J. SMITH.

Stoves.

No. 151,445. Patented May 26, 1874.

Fig. 1.

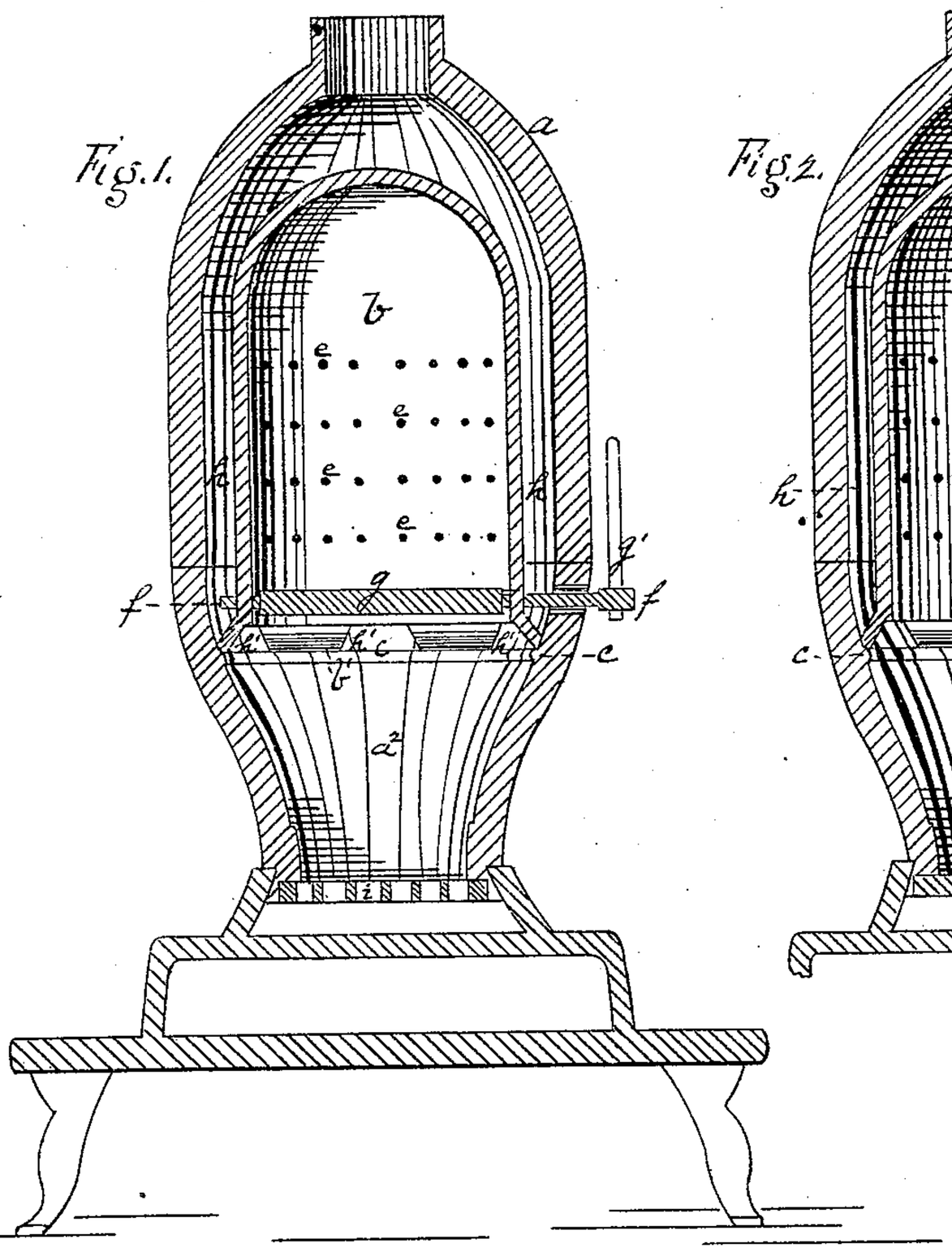


Fig. 2.

