J. A. McNATT.

GARBAGE INCINERATOR.

APPLICATION FILED OCT. 23, 1916.

1,238,420.

Patented Aug. 28, 1917.

2 SHEETS—SHEET 1.

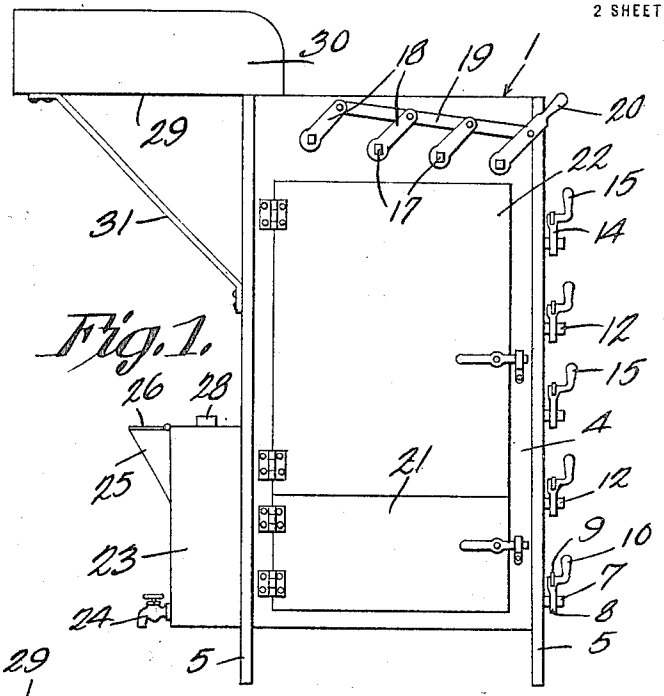


Fig. 1.

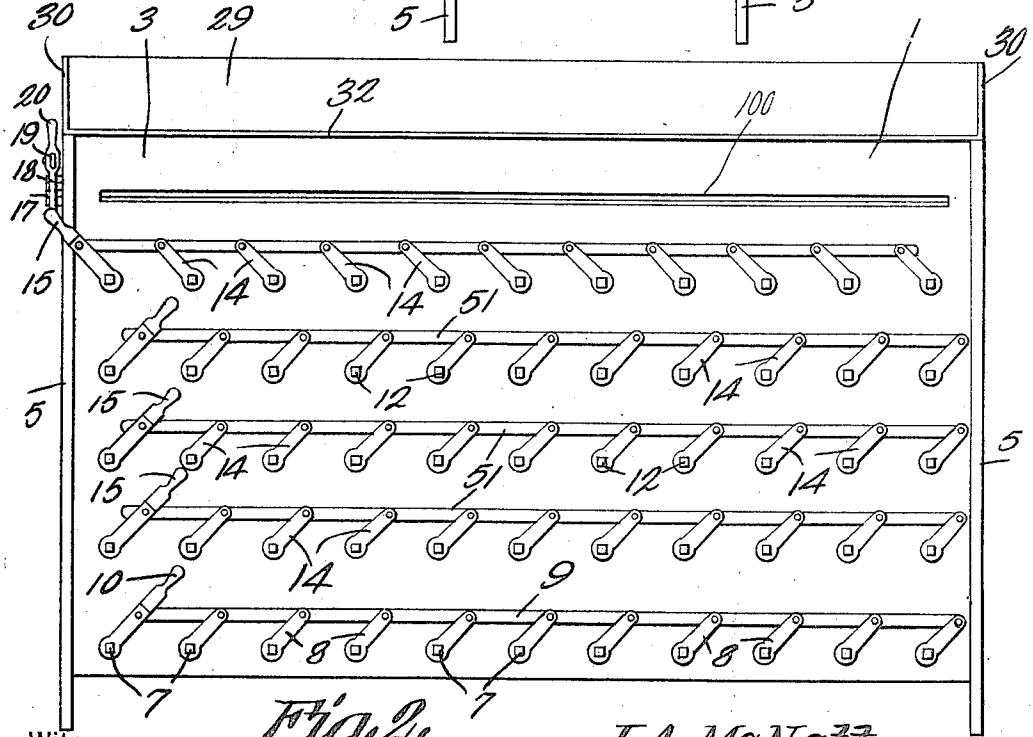


Fig. 2.

