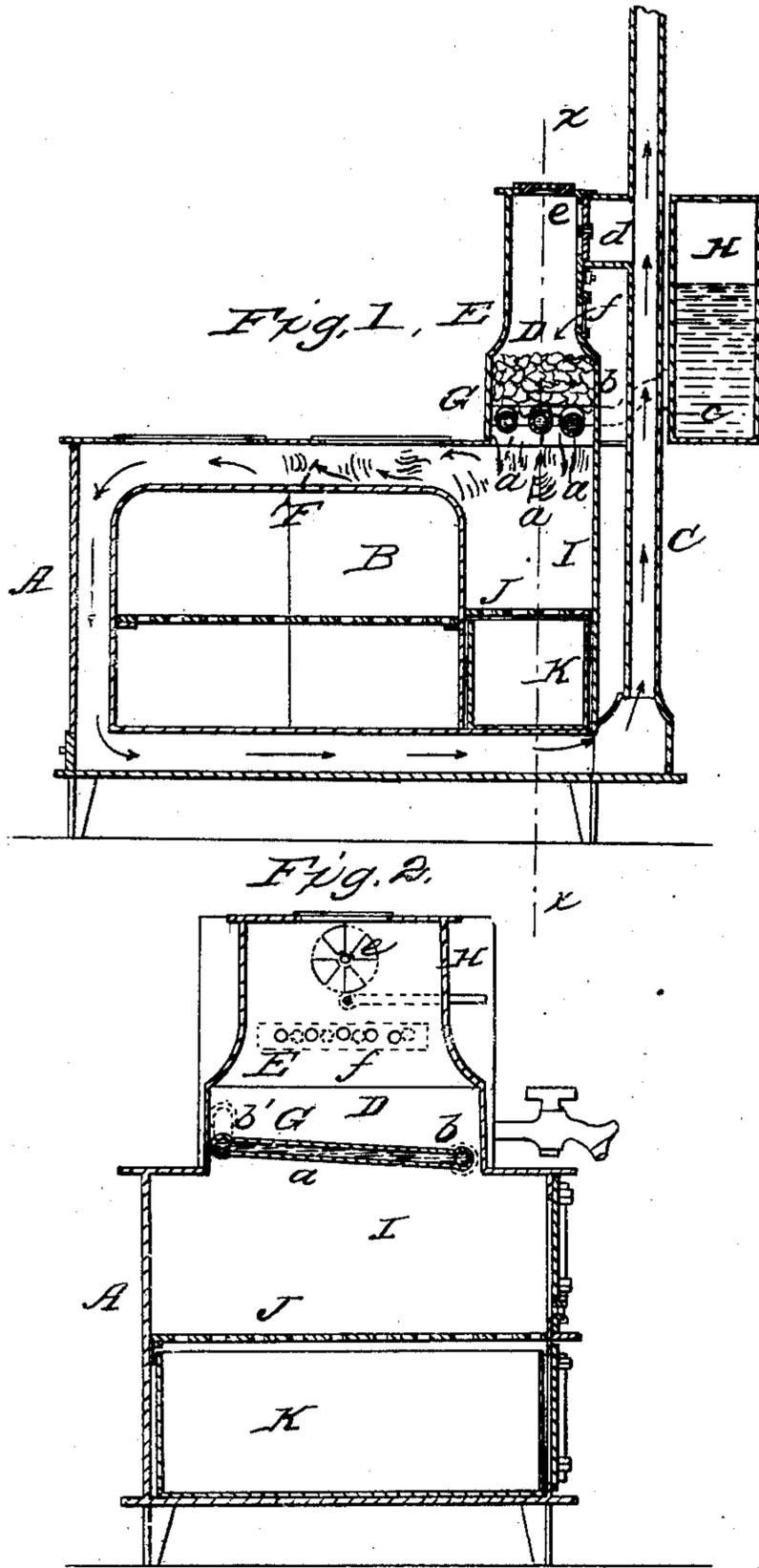


J. D. FIELD.
Magazine Cook Stove.

No. 24,800.

Patented July 19, 1859.



Witnesses:
Geo. Parker
Edward Day.

