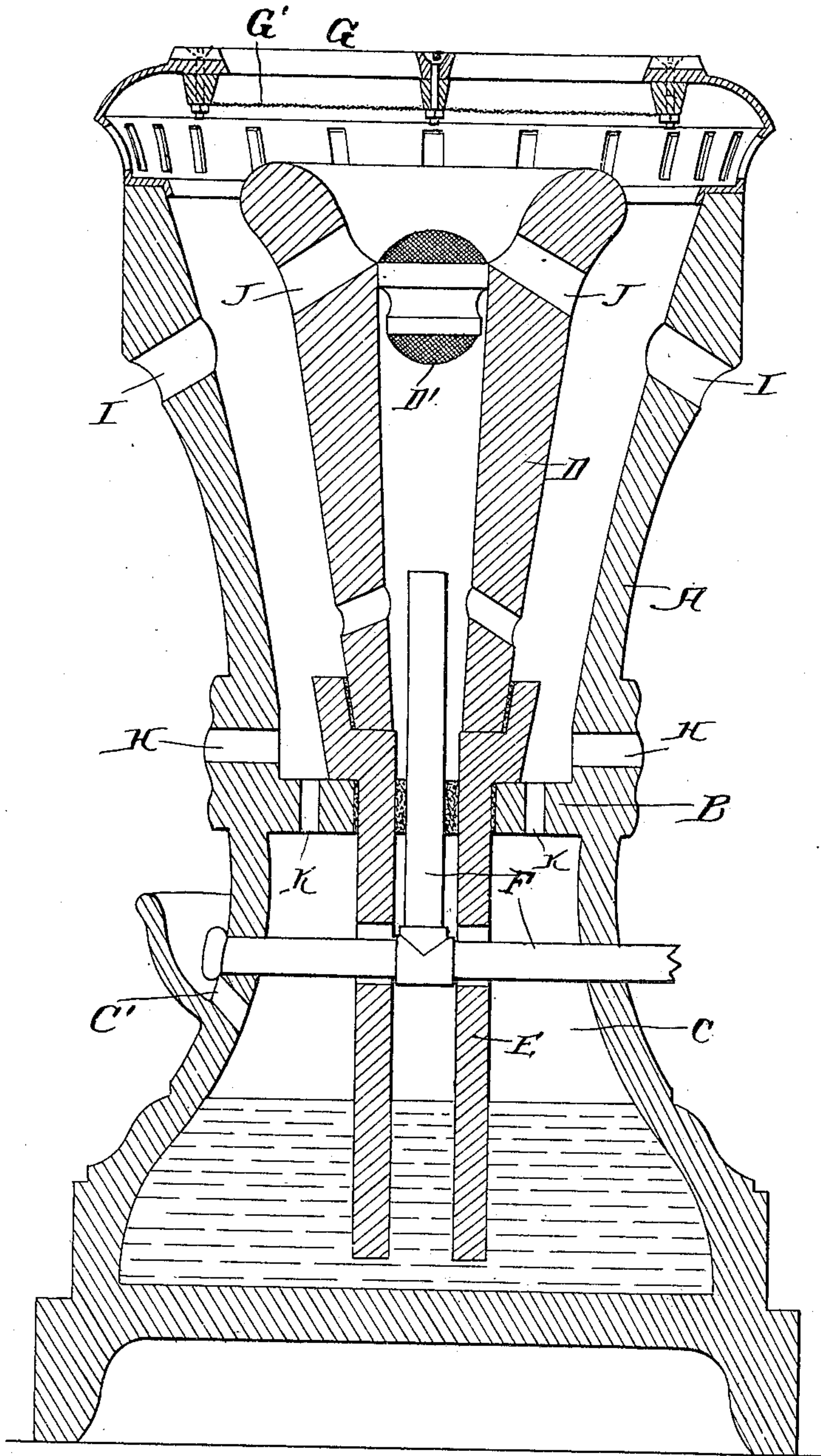


No. 825,607.

PATENTED JULY 10, 1906.

P. S. MURTA.
GAS HEATER AND EVAPORATOR.
APPLICATION FILED JUNE 28, 1905.



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UNITED STATES PATENT OFFICE.

PAUL S. MURTA, OF PHILADELPHIA, PENNSYLVANIA.

GAS-HEATER AND EVAPORATOR.

No. 825,607.

Specification of Letters Patent.

Patented July 10, 1906.

Application filed June 28, 1905. Serial No. 267,387.

To all whom it may concern:

Be it known that I, PAUL S. MURTA, a citizen of the United States, residing at Philadelphia, county of Philadelphia, and State of Pennsylvania, have invented a certain new and useful Improvement in Gas-Heaters and Evaporators, of which the following is a specification.