Witnesses

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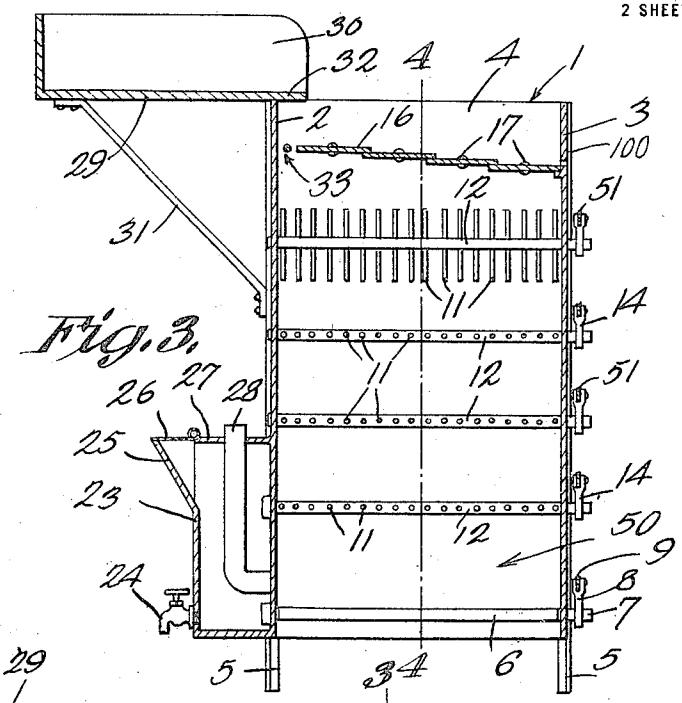


Fig. 3.

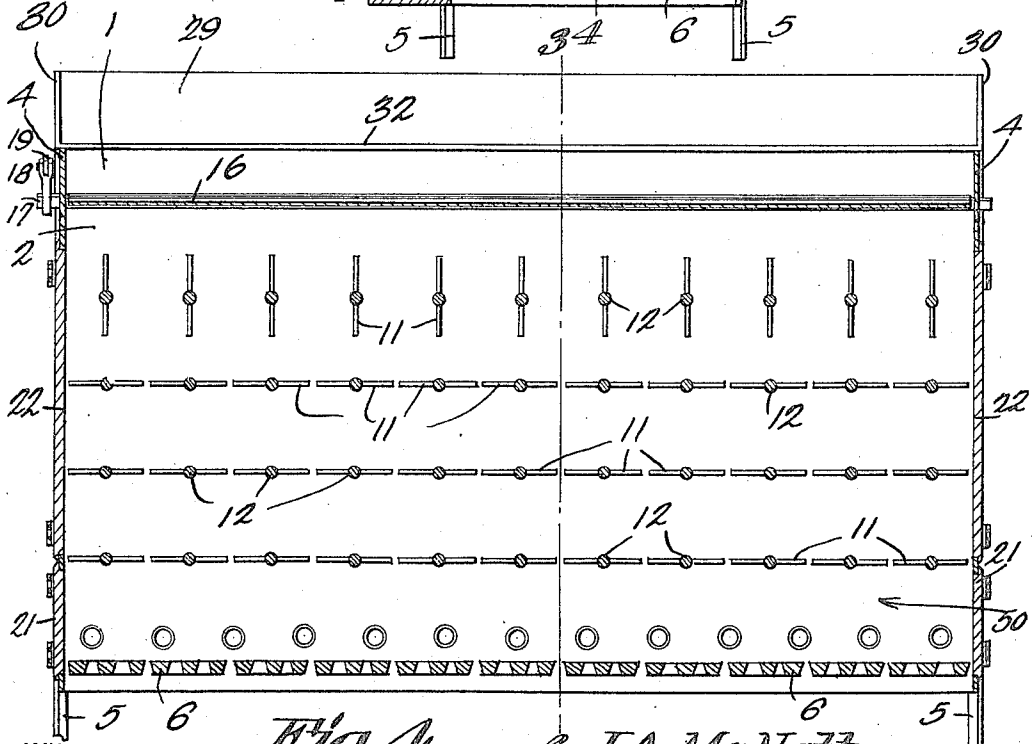


Fig. 4.

