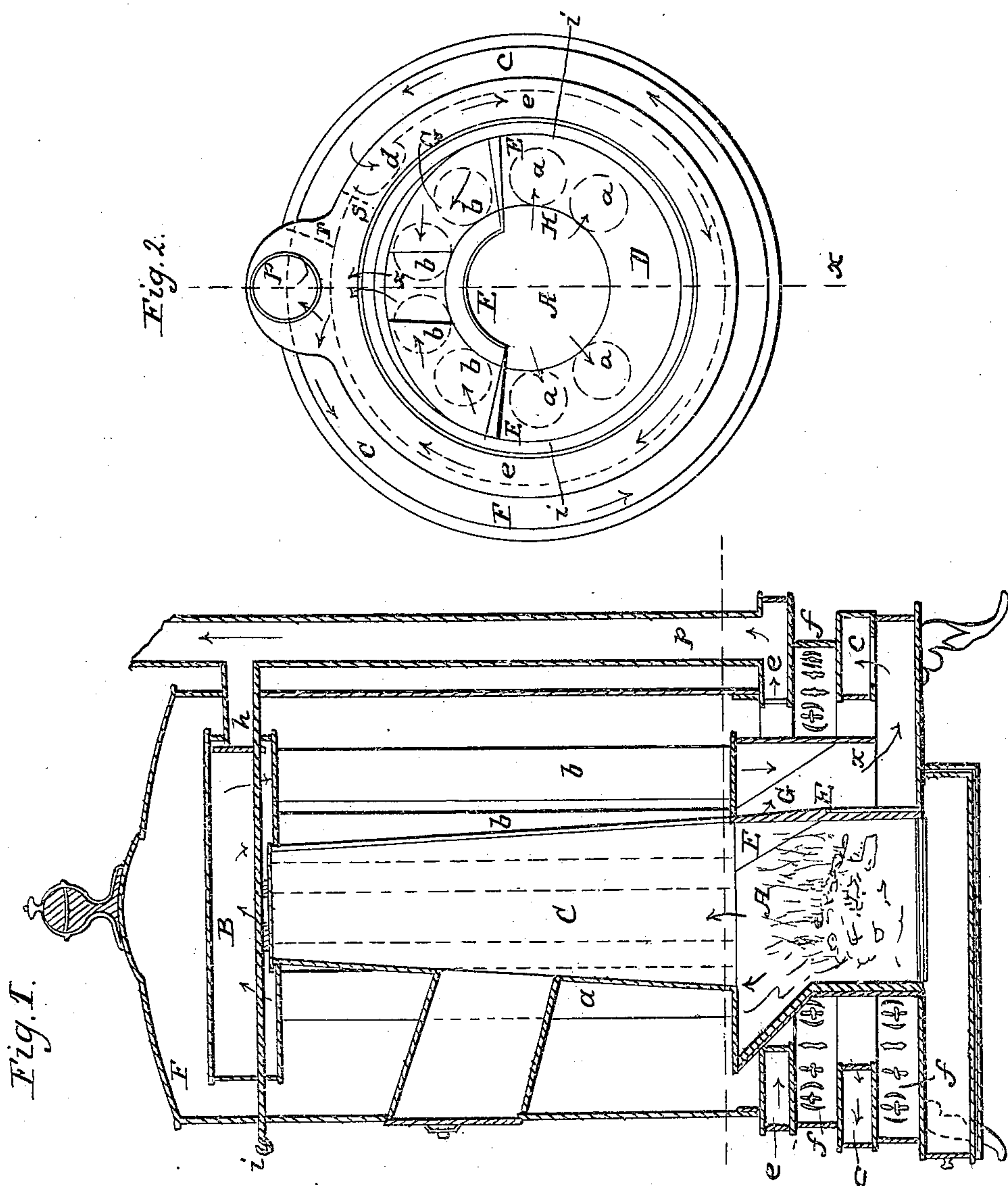


R. CHESTER.  
Magazine Stove.

No. 42,837.