My invention relates to a new and useful improvement in gas-heaters and evaporators, and has for its object to provide a gas-stove so constructed as to give the greatest amount of heat for the least amount of gas burned, the casing of the stove and burner being made of a material adapted to retain the heat.

With these ends in view this invention consists in the details of construction and combination of elements hereinafter set forth and then specifically designated by the claims.

In order that those skilled in the art to which this invention appertains may understand how to make and use the same, the construction and operation will now be described in detail, referring to the accompanying drawing, forming a part of this specification, in which is represented a vertical section through my improved gas-heater and evaporator.

A represents the casing, which casing is made of fireproof porcelain which is adapted to retain the heat, as I have found by experience that the same amount of gas burned in a metal stove will not heat a room as quickly as one of my improved stoves, where the casing is of clay or other refractory material. This casing is divided horizontally into two parts by a partition B. The lower part C is the water-chamber and is adapted to contain water, which may be poured therein through an opening C'.

D is the burner, which is arranged in the upper portion of the casing and is composed of fire-clay. Within the burner is the gas-pipe F, which extends from the exterior of the stove through the casing into the lower chamber C and then turns upward and extends into the burner.

E is a tube formed with the burner D, which extends downward through the partition B to a point near the bottom of the chamber C, the lower ends of said tube always being immersed in the water, this tube being made of absorbent clay and will carry the moisture upward, and the heat of the burner will help to draw the water upward, and the water in

being evaporated at the burner will allow the oxygen to readily join the gas and will create an exceedingly hot flame.

Into the flaring upper end of the burner D is fitted a hollow reticulated globe D', preferably made of very fine steel wire, which forms a mantle and adds greatly to the heating quality of the stove. The top of the stove is composed of a metal grid G, which is lined underneath with a sheet of very finely woven steel-wire cloth G', which forms a second mantle and also aids in adding intensity to the flame.

Air is admitted from the exterior of the stove to the upper chamber at its lower portion through the openings H, and air is admitted to the upper portion of the upper chamber from the exterior through the openings I, said openings directing the air upward above the burner.

J represents openings formed through the upper rim of the burner, and the air passing therethrough comes in direct contact with the mantle and aids in the combustion at this point.

K represents openings formed through the partition B, through which the moisture may pass to the upper chamber.

Thus it will be seen that I have provided a stove which has exceptional heating qualities and at the same time can be used as a cooking-stove, if so desired, and another advantage is that this stove can be manufactured at a comparatively small cost, will be durable and ornamental in appearance, and will retain the heat a long period after the gas has been closed off, and this stove by holding water in its base will generate a moist heat instead of a dry heat, which is so objectionable in the use of gas-stoves.

Of course I do not wish to be limited to the exact construction here shown, as slight modifications could be made without departing from the spirit of my invention.

Having thus fully described my invention, what I claim as new and useful is—

1. In a gas-heater and evaporator, a casing of refractory material, said casing or body being divided horizontally into parts, the lower part adapted to contain water, the upper part being open at the upper end, removable grating adapted to fit over the upper end, a woven-wire screen secured underneath the grating, a burner of fire-clay arranged in the upper portion, a gas-pipe leading to the lower end of said burner, a tube of absorbent mate-

rial connected with the burner and extending downward through the partition into the water in the lower chamber, the partition provided with openings connecting the two compartments, the casing provided with a series of openings extending from the exterior lower portion of the upper compartment to the interior, said casing also provided with a series of openings extending from the exterior to the interior of the upper portion of the upper compartment above the burner, as specified.

2. In a gas-heater and evaporator, a body or casing composed of fire-clay, said casing divided by a horizontal partition into two compartments, the lower compartment adapted to hold water, the upper compartment being open at the upper end, a metal grating covering said upper end, a sheet of woven-wire cloth secured to the grating underneath the same, a cup-shape burner of fire-clay arranged in the upper compartment, a gas-pipe extending from the exterior and extending upward through the lower end of the burner, an absorbent tube connected with the burner and extending downward through the partition into the water in the lower compartment, a reticulated globular mantle fitted into the upper end of the burner, the upper

rim of the burner provided with openings formed therethrough, said openings inclining upward and inward toward the mantle, the casing provided with an upper and lower series of openings extending from the exterior of the casing to the interior thereof, and a partition provided with a series of openings connecting the two compartments, as specified.

3. As a new article of manufacture, a gas-heater and evaporator, the body of which is composed of fire-clay, a burner arranged within the same also composed of fire-clay, a gas-pipe extending from the exterior into the lower end of the burner, said casing adapted to contain water in its lower portion, an extension formed with the burner adapted to extend downward into the water, the casing provided with suitable openings formed through the same for the intake of air, as and for the purpose specified.

In testimony whereof I have hereunto affixed my signature in the presence of two subscribing witnesses.

PAUL S. MURTA.

Witnesses:

KARL EHMANN,
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