L. Ervin.

Gas Stove.

No. 46,651. Patented Mar. 7, 1865.

Fig. 1.

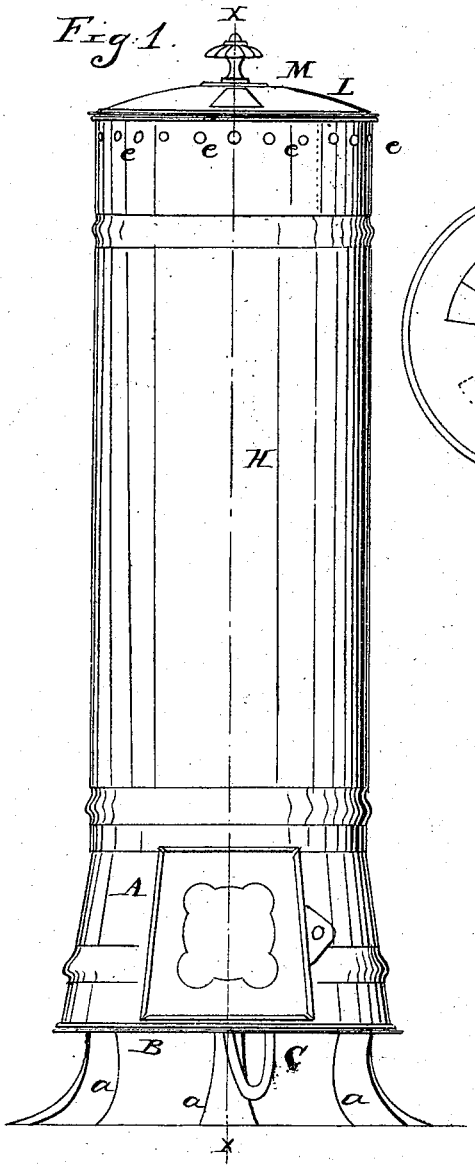


Fig. 3.

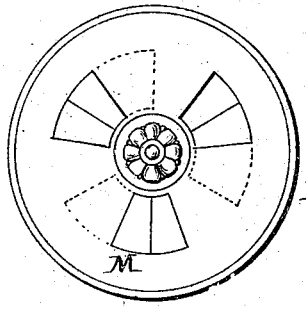


Fig. 2.

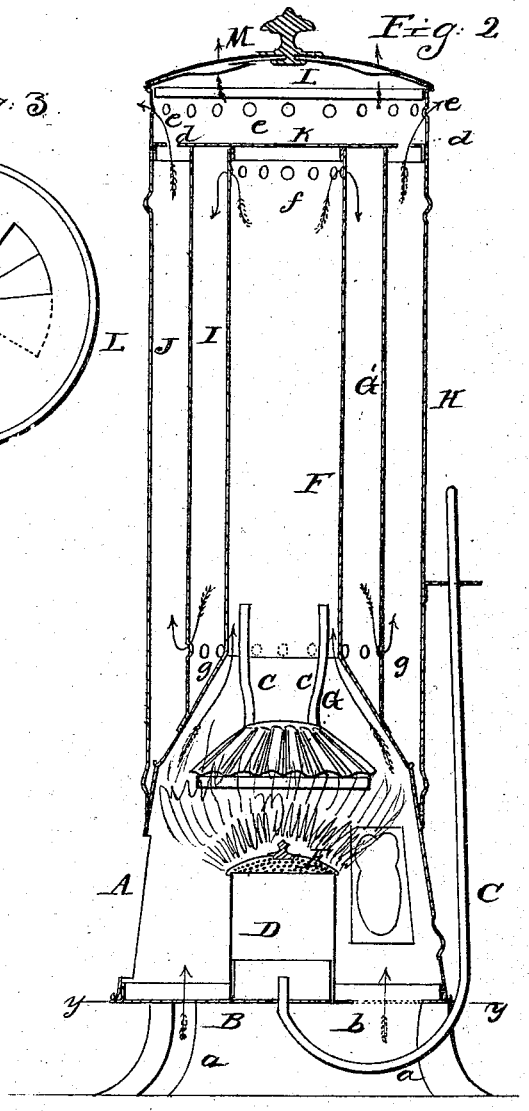
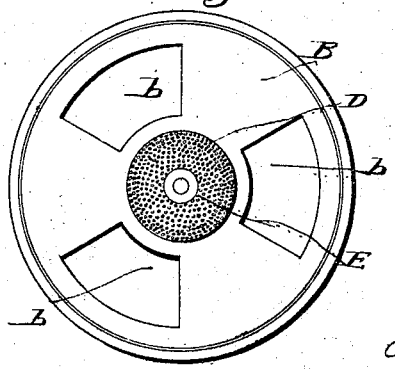


Fig. 4.



