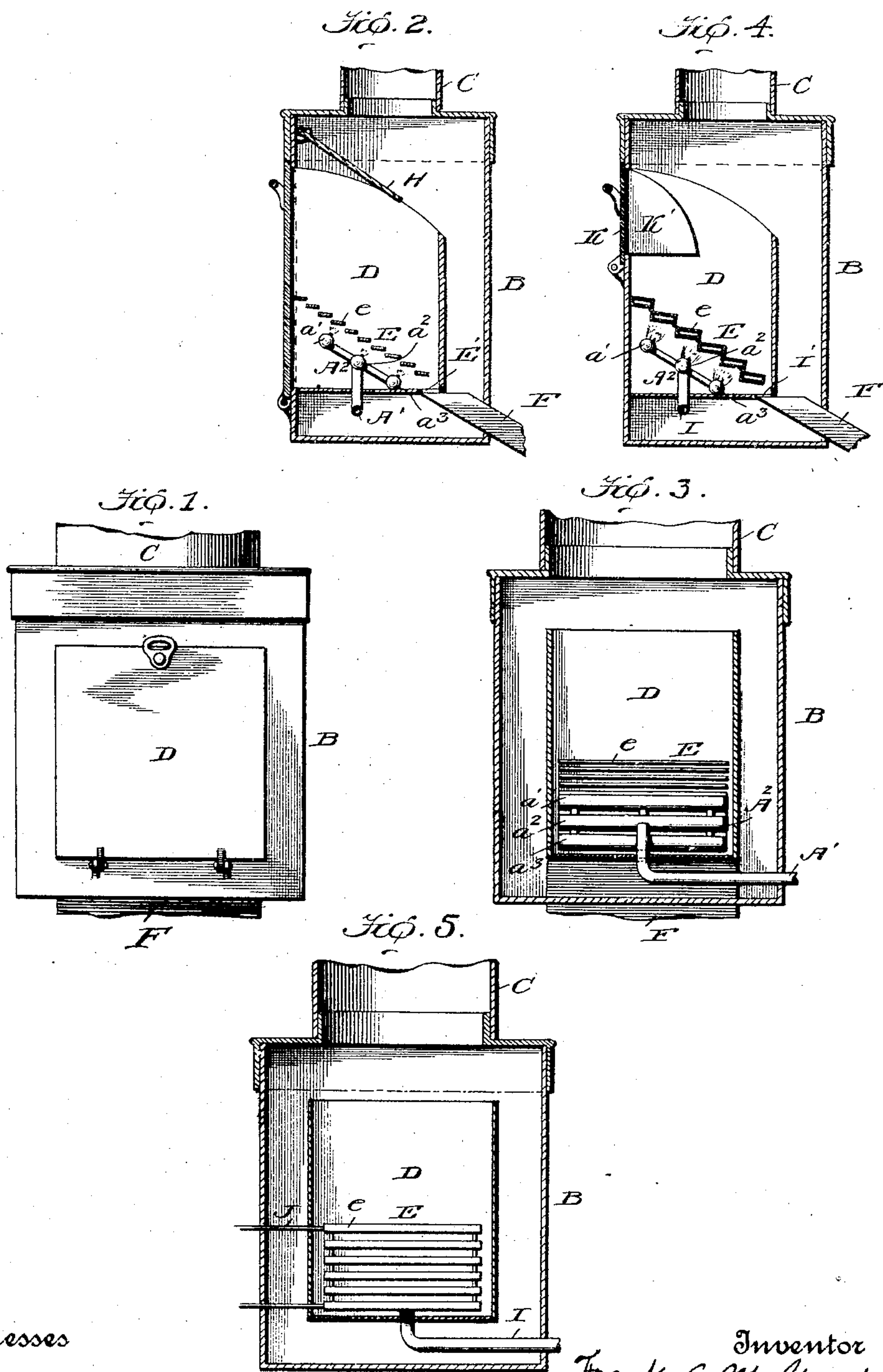


No. 779,960.