Witnesses

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UNITED STATES PATENT OFFICE.

JOSEPHUS ALVAH McNATT, OF LANSING, MICHIGAN.

GARBAGE-INCINERATOR.

1,238,420. Specification of Letters Patent. Patented Aug. 28, 1917.

Application filed October 23, 1916. Serial No. 127,201.

To all whom it may concern:

Be it known that I, JOSEPHUS A. McNATT, a citizen of the United States, residing at Lansing, in the county of Ingham and State of Michigan, have invented a new and useful Garbage-Incinerator, of which the following is a specification.

The device forming the subject matter of this application is adapted to be employed in burning up garbage, either on a large scale in a crematory, or on a small scale in stores or dwellings.

The invention aims to provide novel means for caring for the water in the garbage, and to provide novel means whereby the garbage is dried on separate grates and ultimately is dumped into the combustion chamber in a comparatively dry condition.

It is within the province of the disclosure to improve generally and to enhance the utility of devices of that type to which the present invention appertains.

With the above and other objects in view which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of the invention herein disclosed can be made within the scope of what is claimed, without departing from the spirit of the invention.

In the accompanying drawings:—

Figure 1 shows in end elevation, a garbage incinerator constructed in accordance with the present invention;

Fig. 2 is a side elevation of the garbage incinerator hereinafter described;

Fig. 3 is a transverse section of the incinerator, parts appearing in elevation; and

Fig. 4 is a longitudinal section of the incinerator on the line 4—4 of Fig. 3, the line 3—3 in Fig. 4 indicating the cutting plane on which Fig. 3 is taken.

In carrying out the present invention there is provided a casing 1 which may be made of any desired material. The casing 1 includes a back 2, a front 3 and ends 4. The casing 1 is supported on legs 5.

Disposed within the casing 1 at the lower end thereof is a fuel grate comprising any desired number of sections 6, including shafts 7 journaled in the back 2 and the front 3 of the casing 1. The shafts 7 have arms 8. A rod 9 is pivoted to the arms 8. One of the arms 8 has an upstanding handle 10. Obviously, by operating the handle 10, all of the sections 6 of the fuel grate may be dumped. The space immediately above the fuel grate forms a combustion chamber 50.

Disposed above the fuel grate 6 are any desired number of intermediate grates. Each of the intermediate grates includes sections 11 having shafts 12 journaled in the back 2 and the front 3 of the casing 1. The shafts 12 are equipped with arms 14. Rods 51 are pivoted to the arms 14, one of the arms in each set terminating in a handle 15. Obviously, by manipulating the handles 15, any or all of the intermediate grates may be dumped.

Disposed adjacent the top of the casing 1 is a drying grate comprising a plurality of imperforate panels 16 which overlap each other along their longitudinal edges, each panel 16 of the drying grate being disposed slightly below an adjoining panel, so that the water in the garbage will flow readily from panel to panel. The drying panels 16 are provided with shafts 17. The shafts 17 have arms 18. A rod 19 is pivoted to the arms 18 and one of the arms has a handle 20. As Fig. 1 will clearly disclose, by manipulating the handle 20, all of the drying panels 16 may be manipulated to dump the garbage thereon downwardly onto the next lower intermediate grate.

The ends 4 of the casing 1 are provided with stoke doors 21 giving access to the combustion space 50 above the fuel grate. The ends 4 of the casing 1 may be equipped with large doors 22 giving access to the various grates which lie above the fuel grate.

