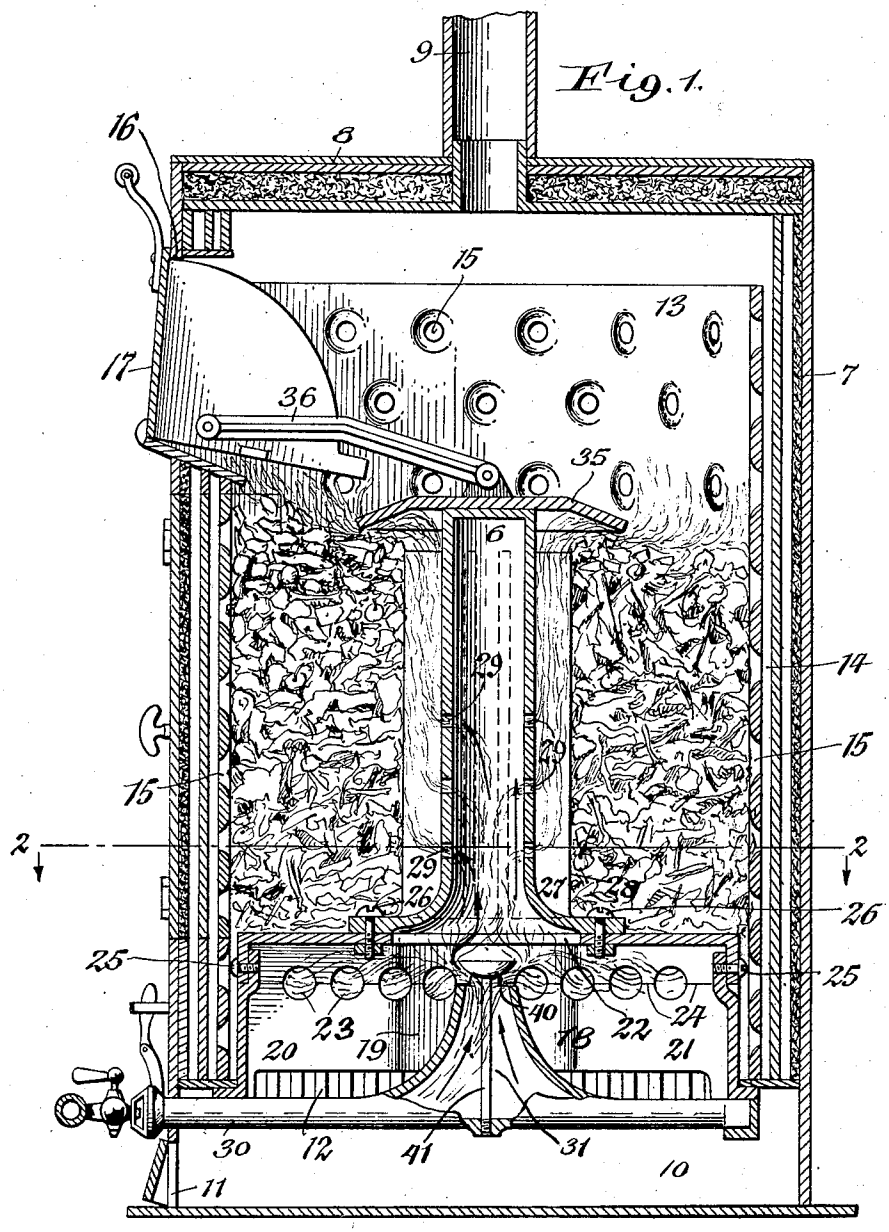
June 19, 1928. 1,674,304

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INCINERATOR

Filed Dec. 16, 1926 2 Sheets-Sheet 1

Fig. 1.



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2 Sheets-Sheet 2

Fig. 2.