Inventor:
James D. Field.

UNITED STATES PATENT OFFICE.

JAMES D. FIELD, OF DAVENPORT, IOWA.

STOVE.

Specification of Letters Patent No. 24,800, dated July 19, 1859.

To all whom it may concern:

Be it known that I, JAMES D. FIELD, of Davenport, in the county of Scott and State of Iowa, have invented a new and Improved

5 Cook-Stove; 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, forming part of this specification, in which—
10 Figure 1, is a longitudinal vertical and central section of my invention. Fig. 2, is a transverse vertical section of the same, taken in the line *x, x*, Fig. 3.

Similar letters of reference indicate corresponding parts in both figures.

15 The object of this invention is to obtain a cook stove in which the full benefit of the heat generated by the combustion of the fuel will be obtained, and consequently a saving
20 of the latter effected, whether coal or wood be used.

The invention consists in a novel arrangement of flues, fire chambers, and a water-heating device as hereinafter fully shown
25 and described, whereby the desired object is attained.

To enable others skilled in the art to fully understand and construct my invention I will proceed to describe it.

30 A, represents the body or case of the stove, which is of cast iron.

B, is the oven.

C, is the smoke pipe.

35 D, is the fire-chamber, which is placed in a box E, above the body or case A.

40 F, is a flue which extends from the bottom of the fire chamber D, over the top of the oven B, down at its end, underneath it, and communicates with the lower end of pipe C, as shown clearly in Fig. 1.

45 The fire grate G, is formed of a series of tubes *a*, the ends of which are connected with cross-pipes *b, b'*, one of which *b'*, is more elevated than the other *b*, as shown clearly in Fig. 2. This difference in the height or elevation of the cross pipes *b, b'*, gives an inclination to the tubes *a*. The more elevated crosspipe *b'*, communicates with a boiler or water heater H, some distance above its bottom *c*, as shown clearly in
50 Fig. 1. The lower crosspipe *b*, communi-

cates with the boiler or heater H, near its bottom. The boiler or heater H may be of rectangular form and placed parallel with the box E.

55 Within the body A, of the stove and directly below the chamber D, there is a chamber I, having a grate J for its bottom and an ash-box K, below the grate. The chamber I, is intended for wood, when the latter is more readily attainable than coal for
60 fuel.

The upper part of the box E communicates with the smoke-pipe C, by a pipe *d*, which is provided with a damper *e*. In the
65 box E, there is also placed a register *f*, said register being above the coal in the fire-chamber D, as shown clearly in Fig. 1. Vents *g*, provided with doors are made in the flue F below the oven B; see Fig. 1.
70

When coal is used as a fuel D is the fire-chamber and G the fire-grate. A direct draft is given the fire in kindling by opening the damper *e*, closing the register *f*, and opening the vents *g*, in the flue F. When
75 the coal is fully kindled, the damper *e*, and vents *g*, are closed, the register *f*, opened, and the products of combustion pass downward from the fire-chamber and around the oven B, through the flue F, into the pipe
80 C. In case wood is used for fuel, the operation is precisely the same. The water in H will be heated in consequence of its passing through the tubes *a*; and by having said tubes inclined, a circulation of the water
85 through the tubes is briskly kept up; the warm water rising as the cooler water descends. The inclination of the tubes *a*, of the grate G, greatly assists this circulation of the water and prevents the tubes *a*, from
90 burning out.

It will be seen that the fire-chamber I, admits of being made as large as may be desirable for wood without at all affecting the fire-chamber D; and the box K, will receive
95 the ashes of either fire. The whole arrangement is extremely simple and efficient and will prove a valuable acquisition for the kitchen.

I do not claim separately any of the parts,
100 irrespective of arrangement and construction; but

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

5 The fire-chamber D, I, flue F, and water-heater H, the latter being provided with inclined tubes *a*, to form the grate of the fire-chamber D, the above parts being arranged relatively with each other, the oven B, and

the smoke-pipe C, to operate as and for the purpose set forth.

JAMES D. FIELD.

Witnesses:

GEO. H. PARKER,
EDWIN FAY.