PATENTED JAN. 10, 1905.

F. E. MCGURRIN.
GARBAGE BURNER.
APPLICATION FILED AUG. 21, 1903.



Witnesses

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UNITED STATES PATENT OFFICE.

FRANK E. MCGURRIN, OF SALT LAKE CITY, UTAH.

GARBAGE-BURNER.

SPECIFICATION forming part of Letters Patent No. 779,960, dated January 10, 1905.

Application filed August 21, 1903. Serial No. 170,324.

To all whom it may concern:

Be it known that I, FRANK E. MCGURRIN, a citizen of the United States, residing at Salt Lake City, in the county of Salt Lake, State of Utah, have invented certain new and useful Improvements in Garbage-Burners, of which the following is a description, reference being had to the accompanying drawings and to the letters of reference marked thereon.

My invention relates to garbage-burners for domestic use intended to be used in connection with stoves or ranges to dispose of garbage in small quantities by carbonizing it or converting it into ashes; and it is the object of my invention to provide a device of this character which shall be adapted to be used in connection with a gas stove or range of ordinary construction.

In the domestic garbage-burners with which I am familiar there is nothing to prevent the moisture which may drain from the garbage from dripping downward into the stove or range in connection with which they are used. This is not particularly objectionable where the garbage-burner is used in connection with an ordinary coal or wood burner stove or range, but is objectionable when gas is used as a fuel. My invention is designed to provide for draining off any excess of moisture as well as for delivering the ashes in rear of the gas-burner, where they will not interfere with the proper working of the burner or be otherwise objectionable.

My invention has for a further object to provide a construction by which the heat of the gas-flame and the burning garbage may be utilized to heat water and for other purposes.

With these objects in view my invention consists in the construction and combination of parts hereinafter described, and particularly pointed out in the claims.

Referring to the drawings, Figure 1 is a front view of my improved garbage-burner. Fig. 2 is a vertical sectional view showing one form of the garbage-burner. Fig. 3 is a vertical sectional view on a plane at right angles to that on which Fig. 2 is taken. Fig. 4 is a vertical sectional view similar to Fig. 2, but showing a modified form of the device. Fig.

5 is a vertical sectional view similar to Fig. 3, but with the burner removed, showing the form shown in Fig. 4.

Referring to the drawings, B is a casing or frame, preferably rectangular, having a smoke-pipe C connected to it leading to a chimney or other flue. The front of the casing or frame B is provided with an opening, preferably rectangular in shape, in which is mounted the hopper D. This hopper may be connected to the casing in any convenient manner, as by hinging the lower edge of its front plate to the front of the casing below the lower edge of the opening. The hopper is provided above the lower end of the sides with an inclined bottom E, shown as inclined toward the rear, though it may be inclined to one side or even toward the front. The inclined bottom is preferably composed of a series of overlapping slats *e*, arranged like the slats of a Venetian blind, one slat slightly overlapping another, with sufficient horizontal space between adjacent slats to permit the flame from the burner to come in contact with the contents of the hopper, the space not, however, being sufficient to permit the contents of the hopper to pass through. The slats *e* are preferably inclined rearwardly, so that when the hopper is in position, as shown in Figs. 1 and 2, the slats form a rearwardly-inclined surface, from which any excess of moisture will flow rearward. Beneath the rear edge of the hopper when in the position shown in Fig. 2 I provide an inclined chute F, which extends rearward through the wall of the casing or frame B. Above the inner end of the chute the bottom of the hopper is provided with an opening E'. The upper side edges of the hopper are preferably curved, as shown, and the casing is preferably provided with an apron H, hinged to the inner face of the front wall of the casing above the opening and normally resting on the side edges. This apron is preferably of such shape that when the hopper is tilted forward it will close the portion of the opening above the hopper.

