Sept. 2, 1952 E. J. WEGGEL 2,608,943

GARBAGE AND REFUSE INCINERATOR

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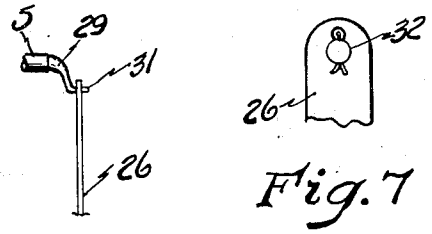


Fig. 7

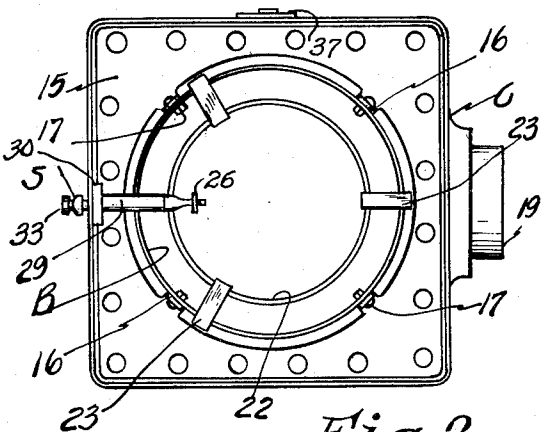


Fig. 2

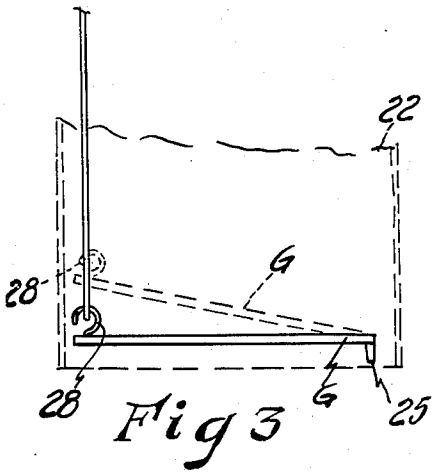


Fig 3

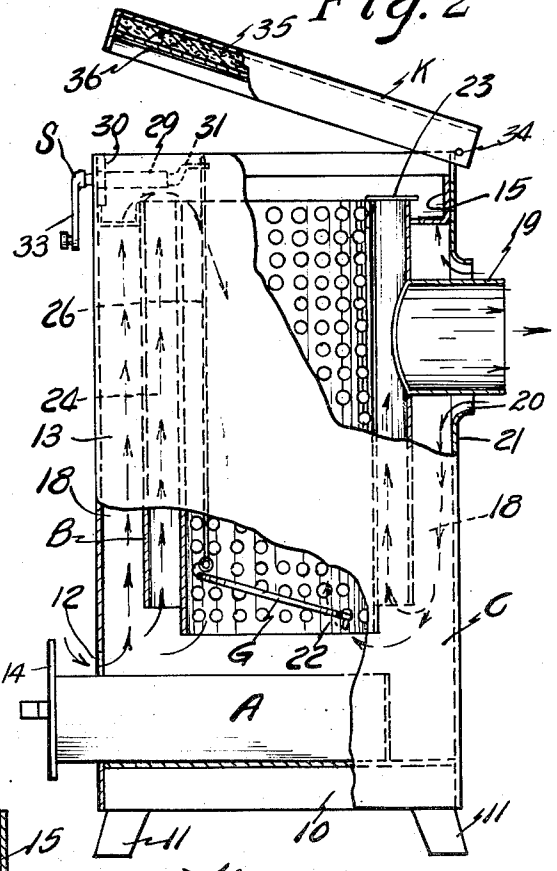


Fig. 1

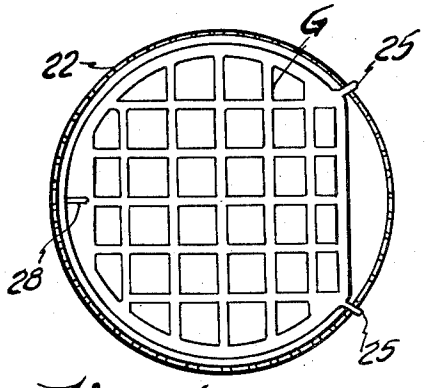


Fig. 4

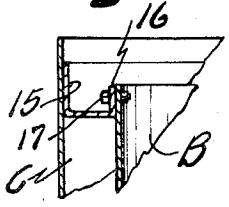


Fig. 5

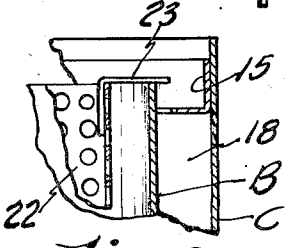


Fig. 6

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GARBAGE AND REFUSE INCINERATOR

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5 Claims. (Cl. 110—18)

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This invention relates to incinerators such as used in the home for disposing of garbage or combustible rubbish or similar refuse by burning the same with the aid of a suitable burner means.