Patented May 24, 1864.



Witnesses:  
L. L. Coburn  
W. E. Mann.

Inventor:  
R. Chester.

# UNITED STATES PATENT OFFICE.

RICHARD CHESTER, OF CHICAGO, ILLINOIS.

## IMPROVEMENT IN STOVES.

Specification forming part of Letters Patent No. 42,837, dated May 24, 1864.

*To all whom it may concern:*

Be it known that I, RICHARD CHESTER, of the city of Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Coal-Stoves; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings and letters of reference marked thereon, which form a part of this specification, in which—

Figure 1 represents a vertical sectional view at the red line *x* in Fig. 2, and Fig. 2, a horizontal sectional view at the red line in Fig. 1.

The nature of my invention consists in so constructing a coal-stove that the draft may be made either direct from the top of the fire-pot into the escape-pipe leading to the chimney or applied near the base of the fire-pot, carrying the heat to a chamber at the top of the stove and thence through pipes to its base, and there so distributed that none of it is lost by passing out of the chimney.

The same letters of reference are used to represent corresponding and similar parts in the different figures.

To enable those skilled in the art to manufacture and use my invention, I will proceed to describe it with particularity.

I construct that part of the fire-pot which contains the fire larger in diameter than the upper part of it. These two parts of the fire pot are marked in Fig. 1 A and C, respectively. The base of C is indicated by the circle *k*, and the top of A by the circle *i*, the square shoulder or plate D extending from the one to the other. Through the said plate D are the pipe-holes *a* and *b*, over which are the pipes marked with the same letters. In the base A of the fire-pot there is a partition, E, which keeps the fire in the front part of it under the pipes *a*. The chamber B rests on the pipes *a* and *b*, and has a pipe *h* leading out of it directly into the escape-pipe *p*. *i* is a damper, which, when drawn out, opens both the top of the fire-pot C and the pipe *h*. F is a sheet-iron case, forming the outside of the stove, and may be either open or closed at the top. *c* and *e* are pipes for conducting the heat around the base of the stove and *f* is

open work between said pipes. *r* and *s* are solid partitions in the pipes *c* and *e*, and *d* is a pipe connecting the two said pipes.

When the fire is kindled, the damper *i* is drawn forward, which allows the smoke to escape into the chamber B and directly into the escape-pipe *p*, but, when the fire is well burning, by pushing back the damper the top of the fire-pot C is closed and also the pipe *h*, when the heat can escape from fire-pot only through the pipes marked *a*. These pipes lead into the chamber B but the pipe *h* being closed the heat is forced down the back pipes, *b*, through the passage *x* into the circular pipe at the base of the stove, (marked *e*.) By means of the partition in the pipe *c*, which is represented by the dotted line *r*, the heat is caused to pass quite round in *c*, as indicated by the arrows, to the connecting-pipe *d*, and through it into the circular pipe *e*. There is also a similar partition in this pipe, (shown at *s*), which causes the heat to pass round in *e*, as indicated by the arrows, to the escape-pipe *p*. The number of these circular pipes could be increased, but two is sufficient to show the principle.

There are two small doors opening into each of the circular pipes to facilitate cleaning them.

Having thus fully described the construction and operation of my improved coal-stove, what I claim as my invention, and desire to secure by Letters Patent, is—

1. The arrangement of the partition E in the fire-pot A, when constructed and operating substantially as and for the purposes set forth.

2. The combination and arrangement of the partition E, the front pipes, *a*, the chamber B, the return-pipes *b*, the passage *x*, and the circular pipes *c* and *e*, when constructed and operating substantially as set forth.

3. The combination and arrangement of the damper *i*, the chamber B, the pipe *h*, the fire pot C, and the partition E, when all arranged and operating substantially as herein delineated and described.

RICH. CHESTER.

Witnesses:

L. L. COBURN,  
W. E. MAUS.