

(No Model.)

O. STEVENS.
INCINERATING FURNACE.

No. 486,512.

Patented Nov. 22, 1892.

Fig. 1.

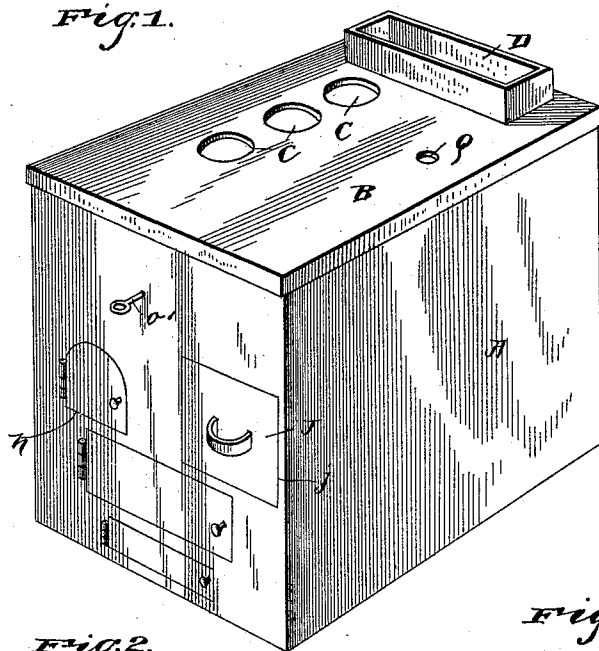


Fig. 2.

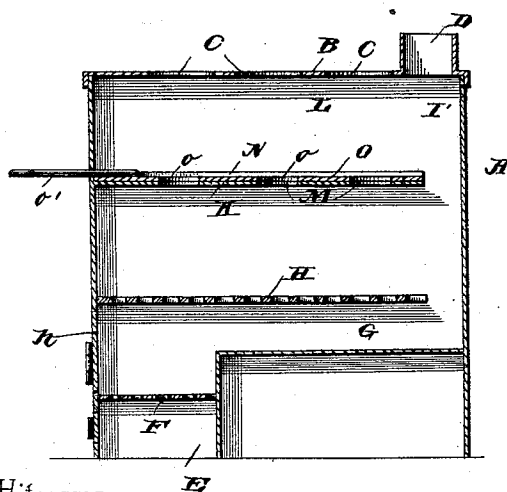
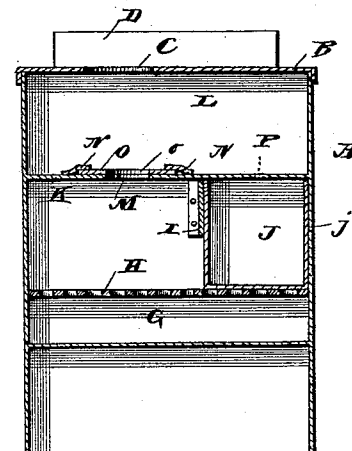


Fig. 3.



Witnesses

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By his Attorneys,

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OSCAR STEVENS, OF CLEAR LAKE, IOWA.

INCINERATING-FURNACE.

SPECIFICATION forming part of Letters Patent No. 486,512, dated November 22, 1892.

Application filed March 19, 1892. Serial No. 425,616. (No model.)

To all whom it may concern:

Be it known that I, OSCAR STEVENS, a citizen of the United States, residing at Clear Lake, in the county of Cerro Gordo and State of Iowa, have invented a new and useful Incinerating-Furnace, of which the following is a specification.

This invention relates to furnaces, and more especially to that class which are designed for use in cremating and evaporating the garbage, &c., from the closets of school-houses and the like.

To this end it is the main object of the invention to provide a furnace of this character which not only is simple in construction, but which shall be especially adapted for the thorough and complete incineration of the garbage, and the liquids from closets especially.

With these and many other objects in view, which will readily appear as the nature of the invention is better understood, the same consists in the novel construction, combination, and arrangement of parts hereinafter more fully described, illustrated, and claimed.

In the accompanying drawings, Figure 1 is a perspective view of a furnace constructed in accordance with this invention. Fig. 2 is a vertical longitudinal sectional view of the same. Fig. 3 is a vertical transverse sectional view of the same.

