

L. J. BEDARD.
GARBAGE INCINERATOR.
APPLICATION FILED MAY 24, 1915.

1,199,727.

Patented Sept. 26, 1916.
2 SHEETS—SHEET 1.

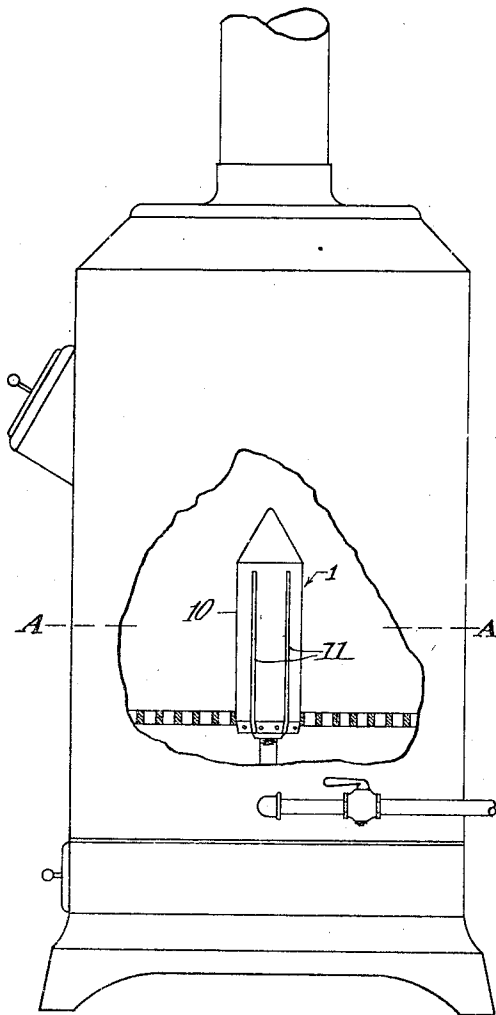


Fig 1

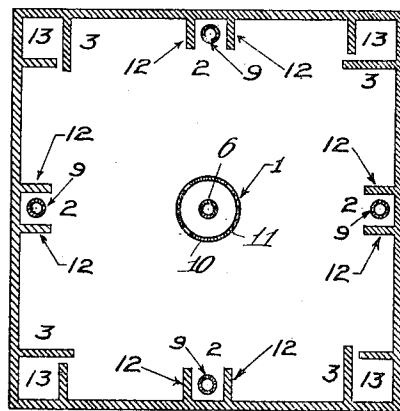


Fig 2

Witnesses
R. M. Page
J. W. Adair

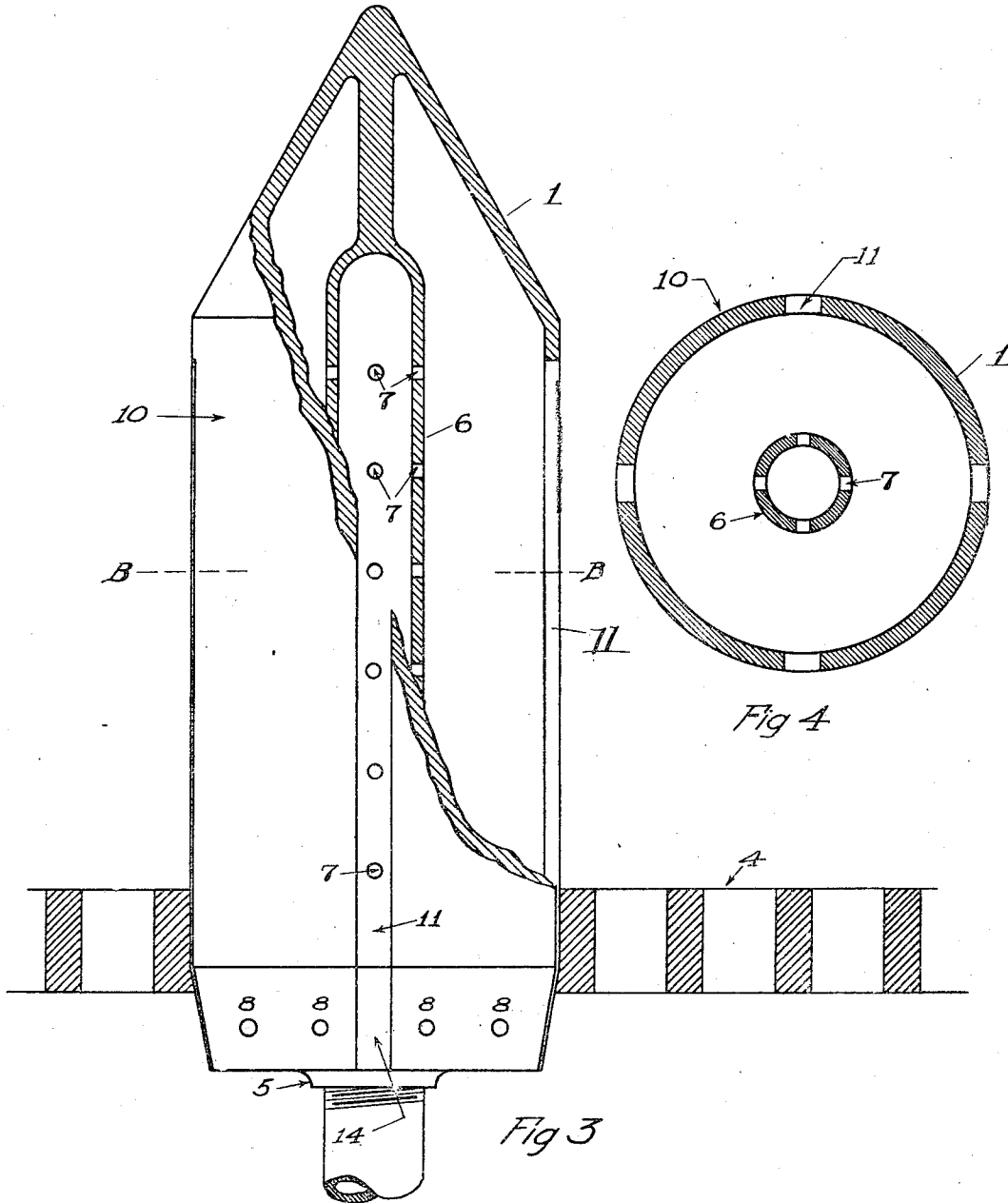
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Witnesses

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UNITED STATES PATENT OFFICE.

LUDDER J. BEDARD, OF MINNEAPOLIS, MINNESOTA.

GARBAGE-INCINERATOR.

1,199,727.

Specification of Letters Patent. Patented Sept. 26, 1916.

Application filed May 24, 1915. Serial No. 30,165.

To all whom it may concern:

Be it known that I, LUDGER J. BEDARD, a citizen of the United States, residing at Minneapolis, in the county of Hennepin and State of Minnesota, have invented new and useful Improvements in Garbage-Incinerators, of which the following is a specification.

My invention relates more particularly to providing means of applying flame throughout the midst of garbage placed in the incinerator, in such manner that the entire mass is not only heated but burned throughout at practically the same time.

The drawings disclose in Figure 1 a garbage incinerator embodying my invention wherein part of the outside casing is cut away showing the central burner and its location in respect to the grate. Fig. 2 is a horizontal cross-section taken on the line A—A of Fig. 1 showing the central burner 1, side burners 2 and air vents 3. Fig. 3 discloses a larger view of the central burner 1 and the grate 4 and Fig. 4 shows a horizontal section of the burner 1 taken on the line B—B of Fig. 3.

