

H. E. Smith.

Lamp, Stove.

No 48732.

Patented July 11, 1865.

Fig. 1

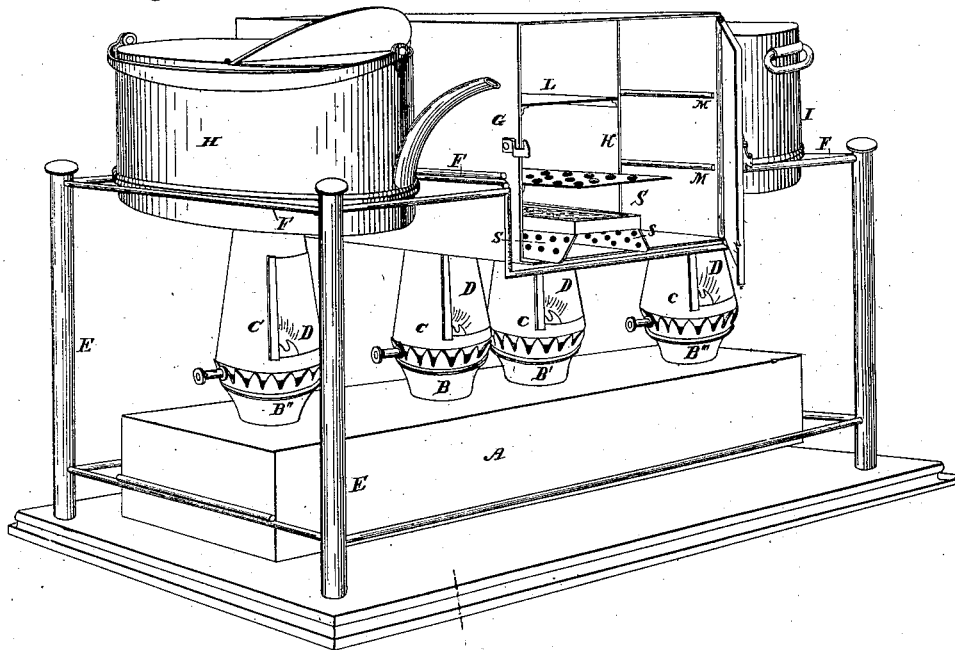
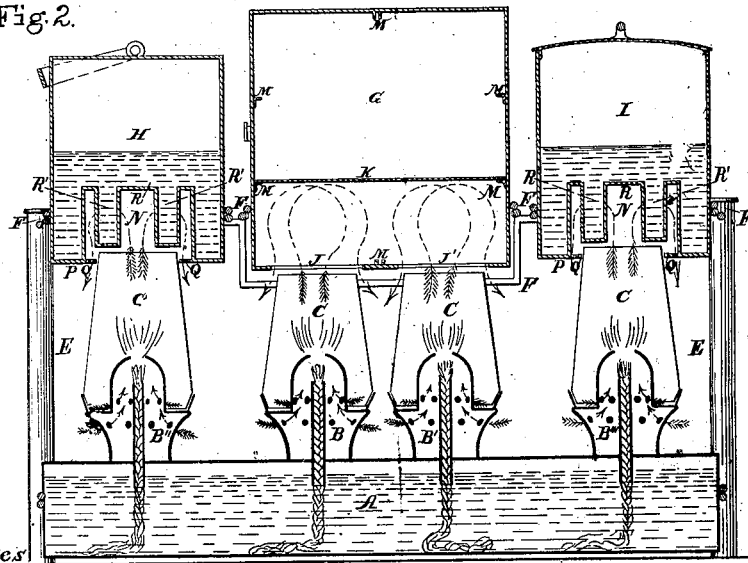


Fig. 2.



Witnesses:

J. P. Magee
James H. Layman

Inventor:

H. E. Smith
By Knight & Co.
Attys.

UNITED STATES PATENT OFFICE.

HAMILTON E. SMITH, OF CINCINNATI, OHIO.

IMPROVEMENT IN PETROLEUM-STOVES.

Specification forming part of Letters Patent No. 48,732, dated July 11, 1865.

To all whom it may concern:

Be it known that I, HAMILTON E. SMITH, of Cincinnati, Hamilton county, Ohio, have invented a new and useful Petroleum-Stove; and I do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawings, making part of this specification.

My invention relates to a portable cooking apparatus to be heated by a series of petroleum or other hydrocarbon lamps, the various boiling, baking, and other compartments being capable of being operated, either separately or in conjunction, by the use of one or more lamps, as may be desired.

Figure 1 is a perspective view of a stove embodying my improvements. Fig. 2 is a vertical section thereof.

A is a reservoir for petroleum, coal-oil, or other burning-fluid.

B B' B'' B''' are lamp-burners of any approved construction.

Instead of the customary glass-chimneys, I provide chimneys C, of sheet metal, which chimneys may be bulged opposite the flame, and may taper upward and downward. Each chimney is furnished with a window, D, of mica, which, affording a view of the flame, enables the operator to know whether to elevate or depress the wick.

E is a stand provided with racks F for supporting at a suitable height above the burners an oven, G, and boilers or kettles H and I. The oven G has two circular apertures, J J', in its bottom plate immediately over the chimneys of the two central burners, a small interval in height being left between said chimneys and the said plate to enable the spent and cooled air to escape from the oven, so as to provide room for the heated emanations from the burners. The interior of the oven is so arranged as to be capable of being separated into two compartments by a vertical plate or partition, K, and each of these compartments is again divided into sub-compartments by means of floors or horizontal plates L. This vertical division and horizontal subdivision is represented in Fig. 1. The said mode of division enables the use of one side only of the oven when a small amount of cooking is to be done, thus economizing fuel and avoiding excessive or unnecessary heat.

The plates K and L are retained in their places by flanges M on the interior surfaces of the oven, and are capable of being withdrawn entirely, so as to leave the entire interior of the oven unobstructed; or the plate K may be used for a horizontal diaphragm, as in Fig. 2.

The chimneys of the burners B'' and B''' pass upward into hot-air chambers N in the lower part of the boilers H and I, whose bottom plates, P, are perforated at Q around their apertures which receive the chimneys, so as to afford a ventage for the spent air and gases. The top plate, R, of the hot-air chamber constitutes the actual bottom of the boiler, and is provided with a number of drops or pendent tubes, R', which descend into the hot-air space and act to absorb heat therefrom and to effect a very speedy and active ebullition of the water in the boiler.

S is a water-pan supported on perforated flanges s, for insuring a free circulation of heat around the pan.

T is a perforated plate or grid for cooking meat, fish, &c.

It will be seen that the separate hot-air chamber and independent burners—one or more to each chamber—enable the optional use of one or more departments of the baking and boiling apparatus.

I claim herein as new and of my invention—

1. The series of petroleum or coal-oil burners B B' B'' B''', in connection with a corresponding number of separate hot-air chambers or receivers, G and N, having ventages for spent air at their bottom portions only, substantially as set forth.

2. In connection with two or more independent burners, B B', the oven G, capable of vertical subdivision, in the manner and for the purpose explained.

3. In the described combination, with a petroleum-stove, of the tubular hot-air-chambered boilers, whose ventage for the spent air is at the bottom of their chambers, as set forth.

In testimony of which invention I hereunto set my hand.

HAMILTON E. SMITH.

Witnesses:

GEO. H. KNIGHT,
JAMES H. LAYMAN.