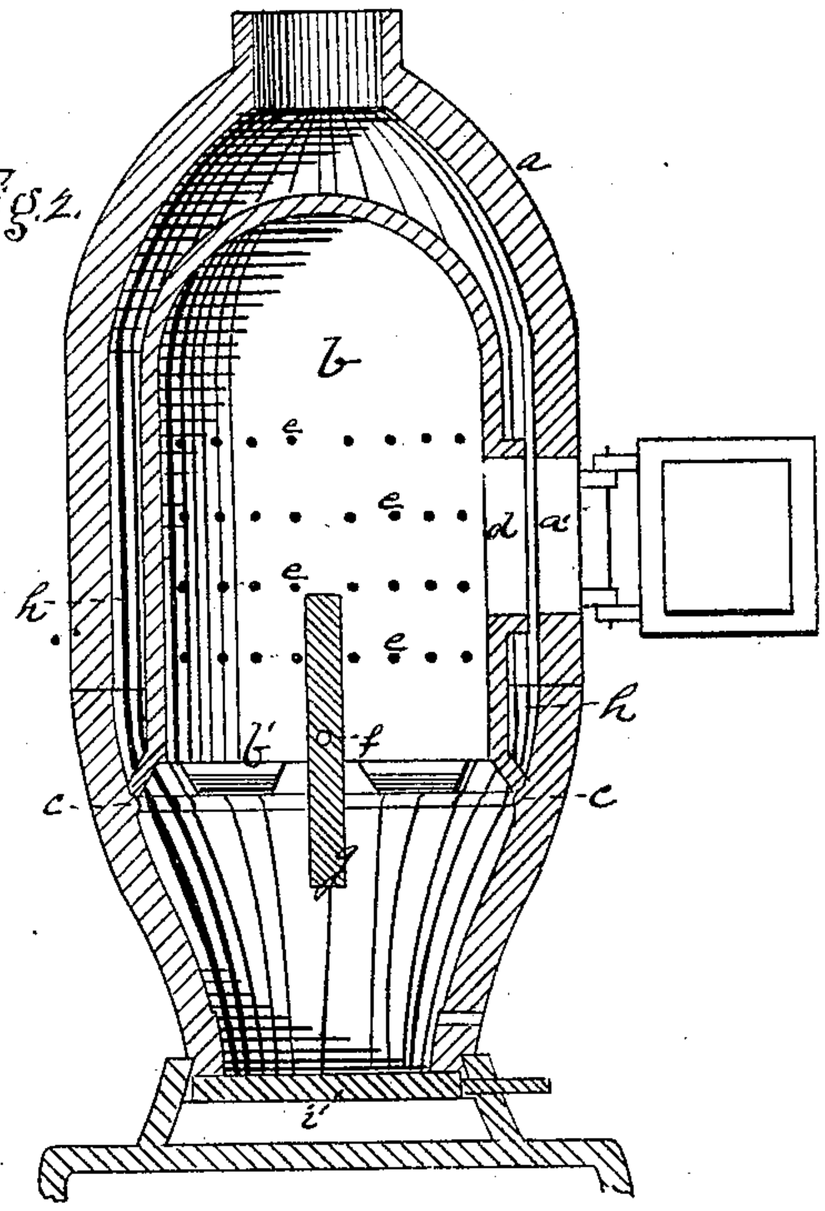
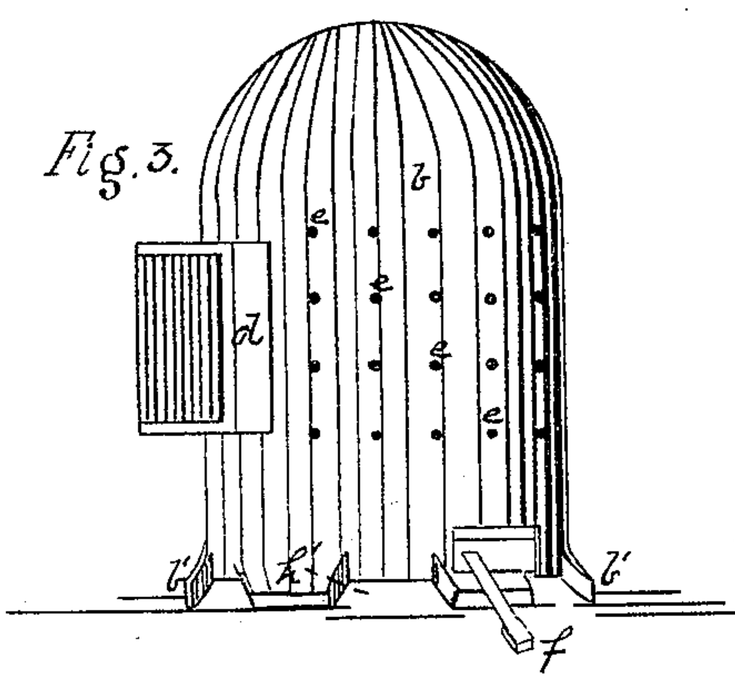