Witnesses:

M. M. Springer

Wm. Treuern

Inventor:

Luther Ervin

UNITED STATES PATENT OFFICE.

LUTHER ERVING, OF BROOKLYN, NEW YORK.

IMPROVED GAS-STOVE.

Specification forming part of Letters Patent No. 46,651, dated March 7, 1865.

To all whom it may concern:

Be it known that I, LUTHER ERVING, of Brooklyn, in the county of Kings and State of New York, have invented a new and Improved Gas-Stove; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is an elevation of my invention; Fig. 2, a vertical central section of the same, taken in the line *x x*, Fig. 1; Fig. 3, a plan or top view of the same; Fig. 4, a horizontal section of the same looking upward, taken in the line *y y*, Fig. 2.

Similar letters of reference indicate like parts.

This invention relates to a new and improved stove for heating apartments, cooking, &c., by gas such as is used for illuminating purposes.

The invention consists in the employment or use of a gas chamber or reservoir in connection with a combined air and gas receiver and a series of flues, all arranged and combined in such a manner as to insure the perfect combustion of all the gas which passes into the stove and the radiation of all heat generated by said combustion.

A represents the lower part of the stove, which may be of cast-iron, and is supported on a base, B, provided with feet *a*, the base having holes *b* in it to admit of the entrance of air into the stove.

C represents a gas-pipe the lower end of which is curved upward and passes through the center of the base B, and communicates with a chamber, D, within the lower part, A, of the stove, said chamber having a perforated top, E, as shown clearly in Fig. 2.

F is an upright flue, which is attached to the upper end of A, and has suspended from its lower end by rod *c*, a conical chamber, G, which is corrugated in order to obtain as large a heat-radiating surface as possible. This chamber G extends down into the upper part of A, and is directly over but some distance above the top of the chamber D, as shown in Fig. 2. The flue F is encompassed by a cylinder, G′, the lower end of which rests on the lower part, A, of the stove, and the cylinder G is encompassed by a cylinder, H, the lower end of which also rests on A. The two cylinders G′ H form flues I J, as the cylinder G′ is larger in diameter than F, and the cylinder H larger in diameter than G′, as shown clearly in Fig. 2. The flues F I are covered by a hoizontal plate, K, and this plate extends across the flue J, but is perforated with holes *d* directly over said flue. The cylinder H extends some distance above the cylinder G′, and is perforated all around with holes *e* above the plate K, and the upper end of the cylinder H is provided with a top, L, which has a register, M.

The operation is as follows: The gas-jet is at the end of the pipe C in the chamber D, and the gas is consumed at the exterior of the perforated top E of D. Any gas which may escape from E unconsumed is arrested by the chamber G and becomes mixed or incorporated with air which passes up into the stove through the openings *b*. This gas mixed with air is consumed in G, the latter radiating heat in the lower part, A, of the stove. The heat or products of combustion pass up the flue F through holes *f* in the upper part of F, down the flue I, and through holes *g* in the lower end thereof into the flue J, and thence up through J, passing out either at the holes *e* or through the register M. By this arrangement all the gas is consumed in the stove, the combined air and gas chamber G arranged relatively with the chamber D, as shown, effecting that result, while the arrangement of flues, as described, insures a perfect radiation of the heat.

I claim as new, and desire to secure by Letters Patent—

1. The gas chamber D, provided with a perforated top, E, in combination with the air and gas chamber G, all arranged substantially as and for the purpose herein set forth.

2. The arrangement of the flues F I J, when used in combination with the gas-chamber D and air and gas chamber G, substantially as for the purpose specified.

LUTHER ERVING.

Witnesses:

WM. F. MCNAMARA,

M. M. LIVINGSTON.