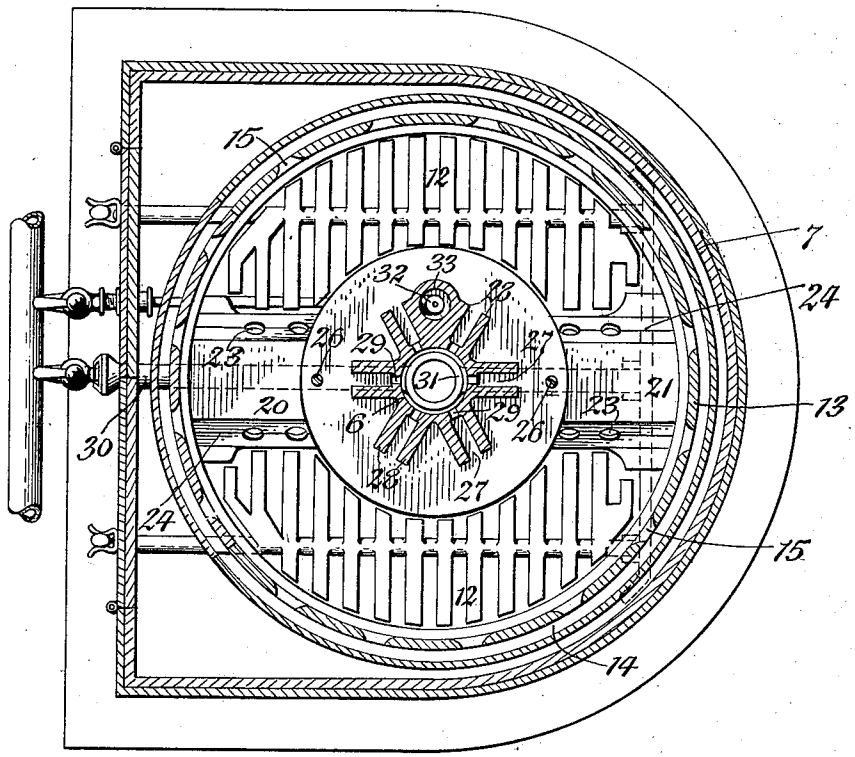
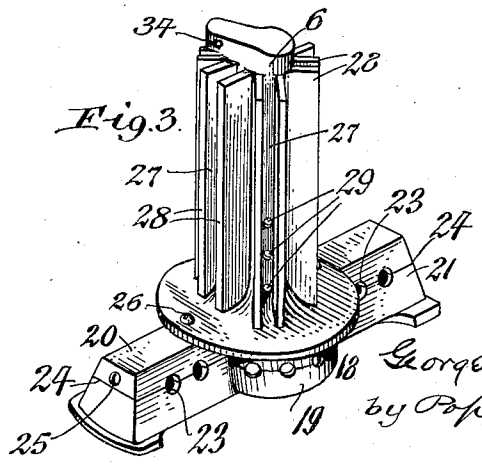


Fig. 3.



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UNITED STATES PATENT OFFICE.

GEORGE SCHAMBERG, OF BUFFALO, NEW YORK, ASSIGNOR TO BUFFALO CO-OPERATIVE STOVE CO., OF BUFFALO, NEW YORK, A CORPORATION OF NEW YORK.

INCINERATOR.

Application filed December 16, 1926. Serial No. 155,282.

This invention relates to domestic or household incinerator which is more particularly intended for destroying by fire garbage and refuse derived from the kitchen and similar sources.

It is desirable in an incinerator of this character to so organize the same that it will consume the material rapidly, economically and without creating any offensive odors.

The object of this invention is the production of an incinerator which accomplishes these requirements satisfactorily by means which can be operated easily, conveniently and at comparatively low cost.

In the accompanying drawings:

Figure 1 is a vertical section of an incinerator embodying my improvements. Figure 2 is a horizontal section taken on line 2—2, Fig. 1. Figure 3 is a perspective view of the distributor constructed in accordance with my invention.

Similar characters of reference indicate like parts in the several views of the drawings:

The enclosure or casing containing the combustion chamber of the incinerator may be of any suitable character but in the present instance the same is composed of a side wall 7, and a top 8, which latter is provided with an outlet or smoke pipe 9 which carries the products of combustion to a chimney or other flue leading to the exterior of the building.

In the lower part of the casing is arranged an ash pit 10 which is provided with an air inlet 11 on its front side and between this ash pit and the lower end of the combustion chamber is arranged a sectional grate 12 which supports the mass of refuse or garbage on its under side and which may be of any suitable construction. Within the casing is arranged a receptacle 13 for the material to be burned which receptacle extends upwardly from the grate but terminates short of the top of the casing and is separated from the side wall of the casing by a vertical air passage 14 extending from the ash pit to the top of the casing and provided with a plurality of openings 15 which are suitably spaced. The material to be burned is introduced through a feed opening 16 in the upper part of the front side of the enclosing wall, which opening is normally closed by a vertically swinging door 17.

The means for distributing the gas which consumes the material in the receptacle in accordance with my improvements are constructed as follows:

The numeral 18 represents a hollow base which is arranged horizontally and diametrically across the space between the sections of the grate from the front to the rear side of the receptacle and which is supported at its front and rear ends in any suitable manner on the adjacent parts of the fire box of the incinerator. In the preferred form of this base the same has a cylindrical central part 19 and two arms 20, 21 extending forwardly and rearwardly from this cylindrical part. In its top the central part of the base is provided with an outlet opening 22 and its side walls are provided with two horizontal rows of openings 23 through which gas is adapted to pass laterally and burn in a flame against the lower end of the mass of material in the combustion chamber. For the purpose of forming these gas openings 23 easily and at lower cost in the case the latter is divided into upper and lower sections, the dividing line 24 between these sections passing horizontally through these rows of openings 23 and the two sections being connected at their front and rear ends by screws 25, as shown in Fig. 1, or by any other approved means.

