

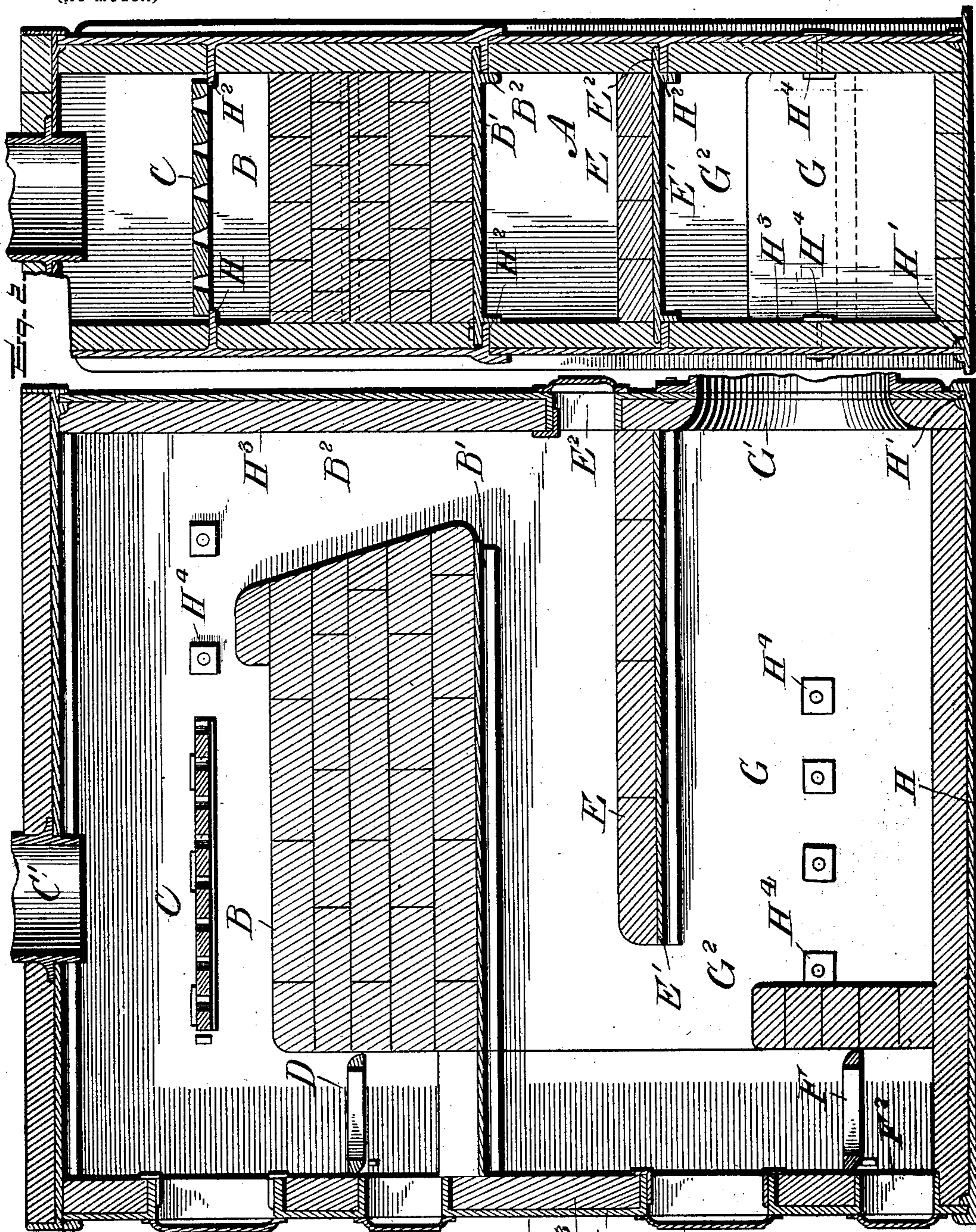
No. 688,090.

Patented Dec. 3, 1901.

W. S. HULL.
SANITARY INCINERATING CLOSET.

(Application filed May 28, 1901.)

(No Model.)



WITNESSES:

Wm. F. Doyle
Alfred T. Gage

INVENTOR

William S. Hull,

BY

E. B. Stocking
Attorney

UNITED STATES PATENT OFFICE.