Extending along the back 2 of the casing 1 is a tank 23 which may be supplied with a draw off cock 24. The tank 23 may include a spout 25 having a hinged lid 26, to the end that water may be poured into the tank 23. The invention comprises a plurality of angular flues 28 which extend upwardly through the top 27 of the tank 23, the lower ends of the flues 28 passing through the back 2 of the casing 1. Obviously, the products of combustion, passing upwardly through the flues 28, will heat the water in the tank 23, the heated water being drawn off through the cock 24, and being

used to wash garbage cans, or for any other purpose of a like kind.

The invention comprises a platform 29 supported on the back 2 of the casing 1 and sustained by braces 31 connected with the legs 5. The platform 29 has an upstanding peripheral flange 30, adapted to retain garbage on the platform. As shown at 32, the forward edge of the platform 29 projects beyond the back 2, and in this connection, it should be observed that a suitable draft space exists, as shown at 33, between the back 2 of the casing 1 and the rear edge of the rearmost drying panel 16.

In practical operation, garbage is dumped from the cans onto the platform 29. The water in the garbage leaches out and flows along the platform 29. Because, as indicated at 32, the forward edge of the platform 29 projects beyond the back 2 of the casing 1, the water flowing from the garbage does not run downwardly through the opening 33 at the rear of the drying grate, but flows on top of the drying grate. The drying grate is heated, and because the drying grate is inclined, the water flows slowly from one panel to another of the drying grate, in a manner which will be manifest from Fig. 3. Before the water emanating from the garbage reaches the front 3, the water is thoroughly dried up, generally, but if the water is not dried up, it will flow away through a drainage outlet 100 formed in the front wall of the casing 1.

From the platform 29, the garbage may be shoveled or pushed onto the drying grate, comprising the panels 16. When the panels 16 are manipulated, the garbage is deposited on the uppermost of the intermediate grates. The garbage is then dumped successively, from one of the intermediate grates to the other, and when the garbage reaches the lowermost of the intermediate grates, it is dry enough so that it will burn readily.

The construction is such that it is never necessary to mix garbage which is partially dried, with fresh garbage, recently delivered to the incinerator. While the comparatively dry garbage is burning in the lower portion of the incinerator, the relatively wet garbage is being dried out in the upper portion of the incinerator.

Since the casing 1 is supported on the legs 5, there is an up draft through the various intermediate grates and out of the top of the incinerator through the opening 33 at the rear of the drying grate.

Having thus described the invention, what is claimed is:—

1. In a garbage incinerator, a casing; a fuel grate in the lower end of the casing; a drying grate in the upper end of the casing and comprising a plurality of imperforate panels located at different levels and having their edges overlapped, one of the terminal panels of the drying grate being spaced from one wall of the casing to define a combustion outlet, the panels being disposed in downwardly stepped relation away from said wall; means for manipulating the panels of the drying grate; an intermediate grate located between the drying grate and the fuel grate; means for manipulating the intermediate grate; and a platform carried by the upper end of the incinerator and extended above the combustion outlet, to discharge onto the drying grate, and to prevent garbage from falling into the combustion outlet as the garbage passes from the platform to the drying grate.

2. A garbage incinerator comprising a casing including front and rear walls; a drying grate in the upper end of the casing and including imperforate panels located at different heights, one of said panels being in close contact with the front wall, and another of said panels being spaced from the rear wall to form a combustion outlet; a platform constituting a part of the incinerator and extended above the combustion outlet to discharge on the drying grate, the front wall having an outlet through which liquid matter may flow from the drying grate and the panels being disposed in downwardly stepped relation from the combustion outlet to the liquid outlet; means for manipulating the panels of the drying grate; a fuel grate in the lower end of the casing; an intermediate grate located in the casing between the drying grate and the fuel grate; and means for manipulating the intermediate grate.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

JOSEPHUS ALVAH McNATT.

Witnesses:
E. P. Mills,
Harry Nesman.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."