

C. HITCHCOCK

PATENTED AUG 15 1871

HYDRO CARBON STOVE.

118129

Fig. 1.

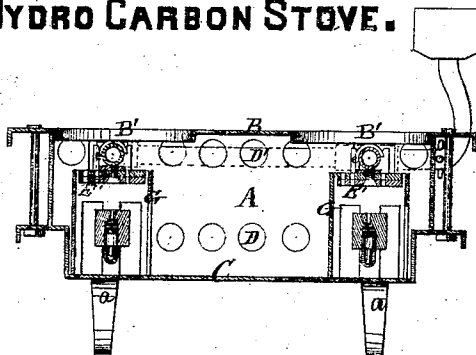


Fig. 2.

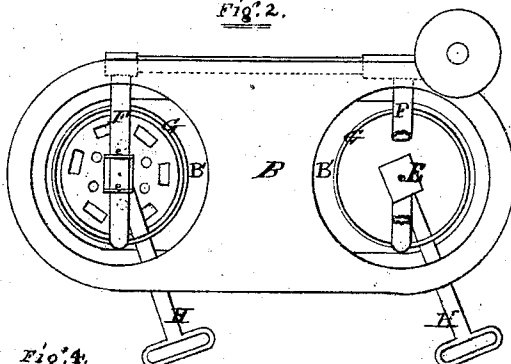


Fig. 4.

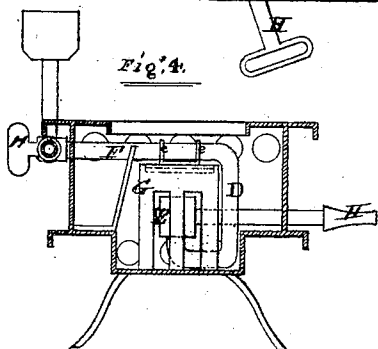


Fig. 3.



Witnesses

E. H. Bates.
Frank B. Curtis.

Inventor

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UNITED STATES PATENT OFFICE.

CHARLES HITCHCOCK, OF CHICAGO, ILLINOIS.

IMPROVEMENT IN HYDROCARBON STOVES.

Specification forming part of Letters Patent No. 118,129, dated August 15, 1871.

To all whom it may concern:

Be it known that I, CHARLES HITCHCOCK, of the city of Chicago, in the county of Cook and State of Illinois, have invented a new and valuable Improvement in Hydrocarbon Stoves; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawing making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawing is a representation of a vertical section of a stove embodying my invention. Fig. 2 is a plan view of the same. Fig. 3 is a plan view of combustion-disks. Fig. 4 is a vertical transverse view of my invention.

This invention has relation to certain improvements in hydrocarbon stoves; and it consists in the construction of the adjustable combustion-plates, and in the arrangement thereof with respect to the cylindrical burner-shields and the perforated stove-body, as hereinafter described.

In the accompanying drawing illustrating this invention, A designates the body of the stove, which may be large enough to admit of several burners. B represents the top-plate with the usual griddle-holes. C, the bottom plate, sunk in the form of a pan, to hold water, and, generating steam, assist combustion. This bottom pan extends over the entire floor of the stove, and is level, so that a considerable amount of water may be readily heated to the point of vaporization. D D' represent perforations designed, respectively, for the admission of cool air, and the escape of the heated vapor and products of combustion. E represents the burner placed on the end of tube F, communicating with the siphon-pipe, and extending thence transversely into the stove below the griddle-holes. The tubes are then bent in the usual manner, so as to bring the last sections directly under the centers of the griddle-holes. E' represents the adjustable combustion-plate, composed of two perforated disks

pivoted together, and hung by means of hooks on the transverse section of the tube F. The peculiarity of this combustion-plate consists in the form and arrangement of the perforations, by which the jets can be graduated to any degree of nicety. These perforations are arranged in two series, the outer being a series of rectangles, and the inner a series of circles, both being concentric. When the perforations are superimposed they are designed to fit accurately; but when the disks are moved one upon the other the openings are readily graduated to any degree of fineness, as the sides of the circles or the angles of the rectangles approach each other. G G indicate the vertical cylinders or shields which stand on the bottom plate of the stove and surround the combustion-plate. They are slotted from the bottom part up to or nearly to the disk, the object being to allow the free passage of the particles of water, and to admit of their ready removal from their positions when necessary for cleaning or other purposes. The position of each combustion-plate is below the upper rim of the cylinder, and thus is entirely protected from side draughts, which would have a tendency to extinguish the flames. H H designate the regulating-cocks for graduating the flow of vapor through the burners.

What I claim as my invention, and desire to secure by Letters Patent, is—

The combination, with the stove-body A having the side perforations D D' and the level water-bottom C, of the circular combustion-plates E', surrounded by the neatly-fitting cylinder-shields G, substantially as specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

CHARLES HITCHCOCK.

Witnesses:

J. A. LAMBERT,
C. STORER HITCHCOCK.