One of the salient objects of the invention is to design a simple, practical, attractive structure which can be placed in the kitchen, office, or other part of the home or establishment, which will efficiently consume the garbage, rubbish and refuse placed therein, and from which no odors can escape to the room in which it is housed.

Another object is to design an incinerator from which the grate can be readily removed and/or replaced without the use of tools of any nature.

A further object is to provide conveniently arranged easily operable means for shaking said grate to dislodge ash therefrom, without opening a door or other closure means, thereby eliminating the possibility of dust and or odors escaping into the room in which the incinerator is housed.

A further object still is to provide a very inexpensive and economical grate structure and combustion chamber shell and arrangement which admits a maximum amount of air for dehydrating the garbage and/or refuse placed therein so that it is readily consumed as the incinerator is operated.

To the accomplishment of the foregoing and related ends, said invention then consists in the means hereinafter fully described and particularly pointed out in the claims, the annexed drawings and following description setting forth, in detail, certain means and one mode of carrying out the invention, such disclosed means and mode illustrating, however, but one of the various ways in which the principle of the invention may be used.

In the drawing:

Fig. 1 is a part-sectional, side-elevational view of my incinerator, parts being broken away to show the interior, the numerous arrows indicating the direction of flow of the air and gases.

Fig. 2 is a top, plan view with the cover omitted.

Fig. 3 is a fragmentary, side-elevational view, the solid lines showing the grate, the grate suspension, and the shaking mechanism, the broken lines illustrating the outline of the incinerator combustion cylinder with the grate in raised position.

Fig. 4 is a sectional, plan view showing the combustion cylinder with the grate in position therein.

Fig. 5 is a fragmentary, sectional view showing the manner of supporting the baffle cylinder.

Fig. 6 is also a fragmentary, sectional view showing the manner of supporting the combustion cylinder.

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Fig. 7 is an enlarged view showing the connection of the shaker mechanism to the grate support.

Referring now more particularly to the drawing in which I have shown the preferred embodiment of my invention. The letter C indicates a sheet metal cabinet which in the present instance is shown substantially square in cross section, but which can be of any other desired shape. A base 10 extends into the bottom of the cabinet C, and includes legs 11 that can be formed integral with or secured thereto as desired.

An opening 12 is formed in the front wall 13 of the cabinet and is of a size to accommodate an ash pan drawer A which slides on the base 10, the front end 14 of said pan being of sufficient area to cover said opening when in closed position, this drawer being adjustable outwardly as shown in Fig. 1 of the drawing, and forms a draft opening to control the air admitted to the cabinet.

A perforated support plate 15 is mounted in the upper end of the cabinet in any approved manner, and a sheet metal air baffle cylinder B is hung thereon, said cylinder being supported in full floating relation at spaced-apart points by means of ears 16 provided on the plate 15 formed integral with the plate 15, and to the baffle cylinder B by means of bolts 17 or the like. This baffle cylinder B is preferably round in cross section, and an air space 18 is provided between said cylinder and the cabinet walls for cooling purposes and to prevent buckling during the burning cycle.

A smoke pipe 19 opens into the cylinder B as shown, said pipe projecting through an enlarged opening 20 provided in the back wall 21 of the cabinet, this opening being of larger diameter than the smoke pipe, and forms a safety vent for the escape of gas should the flue in any manner become blocked.

A perforated combustion cylinder 22, open at both ends, is hung in the baffle cylinder B and is supported on spaced-apart brackets 23 as shown, and here again, an air space 24 surrounds the combustion cylinder through which air, admitted by advancing the ash pan drawer and through the opening 20 in the cabinet, is circulated as indicated by the arrows shown in Fig. 1 of the drawing, this air preventing buckling of the cylinder, and drawing moisture from the refuse so that it readily burns.