Fig. 3.



WITNESSES

Frederick Standish

James L. Kay

INVENTOR

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UNITED STATES PATENT OFFICE.

JOHN SMITH, OF PITTSBURG, PENNSYLVANIA.

IMPROVEMENT IN STOVES.

Specification forming part of Letters Patent No. **151,445**, dated May 26, 1874; application filed April 3, 1874.

To all whom it may concern:

Be it known that I, JOHN SMITH, of Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Stoves; and I do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawing forming part of this specification, in which—

Figures 1 and 2 are sectional views, and Fig. 3 is a view of one of the parts detached.

Like letters of reference indicate like parts in each.

My invention consists in the construction of a stove, having an inner or coking chamber, with a closed top, perforated sides, for the escape of the gases, and provided with a dumping or rotating bottom for discharging its contents. The object of my invention is the combustion of gases generated in the stove, and thereby the entire utilization of the fuel which is used.

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

The stove, which is shown in the drawing, is of a common form, and one of a number to which my improvement may be applied. Inside of the stove *a* I place an inner chamber, *b*, in this case dome-shaped to suit the shape of the stove *a*. This inner chamber *b*, which is shown in Fig. 3, is provided with feet *b'*, by which it rests upon the rib or ring *c*, and a doorway or entrance-port, *d*, which is opposite to and extends out to the door a^1 of the stove *a*, so as to form a protected passage-way into the inner chamber, as illustrated in Fig. 2. In the sides of the chamber *b* I make any desired number of perforations or holes *e*, and upon pivots *f* I mount a rotating bottom or disk, *g*, which is designed to be operated by the crank *g'*, placed upon the extended end of one of the pivots. Between the stove *a* and the chamber *b* is an annular recess or space, *h*, which communicates by the openings *h'* with the lower portion of the stove a^2. The stove is fitted with a grate, *i*, of the usual construction, beneath which is the ash-pit.

The operation of my stove is as follows: Fire is first made in the chamber *b* or in the portion a^2 of the stove. After it has been fully started it is thrown down into the chamber a^2 by turning the bottom *g*, as indicated in Fig. 2. Fresh coal is then supplied into the chamber *b*. The action of the heat upon the fuel in this chamber causes it to become coked, and the gases which are generated pass out through the perforations *e* into the annular space *h*, and there meeting with the requisite amount of oxygen, and being themselves in a highly-heated condition, they are consumed. When the fuel in this chamber has become thoroughly coked it is thrown down into the lower portion by turning the bottom in the manner described, and fresh fuel is supplied.

The fuel for which this stove is especially designed is bituminous coal. Practical experience has proven to me that this stove generates an intense degree of heat, consumes all the smoke, and requires less fuel than the ordinary stove.

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

In combination with the shell *a*, the inner chamber having a closed top and perforated sides, and the tipping or discharging bottom, substantially as and for the purpose specified.

In testimony whereof I, the said JOHN SMITH, have hereunto set my hand.

JOHN SMITH.

Witnesses:

W. N. PAXTON,

JAMES I. KAY.