Arranged centrally within the combustion chamber and above the base is a pedestal which comprises an upright hollow column 6, the upper end of which is closed and the lower end of which flares downwardly and is secured by bolts 26 to the top of the base around the opening 22 so that the lower end of the column communicates with the base. On its exterior the column is provided with a plurality of upright flutes or channels 27, each channel being preferably formed between a pair of upright ribs 28 projecting laterally from the periphery of the column, as shown in Figs. 2 and 3. Each of these channels communicates with the interior of the hollow column by a plurality of openings 29 formed, preferably only in the lower parts of the column. By this means gas is prevented from passing from the upper end of the column into the upper ends of the channels where the flame of the burning gas would only act a short time on the material and instead of this the gas passing from the lower part of the column through the openings 29 into the lower parts of the channels

will burn in a flame in the central part of the mass of garbage or refuse from the lower part to the upper part thereof, thereby retaining the flame in contact with the material for a longer time, whereby the material is dried and destroyed more rapidly and a substantial saving of fuel is effected for consuming a given amount of garbage or the like.

The gas for producing the flames in the distributor may be supplied by any suitable means, for example, by a horizontal gas supply pipe 30 arranged in the ash pit lengthwise below the base of the distributor and provided with an upwardly projecting delivery nozzle 31 which opens into the central part of the base and the lower end of the column. In order to ensure a proper flow of gas through the gas openings 23 of the base 18, a deflector or baffle 40 is arranged at the upper end of the nozzle 31 over the nozzle outlet and serves to deflect the gas laterally toward the openings 23. This deflection, as best shown in Fig. 1, is preferably of inverted mushroom form and is mounted on a post or standard 41 which extends downwardly through the nozzle and is secured at its lower end to the bottom of the distributor in any suitable manner.

The lighting of the gas is effected by a pilot light 32 arranged in the ash pit below the base of the distributor so as to ignite the gas within the base and cause the flame thereof to pass out through the openings 23 and against the lower part of the garbage. Some of this ignited gas also passes upwardly into the column and laterally through the openings 29 thereof and thence upwardly through the channels so as to dry and burn the material in the central part of the mass.

Some of the lighted gas also passes from the base upwardly through a vertical extension passage 33 on one side of the column to the top thereof and issues laterally through a pilot opening 34 adjacent to the upper ends of the channels, thereby lighting the gas if the same should reach the tops of the channels before being ignited, whereby accumulation of unconsumed gas in the upper part of the casing and possible explosion is avoided. After the gas has been thus lighted at the base and the upper end of the column the pilot light is turned off.

As the flames issue from the upper ends of the channels on the column the same are deflected laterally over the top of the mass of refuse in the receptacle by a baffle 35 of disk form normally resting on the upper end of the column and overhanging the same, thereby compelling the gas flames to spend their full effect on the garbage for drying and burning the same before escaping through the smoke pipe.

This baffle is preferably connected by arms, similar to that shown at 36 in Fig. 1, with the feed door, so that upon opening the latter the baffle will be raised out of the path of incoming refuse and when the feed door is closed the baffle is again lowered into its operative position on the distributor column.

As the refuse and garbage is thrown into the receptacle the same piles around the pedestal and forms bridges across the channels or flutes in the same, whereby the refuse is prevented from choking the channels 27 or closing the gas openings 29, thereby insuring free passages at all times for the upward streaming flames against the core of the refuse and causing the same to dry and burn refuse rapidly with a minimum consumption of fuel.

I claim as my invention:

1. An incinerator comprising a receptacle adapted to receive the material to be burned, a distributor arranged in said chamber and having a hollow base provided on its side with openings, said base being divided into sections and the joint between said sections extending through said openings, and means for supplying gas to said base.

2. An incinerator comprising a receptacle adapted to receive the material to be burned, a distributor arranged in said chamber and having a hollow base provided on its opposite side walls with horizontal rows of openings, said base being divided into sections and the joint between said sections extending through said rows of openings, and means for supplying gas to said base.

3. An incinerator comprising a receptacle adapted to receive the material to be burned, a distributor arranged in said chamber and having a hollow base provided on its opposite side walls with horizontal rows of openings, said base being divided into sections and the joint between said sections extending through said rows of openings, a hollow column communicating at its lower end with said base and provided on its exterior with longitudinal channels which communicate with the interior of said column, and means for supplying gas to the base and column.

4. An incinerator comprising a receptacle adapted to receive the material to be burned, a distributor arranged in said chamber and having a hollow base provided in its opposite sides with horizontal rows of openings, and means for supplying gas to said base comprising a gas supply pipe, a nozzle mounted on said gas supply pipe and projecting upwardly into said base, and a baffle arranged over the outlet of said nozzle and deflecting laterally the gas issuing therefrom.

5. An incinerator comprising a receptacle adapted to receive the refuse to be burned, a distributor arranged in said chamber and having a hollow base provided in its opposite sides with horizontal rows of openings, a hollow column communicating at its lower end with said base and provided on its ex-

terior with longitudinal channels which communicate with the interior of said column, and means for supplying gas to said base and column comprising a gas supply pipe, a nozzle mounted on said pipe below said column and projecting upwardly into said base, and a baffle arranged over the mouth of said nozzle, said baffle deflecting the gas issuing from the nozzle laterally toward said horizontal rows of openings.

In testimony whereof I hereby affix my signature.

GEORGE SCHAMBERG.