

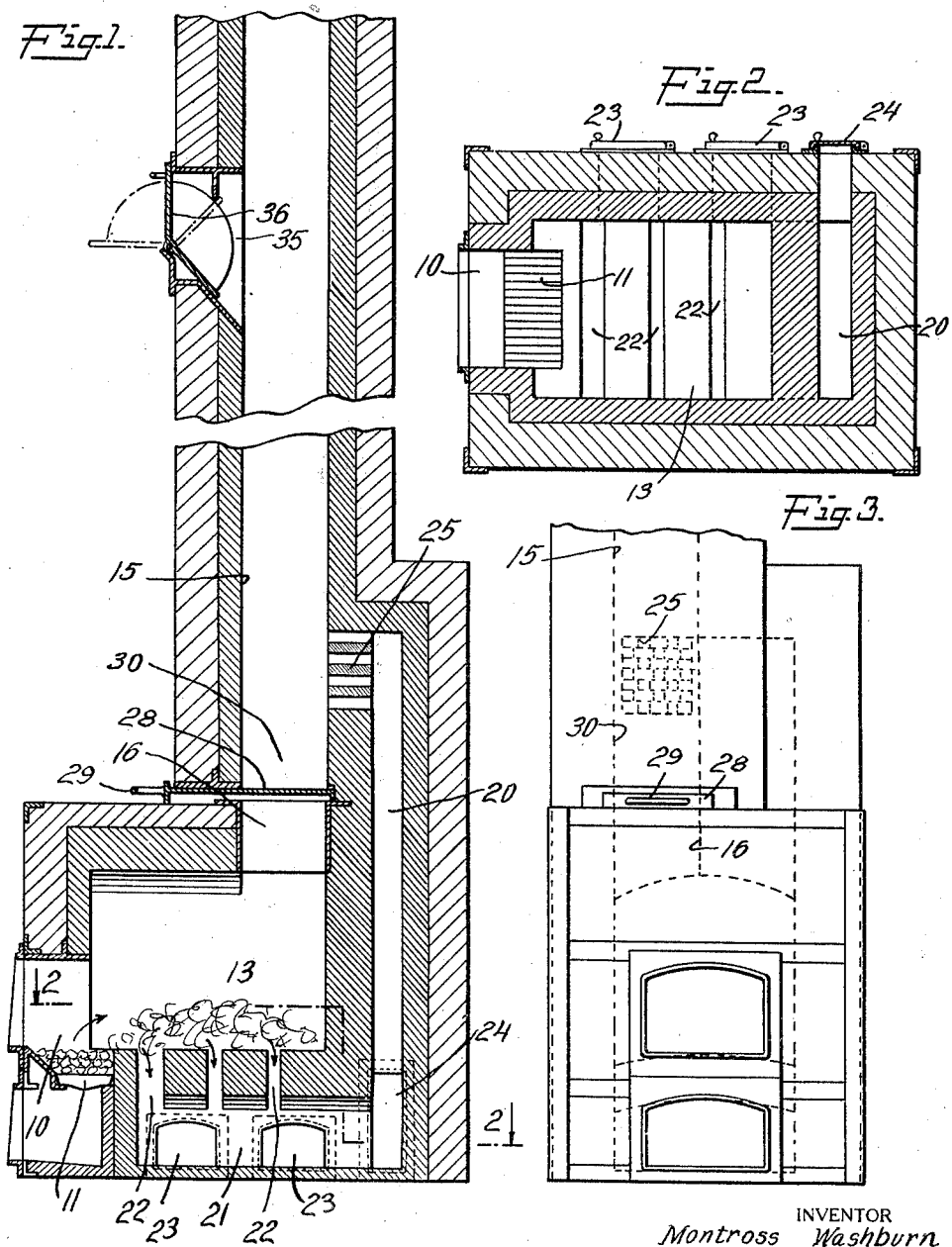
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M. WASHBURN

INCINERATOR

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UNITED STATES PATENT OFFICE.

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INCINERATOR.

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This invention relates to incinerators.

Incinerators are used in apartment houses, office buildings and other structures to burn up waste material such as garbage or other refuse. For instance, banks and similar institutions use incinerators to destroy papers and documents but it has been found that papers and such material instead of being burned or destroyed sometimes pass up the chimney and come down intact outside of the building. It will be readily understood that such occurrences give rise to complications and reflect on the institution which had the custody of the papers.

Furthermore, it is essential that garbage, refuse or other waste material be entirely consumed and in such a manner that the odors thereof will not escape.

This invention has for its salient object to provide an incinerator so constructed and arranged that none of the refuse or waste material to be consumed thereby can escape up the chimney unconsumed.

Another object of the invention is to provide an incinerator so constructed that waste material can be collected and dried out prior to its deposit in the combustion chamber.

Another object of the invention is to provide an incinerator that is simple in construction, efficient in operation and can be economically manufactured.

Further objects of the invention will appear from the following specification taken in connection with the drawings, which form a part of this application, and in which

Fig. 1 is a longitudinal sectional elevation of an incinerator constructed in accordance with the invention;

Fig. 2 is a transverse sectional elevation taken substantially on line 2—2 of Fig. 1; and

Fig. 3 is a front elevation of the structure shown in Fig. 1.