Air also flows upwardly between the baffle and the combustion cylinder, and through the combustion cylinder, thus dehydrating the charge (not shown) placed in the cabinet for burning, this air mingling with the burning gases from the refuse and being drawn upwardly through the smoke pipe **19** and thence to the chimney (not shown).

A grate G is mounted in the cylinder **22** and is formed with spaced projecting lugs **25** which are removably inserted in certain of the perforations or openings in the cylinder. A grate suspension link **26** supports the front end of the grate and is formed with an eye (not shown) adjacent the lower end for engagement with an eye bolt **28** provided on the front end of said grate, or it can be attached directly to the grate if desired.

A shaker mechanism S is provided adjacent the upper end of the cabinet and comprises a shaft **29** journaled in a bearing **30** provided in the front wall of the cabinet, and a crank **31** is provided on the inner end of said shaft, the end of the crank projecting through a suitable opening **32** provided in the upper end of the link **26**.

A handle **33** is provided on the outer end of the shaft **29**, and rotation of said handle imparts a lifting action to the grate, raising and lowering the front end so that jamming is practically impossible.

I wish to direct specific attention to the fact that the grate does not completely cover the circumferential area of the combustion cylinder, and it will be obvious that when the grate is agitated to remove ash etc., the raising of the front end of the grate tends to discharge cans and other non-combustible solid objects, by gravity, into the ash pan, and it will be apparent that this grate is readily removable and/or replaceable.

A cover K is hingedly connected to the cabinet C at the point **34**, and forms a closure for the upper end thereof, said cover being insulated as shown at **35**, and a sheet of corrugated metal **36** is provided on the inner face thereof, this corrugated sheet expanding as the garbage and refuse is burned.

The incinerator consumes all combustible refuse, but under abnormal conditions gas is utilized to complete the burning operation. A gas connection **37** is mounted on the side wall of the cabinet and a burner (not shown) is provided in the front of the cabinet just below the grate so that the flame is directed directly on the charge in the combustion cylinder.

In use, the incinerator is installed closely adjacent a chimney, and the smoke pipe **19** is connected thereto; the cabinet cover K is swung open and garbage or refuse such as waste paper and other inflammable materials are placed in the combustion cylinder. This is then lighted; the ash drawer is adjusted to provide the desired draft, and the mass will dry as it burns until it is entirely consumed; however, should the waste or garbage in the basket be wet and soggy, the gas burner is lighted so the mass is readily dried and burned.

From the foregoing description, it will be obvious that I have perfected a very economical, efficient and neat-appearing incinerator that completely consumes garbage and refuse of any nature.

What I claim is:

1. A garbage incinerator comprising a cabinet open at its upper end, a perforated support plate in the upper end thereof, an open baffle cylinder suspended from the support plate and forming an air space between said cylinder and the walls of the cabinet, an open ended, perforated combustion cylinder suspended from said support plate within said baffle cylinder, spaced-apart expansion brackets forming the suspension means between the combustion cylinder and the support plate, a grate pivotally mounted at its rear end in said combustion cylinder, a suspension link detachably connected to the front end of said grate, means for reciprocating said link, a smoke pipe connected to the baffle cylinder adjacent the upper end thereof, means for admitting air to the cabinet around said pipe, and means for admitting air to the cabinet at a point below said grate.

2. The combination defined in claim 1 in which the link reciprocating means comprises a handle journaled in the upper end of the cabinet, and a crank connection from the handle to the upper end of said link.

3. A garbage incinerator comprising a closed cabinet, a baffle cylinder suspended therein, an open ended, perforated combustion cylinder suspended in the baffle cylinder, spaced-apart expansion members connected to the upper ends of the baffle cylinder and cabinet respectively and forming the suspension means, a smoke pipe connected to the baffle cylinder at a point adjacent the upper end thereof, an enlarged air intake opening in the back wall of the cabinet and through which the smoke pipe extends and providing an air intake opening around said pipe, a grate in the lower end of the combustion cylinder, a crank mounted on the upper end of the cabinet, and a link connecting said crank and grate.

4. The combination as defined in claim 3 in which the grate is shaped to form an open space between the one edge and the wall of the combustion cylinder to discharge cans and non-combustible objects when the grate is actuated.

5. The combination as defined in claim 3 in which the grate is pivotally and detachably mounted in perforated openings in the perforated combustion cylinder, the link is connected to the front end of the grate, and the crank is mounted on the front wall of the cabinet for actuating said grate.

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