

LESLEY & CRAIG.

Gas Stove.

No. 52,300.

Patented Jan'y 30, 1866.

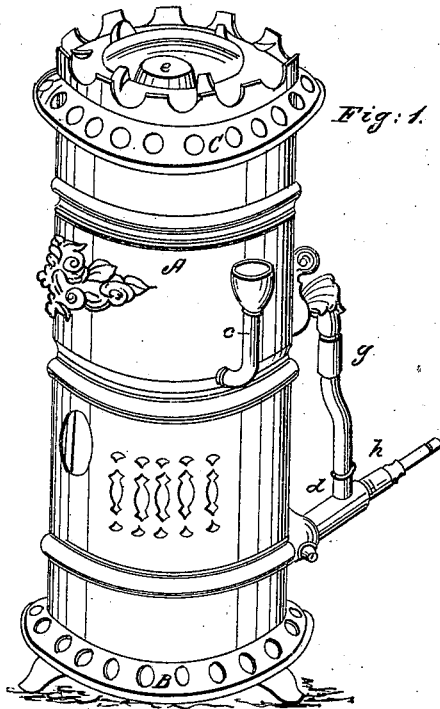


Fig. 1.

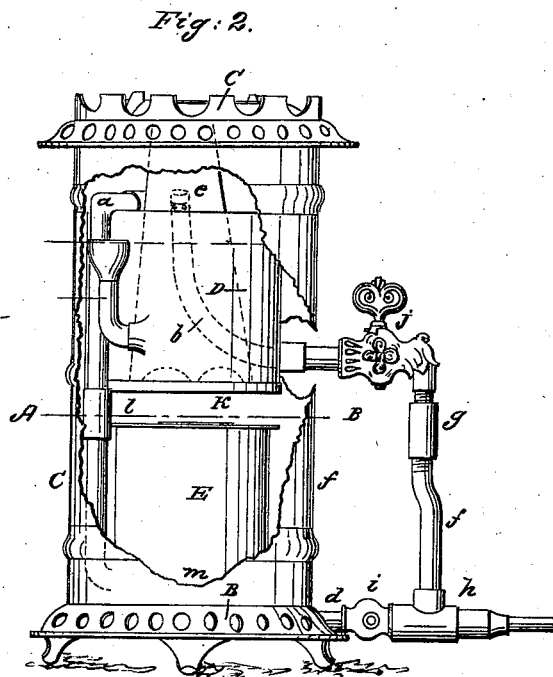


Fig. 2.

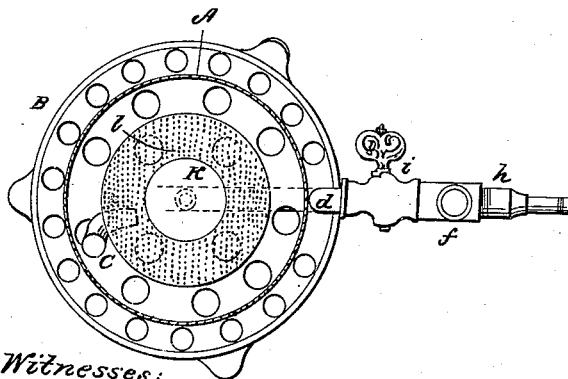


Fig. 3.

Witnesses:

Edwin
Edward Robinson

Inventors:

Alex M. Lesley.
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UNITED STATES PATENT OFFICE.

ALEXANDER M. LESLEY, OF NEW YORK, AND WILLIAM CRAIG, OF
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IMPROVEMENT IN GAS-STOVES.

Specification forming part of Letters Patent No. 52,300, dated January 30, 1866.

To all whom it may concern:

Be it known that we, WILLIAM CRAIG, of Brooklyn, in the county of Kings and State of New York, and ALEXANDER M. LESLEY, of the city, county, and State of New York, have invented or discovered certain new or useful Effects Produced in Gas-Burning Stoves; and we 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 thereon, making part of this specification.

Of the said drawings, Figure 1 is a perspective view of our gas-burning stove. Fig. 2 is a vertical sectional view of the same. Fig. 3 is a horizontal section taken through the line A B.

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

Our invention relates to the application of a current of steam around or in connection with a flame of gas for heating purposes.

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

A represents the cylinder of a gas-stove, which is bolted to a base, B, and cap, C. The base B is perforated, and the top C is open for securing a proper draft of air. In the cylinder A we insert a steam-generator, D, which is held in place by pipes *a b*, one of which pipes, *a*, is for filling the boiler D with water, while the other, *b*, is the induction-pipe and burner for the gas.

E is a cylinder, the lower end of which is open and rests upon the base B, while the other end is fitted with a finely-perforated sheet or sieve, *l*. On top of this sheet *l* is a circular plate, *k*, around the circumference of which the gas rises to heat the boiler D. In the bottom of the cylinder a pipe, *d*, is placed, which has a short elbow, *m*, through which gas passes into the chamber of the cylinder E by the cock *i*, and passes upward, assisted by the draft of air, through the perforated plate *l*.

To the boiler D a tube, *a'*, is attached, as shown in Fig. 2, which passes down the cylinder A and into the chamber of the cylinder

E, for introducing steam to force the flame of gas up against the boiler D. In the top plate of the boiler D we cut a hole for a conical tube, *e*, (see dotted lines, Fig. 2,) which tube is inserted before the top or cover of the boiler is made fast. The lower end of the cone is perforated or cut away near the bottom for water to pass. The bottom of the cone rests upon the boiler-bottom, and the cone is secured to the boiler-top steam-tight.

The boiler D is filled with water through the pipe *a* on the outside of the stove, the plane of this pipe being considerably lower than the top of the boiler for steam-room. The end of the pipe *b* is plugged and a row of holes made just below the plug for the gas to pass through. The gas is then taken from the pipe *h*, which communicates with the pipes *d* and *b*, by the pipe *f* and coupling *g*, and the flow of gas is regulated by the cocks *i j*. The gas is then lighted at the pipe *m*, and rises to the boiler and generates steam, which will pass from the boiler, through the pipe *a' c*, into the chamber of the cylinder E, and force the flame of gas with increased effect upon the boiler, thereby making steam rapidly. The gas is then lighted in the pipe *b*, and, passing through the cone *e*, is forced upward by the steam generated inside the cone *e* and the draft of air which passes up through the cylinder A. The steam rising up through the cone expands the flame of gas and produces more perfect combustion and greatly-increased heat.

The steam-pipe *a' c* being always heated from the gas below before steam is made, no trouble can arise from condensation, and as the end of the pipe *a' c* is always open no accident or injury can arise from steam or low water.

We claim—

The combination of a current of steam with a flame of illuminating-gas and a supply of air, substantially in the manner herein described and specified.

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Witnesses:

C. A. DURGIN,
EDWARD OSBORN.