The invention briefly described consists of an incinerator comprising a grate or fire box, a combustion chamber communicating therewith, a chimney disposed above and communicating with the combustion chamber and a flue communicating with the combustion chamber from below the chamber and also communicating with the chimney above the combustion chamber. A refuse chute opening is provided at each floor in the chimney above the point of communication between the flue and the chimney and

a slide or damper is provided in the chimney above the combustion chamber and below the flue in communication with the chimney. Further details of the invention will appear from the following description.

In the particular embodiment of the invention illustrated, the incinerator has a fire box 10 having grate bars 11. A combustion chamber 13 is in open communication with the fire box and is disposed in the rear of the grate bars. A chimney 15 extends upwardly above the combustion chamber and communicates therewith through an opening 16.

A flue 20 extends beneath the combustion chamber as shown at 21 and communicates with the chamber through down draft openings 22. Doors 23 open into the space 21 beneath the combustion chamber and provide for the removal of ashes or unconsumed matter from the space 21. A clean out door 24 is also provided in the flue 20 near its base.

The flue 20 communicates with the chimney through a checkered opening 25, attention being called to the fact that this opening is disposed in the chimney materially above the combustion chamber 13. This checkered opening 25 is designed to prevent unburned material from passing into the flue 20. A horizontal slide or damper 28 is provided at the base of the chimney 15 for the purpose of closing the communication between the chimney and combustion chamber when refuse is being burned. A handle 29 is formed on the slide or damper and facilitates the use thereof.

It will be evident from the showing in Fig. 1 that when the slide or damper 28 is closed, a pocket 30 is formed above the combustion chamber for supporting and collecting waste material so that the material can be dried out prior to its entrance into the combustion chamber.

A refuse chute opening 35 communicates with the chimney 15 and is provided with a hinged bucket or closure 36 which is normally closed. These refuse openings and closures may be provided on the various floors of an apartment house or building so that any refuse to be burned can be deposited in the chimney without going to the basement where the incinerator is located.

The use of the incinerator may be briefly described as follows. Any refuse or other

material to be burned is deposited in the chimney through one of the openings 35 and if desired, such refuse can be collected in the pocket 30 formed in the chimney 5 when the slide or damper is closed. When a fire has been built on the grate, the hot gases of combustion will pass into the combustion chamber and thence downwardly through the openings 22 into the space 21 10 and flue 20 and from the flue through the checkered opening 25 into the chimney. In order to consume the refuse or waste material, the slide or damper 28 is opened and the material will drop into the combustion 15 chamber 13. The slide 28 is then closed and because of the down draft, the refuse will be entirely consumed. It will be evident that none of the waste material can pass into the chimney without being destroyed. 20 Although one specific embodiment of the invention has been particularly shown and described, it will be understood that the invention is capable of modification and that changes in the construction and in the ar- 25 rangement of the various cooperating parts may be made without departing from the spirit or scope of the invention, as expressed in the following claims.

What I claim is:

30 1. An incinerator comprising a grate, a combustion chamber disposed above said grate, a chimney communicating directly with said combustion chamber, means for closing the direct communication between 35 the chimney and chamber, a flue communicating with the combustion chamber from below and with the chimney above said chamber, thereby providing a down draft in the combustion chamber, and a refuse 40 chute opening communicating with said chimney.

2. An incinerator comprising a grate, a combustion chamber disposed above said grate, a chimney communicating directly with 45 said combustion chamber, means for closing the direct communication between the chimney and chamber, a flue communicating with the combustion chamber from below and with

the chimney above said chamber, thereby providing a down draft in the combustion 50 chamber, and a refuse chute opening communicating with said chimney above the flue opening therein.

3. An incinerator comprising a grate, a combustion chamber disposed above said 55 grate, a chimney communicating with said combustion chamber, a flue communicating with the combustion chamber from below and with the chimney above said chamber, a refuse chute opening communicating with 60 said chimney, and a movable closure in the chimney between the chute opening and the combustion chamber, adapted to close the opening between the chimney and the combustion chamber. 65

4. An incinerator comprising a grate, a combustion chamber disposed above said grate, a chimney communicating with said combustion chamber, a flue communicating 70 with the combustion chamber from below and with the chimney above said chamber, a refuse chute opening communicating with said chimney, and a movable closure in the chimney between the chute opening and the combustion 75 chamber, adapted to close the opening between the chimney and the combustion chamber, said closure being disposed materially below the opening from the flue into the chimney whereby a pocket will be 80 formed in the chimney when the chimney is closed by said closure.

5. An incinerator comprising a grate, a combustion chamber, a chimney communicating directly with said combustion chamber, means for closing the direct communi- 85 cation between the chimney and chamber, a flue communicating with the combustion chamber from below and with the chimney above said chamber through a checkered opening, thereby providing a down draft in 90 the combustion chamber, and a refuse chute opening communicating with said chimney.

In witness whereof, I have hereunto set my hand this 12th day of January, 1927.

MONTROSS WASHBURN.