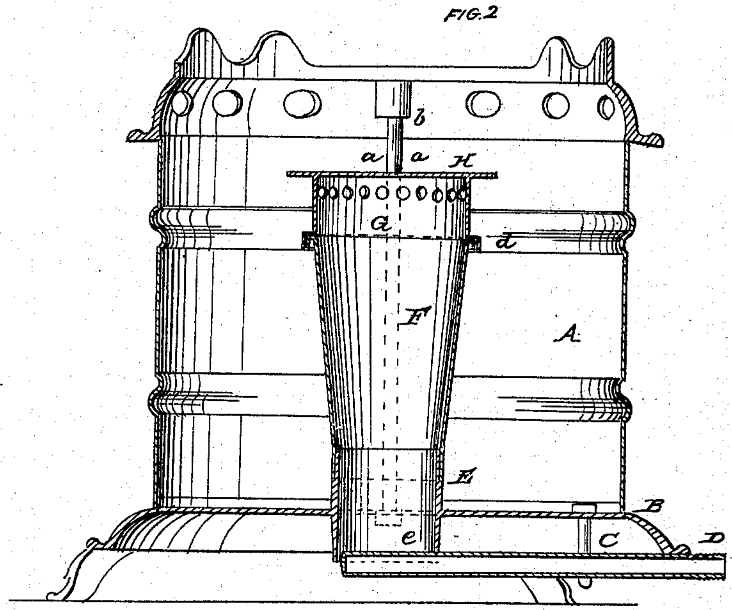
E. J. CALDWELL.

Gas Stove.

No. 49,469. Patented Aug. 15, 1865.

FIG. 2



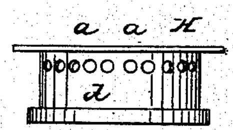


FIG. 3

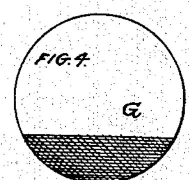
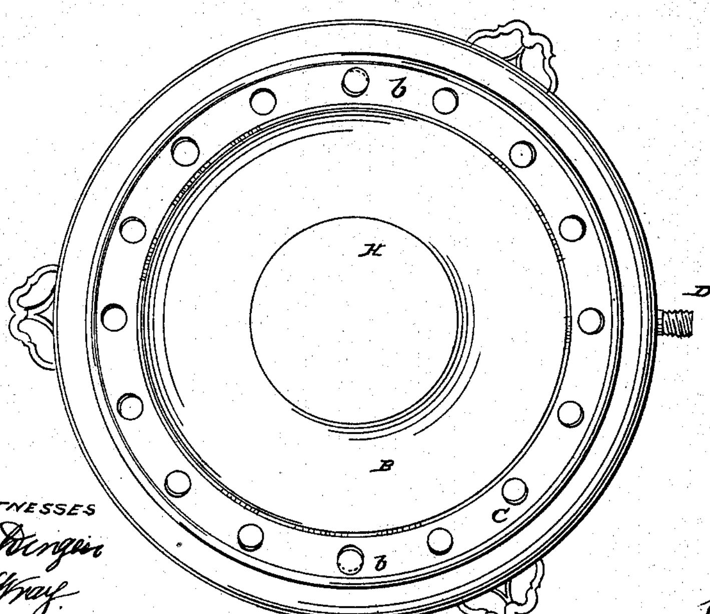


FIG. 1.



WITNESSES

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ELIJAH J. CALDWELL, OF NEW YORK, N. Y., ASSIGNOR TO HIMSELF AND ALEXR. M. LESLEY, OF SAME PLACE.

IMPROVEMENT IN GAS-STOVES.

Specification forming part of Letters Patent No. **49,469**, dated August 15, 1865.

To all whom it may concern:

Be it known that I, ELIJAH J. CALDWELL, of the city, county, and State of New York, have invented certain new and useful Improvements in Gas-Stoves; and I do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawings, figures, and letters of reference making part of this specification.

Of the said drawings, Figure 1 is a top view of my gas-stove. Fig. 2 is a vertical section, and Figs. 3 and 4 show parts in detail.

Similar letters of reference indicate like parts in all the drawings.

In the use of gas-stoves heretofore made, which have the tube open, much difficulty is experienced from the water boiling over and rusting out the sieve through which the gas passes, and also from the gas blowing downward when it is turned down.

My invention is designed to obviate these difficulties, and also to obtain better radiation and greater heat; and it consists in combining with the cylinder of a stove a tube provided with a sieve and perforations and a flanged top, as will be fully set forth hereinafter.

To enable others skilled in the art to make and use my invention, I will describe the construction and operation thereof.

A represents the cylinder of a stove, made of sheet-iron, fitted to a perforated cast-iron base, B, and mounted by a cast top, C, the whole being secured together by bolts *b b*.

In the center of the base B is cast a cylinder, E, which projects upward, and upon which the tube F is connected by a friction-joint.

To the bottom of the cast bed is secured the supply-pipe D by means of a bolt, *c*, which pipe has a small hole, *e*, for the gas to pass up the cylinder F. In this tube F, I secure, by a friction-joint, *d*, a fine wire sieve, G, through which the gas passes. The upper part of the tube H is perforated, as shown at *a a*, around the cylinder and close up to the flange H.

The operation will be as follows: Gas, being communicated by a rubber tube or suitable pipe, will pass through the pipe D and up the cylinder F, and as the bottom of the tube is open, a current of air passes up and is freely mixed with the gas. The gas passes through the perforations *a a*, where it is ignited, and passes up around the flange H in a continuous sheet of flame, and gives out a steady, powerful heat. The flanged cap H serves a twofold purpose, acting as a radiator, and also prevents any accumulation of dirt or passage of boiling water upon the sieve, which is the case where the cylinder is open at the top. The sieve being placed a distance from the flame of gas effectually checks and prevents any downward blowing of the gas when it is turned down.

Having thus described my improved gas-stove, what I claim as new therein, and desire to secure by Letters Patent, is—

The arrangement and combination, with the cylinder A, of the tube or cylinder F, sieve G, and perforated flanged top H, constructed and operating together substantially as described, and for the purposes specified.

ELIJAH J. CALDWELL.

Witnesses:

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