Below the inclined bottom E, formed by the slats *e*, I provide a burner A², to which gas is supplied by pipe A', preferably consisting of a series of horizontal burner-tubes *a'* *a*² *a*³, suitably perforated and arranged, as shown,

to form an inclined burner corresponding in inclination with the inclined bottom E and arranged to direct the flames against it, so as to enter between the spaces between the slats *e*.

- 5 Air to mix with the gas may be introduced in any well-known way—as, for instance, by the use of a pipe open at its outer end and surrounding the gas-supply pipe A'.

10 In Figs. 4 and 5 I have shown a modified form of my invention in which the heat from the gas-burner is utilized for heating water as well as for incinerating the garbage. In this form of the invention the slats *e* are made hollow and are connected at their ends to permit
15 circulation of water. Inlet-pipe I, leading from a service-pipe, is connected to the lower one of the hollow slats, and outlet-pipe J is connected to the top one of the slats. In this form of the invention the hopper is preferably
20 made stationary, a door K, preferably having suitable sides K', being provided in the front wall of the casing above the upper end of the inclined bottom E, through which the garbage to be burned may be introduced.

25 In the use of the device the garbage, preferably first drained of all free water or other liquid, is placed in the hopper. In the form shown in Figs. 1 to 4, inclusive, in which a tilting hopper is shown, the hopper is tilted
30 forward to receive the garbage and is then returned to closed position. In the form shown in Figs. 4 and 5, in which the hopper is stationary, the garbage is inserted through the door K. In both constructions the garbage
35 is received on and rests on the inclined bottom E, formed, as above described, of overlapping slats *e*. The arrangement of the slats *e* as above described is such that any moisture which may drain from the garbage
40 after the hopper is closed and during the process of incineration will flow rearward, dripping from one slat to another, and will finally fall through the opening I' into the chute F, from which it falls into a suitable
45 receptacle placed in rear of the stove. The hopper being open at its lower end permits free access of the flame to the contents of the hopper and insures its conversion into ashes, the odors passing off through the smoke-
50 pipe C. The ashes will fall rearward through the opening E' into the chute F, from which they will be discharged into the receptacle above referred to.

It is evident that minor features of the con-

struction may be modified without departing 55 from the spirit of the invention, and I do not, therefore, desire to be limited to the precise construction shown.

Having thus described my invention, what I claim as new, and desire to secure by Letters 60 Patent, is—

1. In a domestic garbage-burner, the combination with a casing provided with a flue-opening, of a hopper within the casing having an inclined bottom having openings there- 65 in and a burner below the hopper-bottom arranged on an inclination corresponding to the inclination of the hopper-bottom, substantially as described.

2. In a domestic garbage-burner, the combination with a casing, provided with a flue- 70 opening, of a hopper within the casing having an inclined bottom, consisting of a series of overlapping slats separated from each other to permit access of flame, and a burner below 75 the bottom arranged on an incline corresponding to the incline of the bottom; substantially as described.

3. In a domestic garbage-burner, the combination with a casing, provided with a flue- 80 opening, of a hopper within the casing provided with an inclined bottom, consisting of a series of overlapping slats separated from each other to permit access of flame, a burner below the bottom arranged on an inclination 85 corresponding to the inclination of the hopper-bottom, and an inclined chute extending through the rear wall of the casing in position to receive material from the inclined bottom of the hopper; substantially as described. 90

4. In a domestic garbage-burner, the combination with a casing provided with a flue- 95 opening, of a hopper within the casing provided with an inclined bottom, consisting of a series of overlapping hollow slats connected 9 at their ends, an inlet and outlet pipe connected respectively with the lower and upper hollow slat of the series, and a burner below the bottom arranged on an inclination corresponding to the inclination of the hopper-bot- 100 tom; substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

FRANK E. MCGURRIN.

Witnesses:

CHAS. H. MCGURRIN,
A. L. CAMPBELL.