WILLIAM S. HULL, OF HINDS COUNTY, MISSISSIPPI.

SANITARY INCINERATING-CLOSET.

SPECIFICATION forming part of Letters Patent No. 688,090, dated December 3, 1901.

Application filed May 28, 1901. Serial No. 62,252. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM S. HULL, a citizen of the United States, residing in the county of Hinds, State of Mississippi, have invented certain new and useful Improvements in Sanitary Incinerating-Closets, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to sanitary incinerating-closets, and particularly to a structure wherein the gases and products of combustion from one furnace are adapted to pass over a second fire-box before they escape to the flue or point of discharge.

The invention has for its object to provide a structure having an upper and a lower absorbing-platform, one above the other, with a flue between the platforms and independent fire-boxes at the same end of each platform.

A further object of the invention is to provide an incinerating-closet in which the floor, ceiling, and walls may be constructed of metal and lined with an absorbing refractory substance.

Other objects and advantages of the invention will hereinafter appear in the following description, and the novel features thereof will be particularly pointed out in the appended claims.

In the drawings, Figure 1 is a vertical longitudinal section of the closet, and Fig. 2 is central vertical cross-section thereof.

Like letters of reference indicate like parts throughout both figures of the drawings.

In the drawings the letter A designates the closet or cabinet adapted to receive the fire-grates, absorbing-platforms, and other parts constituting the apparatus. This closet may be of any desired construction; but a preferred form thereof will be hereinafter described. In the upper portion of this closet or cabinet a platform B, of any suitable porous material, is provided and adapted to receive and absorb moisture which may fall upon the same. This platform is supported in any desired manner—for instance, by means of the bridge-plate B', seated at its opposite ends upon the walls of the cabinet by means of the sockets B². Immediately above this absorbing platform a perforated receiving-platform C is supported beneath a discharge-pipe C', from which the refuse or other ma-

terial to be incinerated is discharged. At the forward end of the absorbing-platform B a fire-grate D is provided, and adjacent to the same a fuel-door D' and ash-door D², as usual in furnaces.

Beneath the platform B and in substantially the same vertical plane a platform E, of similar absorbent material, is supported by means of the bridge-plate E', having sockets E² at opposite ends, by which the material is supported from the walls of the cabinet. At the end of the platform B a flue-passage B² is provided and extends above the platform E, while at one end of this platform a cleaning-door E² is shown. At the front end of the platform E a fire-grate F is provided and has adjacent thereto the fuel-door F' and ash-door F², as in the grate immediately above the same. Beneath the platform E is a combustion-chamber G, communicating at one end with the stack or chimney G' and at the other end, by means of a throat G², with the products of combustion and flames from the lower fire-grate.

The particular construction of closet or cabinet hereinbefore referred to comprises the metallic frame or wall H, provided at its points of intersection with connecting-sockets H' and having inwardly-extending supporting-ribs H² at different heights for retaining in position the perforated platform and the upper and lower absorbing-platforms. The inner face of this metallic casing is lined or coated with any suitable form of absorbent refractory material—such, for instance, as fire-clay H³—which is retained in position in any desired manner—for instance, by clamping bolts and plates H⁴, passing through both the metallic wall and the refractory material, as shown. By this means the closet or cabinet can be readily constructed or erected in any desired place without the necessity of transporting a large amount of heavy material or any masonry-work, as the sections of the iron casing and the refractory material can be shipped in condition to be erected without the necessity of especially skilled labor.

It will be observed that the absorbing-platforms B and E are located one above the other, each in substantially the same vertical plane and in parallel horizontal planes.

In the operation of the closet the fire in the lower grate F is first started, which creates a draft through the combustion-chamber G, located under the lower platform E, and a movement of air or draft is caused from the upper portion of the cabinet. The fire at the upper grate D is then lighted and the products of combustion therefrom pass above and below the perforated receiving-platform C, adapted to receive and retain the material to be incinerated. The solid matter is retained upon this platform, while the liquid passes through the perforations thereof and is absorbed by the platform B, while any excess of liquid will pass downward and be caught upon the lower absorbing-platform E. The products of combustion and the gases from the upper portion of the closet pass to the rear thereof downward through the flue B² and return to the front between the upper and lower absorbing-platforms. When these gases reach the front, they are brought into contact with the flames of the fire in the lower grate F and ignited, so as to be burned in the combustion-chamber G, located beneath the lower platform. This burning of gases in chamber G also materially assists in heating the lower platform, so as to evaporate therefrom any liquid which may be absorbed thereby. By bringing the products of combustion and gases above and below each of the two absorbing-platforms the heat is so utilized as to produce a very economical evaporation of all fluids, while the direct contact of the products of combustion with any solid material upon the platform readily reduces the same to an ash.

