alignment with the front edge of the top wall whereby said rack is in the path of products of combustion moving from material burning on the grate to the flue connection for drying garbage in the rack, said rack being rotatable in either direction for dumping dried garbage onto the grate, and a burner between the garbage rack and flue connection and in close proximity to the compartment of the rack containing garbage and adapted to direct a flame thereon for supplying additional heat to said garbage for drying same.

HOWARD V. PATTERSON.

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