It has been common in garbage incinerators burning gas, to have the flame below the grate and directed up into the mass of garbage that is placed directly on the grate. With the garbage incinerator of such construction the flame acts only on the bottom of the mass of garbage, serving to ignite that portion slowly, but the action of the flame in reaching the middle and upper part of the garbage is exceedingly slow and there is first an action of drying the mass out through the heated air and gases arising from the burning of the lower portion and the upward progress of the flame is exceedingly slow. A further difficulty experienced in common types of garbage incinerators is that a mass of ashes and unburned refuse is deposited on the grate, serving as an insulator for the flame and heat.

Reference to Fig. 3 of the drawings discloses a connection 5 whereby gas may be brought to the central burner, a pipe 6 extending upward therefrom, and having holes 7 therein for freeing the gas at the points where it is to be burned. Holes 8 are also shown below the grate 4 while the holes 7 in the pipe 6 are spaced above the grate at suitable distances, the pipe 6 being of suitable height for the size of the incinerator for which it is adapted. The section shown

in Fig. 2 also discloses holes 9 in the pipes 2 and these holes may be spaced vertically in these pipes in corresponding positions as the holes 7 and 8 are spaced in the central burner. When the incinerator of this type is filled with garbage and the gas ignited, flames are shot out horizontally from the holes 7, 8 and 9, the flame from the holes 8 spreading radially below the grate and up through the grate into the garbage resting thereon. The flames from the holes 7 will extend substantially horizontally into the mass of garbage throughout practically its entire height and the same action will be had by the flames from the holes 9. The result of this application of a number of flames distributed throughout the mass of garbage results in a substantially complete combustion of the mass in a short period of time.

Reference to Fig. 4 discloses the shell surrounding the central pipe 6 having vertical slots 11 therein. When the burner is in operation, the flames extend through these slots into the mass of garbage and the wall of the cylinder 10 serves to prevent the garbage from getting close to the pipe 6 and either shutting off the flame or having it impinge upon the garbage at a point where it would not have the highest degree of heat.

The ribs 12 disclosed in Fig. 2 serve a similar purpose for the side burners 2.

The vertical chambers or air vents 13 furnish a means of allowing gases to escape upward when the incinerator is full of garbage and prevent a choking up and a possible explosion from the ignition of an accumulation of unburned gases and also help to provide air for complete combustion of garbage.

Reference to Fig. 3 also discloses the vertical slot 11 extending below the grate to the point 14, providing air for the flames in the central burner 1 and preventing the choking up by ashes or refuse at the grate surface.

While I have described and illustrated my invention with one particular type of central burner, and side burners, I wish it understood I do not confine myself to this particular arrangement of parts as described as it is evident my invention may be applied in various manners within the scope of the following claims:

1. In a garbage incinerator the combi-

nation of a chamber for burning garbage, a grate at the bottom of said chamber, a pipe extending from a point adjacent to said grate into said chamber and having multiple
 5 apertures adapted to serve as gas jets throughout substantially its length, a guard about said pipe adapted to space the garbage from said pipe and having vertical slots therein to allow the flames from the
 10 apertures in said pipe to play upon the material to be incinerated.

2. In a garbage incinerator, the combination of a chamber for burning garbage, a grate at the bottom of said chamber, a pipe
 15 extending from a point below said grate, and multiple apertures spaced throughout its length above said grate, a guard above said grate adapted to space the garbage from said pipe and having vertical slots therein to allow flames in said pipe to play
 20 upon the material to be incinerated.

3. In a garbage incinerator, the combina-

tion of a chamber for burning garbage, a grate at the bottom of said chamber, a pipe
 25 extending vertically upward from said grate and projecting upwardly from said grate, apertures in said pipe below said grate, and apertures in said pipe above said grate adapted to serve as gas jets, a guard about
 30 said pipe having vertical slots therein to protect said pipe from direct contact with substances introduced into said chamber, and allowing flames from said apertures to play upon the material to be incinerated,
 35 and vertical pipes spaced about the wall of said incinerator having multiple apertures therein adapted to serve as gas jets and guards for said pipes spaced about the walls
 40 of said incinerator, adapted to space the material to be incinerated from said pipes, but to allow the flames from said pipes to play on the material to be incinerated.

LUDGER J. BEDARD.