While this closet is particularly adapted to the destruction of night-soil, it is still also capable of use for the burning of kitchen waste and all offensive material about an ordinary premise without emitting any odor whatsoever, as the odorous gases are consumed by the fire in the lower grate before passing to the stack. When there is a large discharge of fluids through the pipe C' in excess of what may be absorbed by the upper platform, such excess fluid will drip or flow to the lower platform and be there evaporated, as both platforms receive the heat upon their upper and lower surfaces, and the percolation of liquid through the platforms and dripping through the heated flues accomplishes better results in the evaporation thereof than heretofore secured in this art. The lining of the cabinets or closets with refractory material prevents the radiation of heat therefrom into the room or compartment where the closet is located and to a certain extent absorbs any fluids which may come into contact therewith, permitting the evaporation of the same.

It will be obvious that changes may be made in the details of construction and configuration of the several parts and the character of casing or closet in which the parts

may be disposed without departing from the spirit of the invention as defined by the appended claims.

Having described my invention, what I claim is—

1. An incinerating-closet comprising a casing, an absorbing-platform in the upper part of said closet, a fire-grate at one end of said platform and a flue at the opposite end, a platform beneath and parallel with said absorbing-platform and forming therewith a flue between the two platforms, a lower fire-grate beneath the upper grate and at one end of the lower platform, and a combustion-chamber beneath the lower platform communicating with the lower fire-grate; substantially as specified.

2. An incinerating-closet comprising a casing, an absorbing-platform in the upper part of said closet, a fire-grate at one end of said platform and a flue at the opposite end, a platform beneath and parallel with said absorbing-platform and forming therewith a flue between the two platforms, a lower fire-grate beneath the upper grate and at one end of the lower platform, a combustion-chamber beneath the lower platform communicating with the lower fire-grate, a receiving-pipe at the upper portion of said closet, and a perforated receiving-platform between said pipe and the absorbing-platform; substantially as specified.

3. An incinerating-closet comprising a casing, an absorbing-platform in the upper part of said closet, a fire-grate at one end of said platform and a flue at the opposite end, a platform beneath and parallel with said absorbing-platform and forming therewith a flue between the two platforms, a lower fire-grate beneath the upper grate and at one end of the lower platform, a combustion-chamber beneath the lower platform communicating with the lower fire-grate, a receiving-pipe at the upper portion of said closet, a perforated receiving-platform between said pipe and the absorbing-platform, and absorbent material supported upon the upper face of said lower platform; substantially as specified.

4. An incinerating-closet comprising a casing having a receiving-pipe at its upper portion, a perforated receiving-platform beneath said pipe, an upper absorbing-platform beneath said perforated platform, a fire-grate at one end and a flue at the opposite end of said upper absorbing-platform, a lower parallel absorbing-platform forming a flue between the upper and lower absorbing-platforms, a fire-grate at one end of said lower platform, and a combustion-chamber beneath said lower platform communicating with a flue or stack; substantially as specified.

5. An incinerating-closet comprising a metallic shell, a perforated receiving-platform supported from said shell at the upper portion of the closet, an upper absorbent platform supported from the shell beneath said

receiving-platform, a lower absorbing-platform beneath and parallel with the upper platform and supported from said shell, fire-grates disposed one above the other at the same end
5 of each absorbing-platform, a combustion-chamber beneath the lower absorbing-platform, and a flue-passage extending from the rear of the upper absorbing-platform over the lower absorbing-platform and communicat-

ing with the lower fire-grate and said combustion-chamber; substantially as specified.

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

WILLIAM S. HULL.

Witnesses:

R. T. CLARK,
D. H. HOLDER.