Referring to the accompanying drawings, A represents the furnace-casing, constructed in a suitable shape and having the top B provided with a series of garbage-receiving openings C and having the smoke-stack D connected thereto at the upper rear end to carry off the smoke and other products of combustion, as well as the foul vapors from the garbage incinerated and the evaporated liquids. Located at the front lower end directly over the ash-pit E is the fire-grate F, upon which the fire is kindled for the purposes set forth, and the smoke and other products of combustion pass from the grate directly up through the body of the furnace and through the flue G, extending in rear of the grate to the back end of the furnace. Horizontally supported within the casing directly over the grate and forming the top of the flue G is the horizontal garbage-incinerating grate H, which is designed to receive the garbage or

excretory matter from the closets and hold the same until thoroughly incinerated. It will be seen that the heat not only passes under the incinerating-grate to the back of the furnace, but also passes directly through the grate and subjects the matter thereon to an intense heat. The said grate may be cleaned from the cleaning-opening *h* in the front end of the furnace, which opening is inclosed by an ordinary door, as well as the fire-box and ash-pit openings. A guide-strip I is secured longitudinally of the casing directly over the grate H and to one side of the same to form a slide for the evaporating-pan J, working through the opening *j* in the front end of the furnace and designed to be supported upon one side of the incinerating-grate to receive the heat from the fire and to provide means for the evaporation of the liquid matter which runs therein from the garbage and which may be run in before placing the pan in position. Directly over the top of the evaporating-pan J and parallel with the incinerating-grate is located the division-plate K, which forms between the same and the top of the furnace-casing the garbage-receiving and foul-air chamber L, opening at its rear end into the escape-pipe I'. The division-plate K is provided at one side of the sliding evaporating-pan therebeneath with a series of receiving-openings M, on each side of which are located the guides N. The said guides N receive the cut-off slide O, provided with a series of openings or perforations *o*, which are designed to be aligned with the openings N in said division-plate when the garbage is being placed upon the incinerating-grate H. An operating-rod *o'* is connected with one end of said slide, so that the openings M can be uncovered to receive the garbage or closed during the burning of the garbage on the grate, so that the foul air passes out into the escape-pipe or smoke-stack. The division-plate K, directly over the evaporating-pan, is further provided with a series of small openings P, through which the liquid matter from the closet passes into the evaporating-pan and which also allow the foul air from the evaporation of the liquid matter to pass into the foul-air chamber and out through the escape at the rear end of the furnace. The top of the casing is provided with an opening Q, through which

the liquid matter is passed from the closets, so that it may readily find its way to the evaporating-pan through the openings in the top of the horizontal division-plate.

5 It will now be readily seen that the construction herein described provides for the thorough and complete incineration and evaporation of the matter from the closets of school-houses or other public places, or in
10 fact any garbage which it is desirable to dispose of in this way. Many advantages will suggest themselves to those acquainted with this class of inventions.

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

1. In a furnace of the class described, the closed casing having a series of top receiving-openings, the fire-grate arranged in the front
20 lower end of the casing, an incinerating-grate supported directly over the fire-grate and extending in rear thereof to form a bottom flue, a horizontal division-plate arranged parallel with the incinerating-grate and forming between
25 itself and the top of the casing a foul-air chamber, said division-plate being provided with opposite sets of perforations, one set of which opens onto the grate, and an inclosed evaporating-pan arranged to slide with-
30 in and at one side of the casing between the

grate and division-plate directly under the other set of perforations in the latter, substantially as set forth.

2. In a furnace of the class described, an incinerating-grate supported within the furnace-casing over the fire-box, a longitudinal
35 guide-strip above said grate to form a slide above and at one side of the same, and a sliding evaporating-pan working in said slide and supported upon one side of said grate, sub-
40 stantially as set forth.

3. In a furnace of the class described, the casing, an incinerating-grate, an evaporating-pan supported by said incinerating-grate, a
45 division-plate located above said evaporating-pan and grate and provided with a series of perforations opening over the grate at one side of the pan and also directly into said pan,
50 and guide-strips on each side of the perforations over the grate, and a perforated cut-off slide working in said guide-strip, substantially as set forth.

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

OSCAR STEVENS.

Witnesses:

C. A. STRATTON,
C. E. JOHNSON.