

SMITH & BROWN.

Cooking Stove.

No. 5,113.

Patented May 15, 1847.

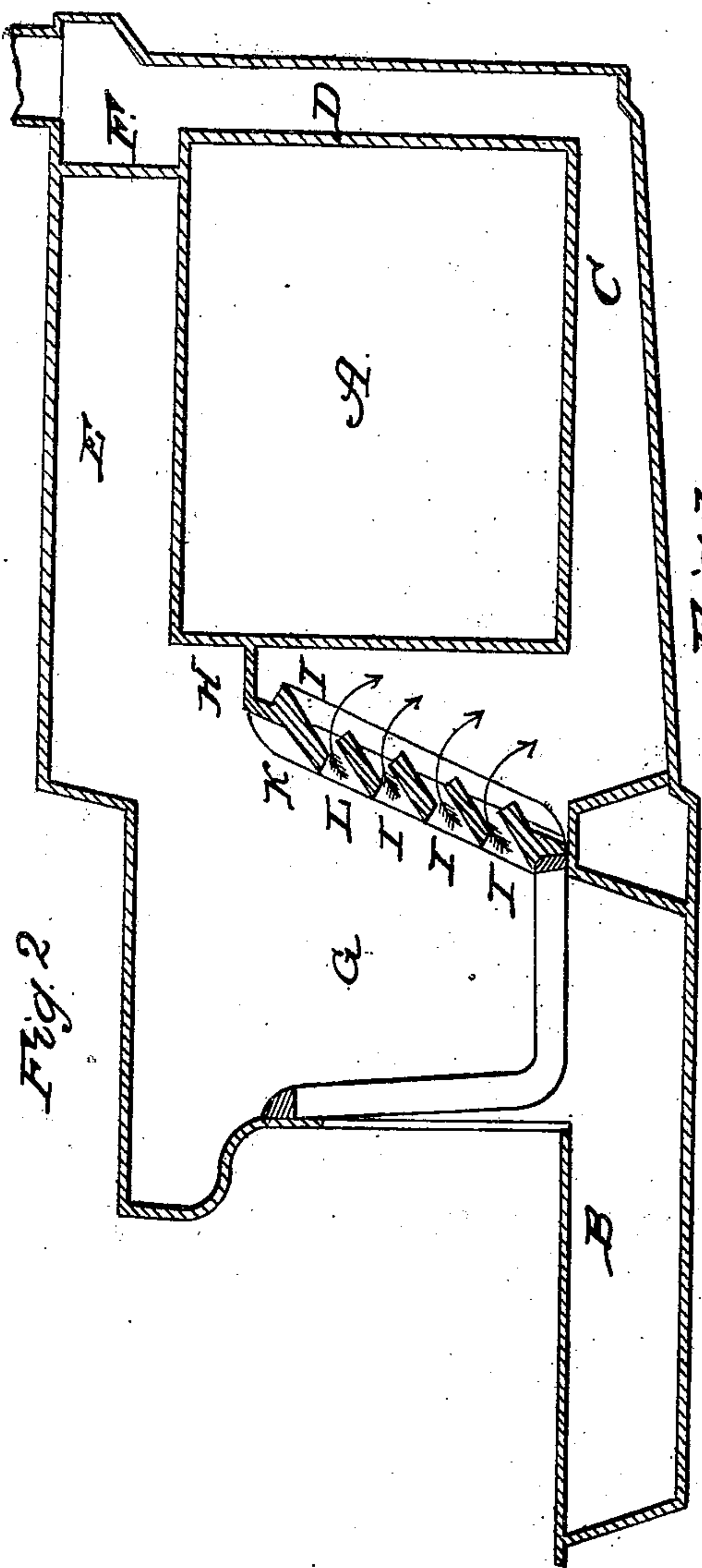


Fig. 1

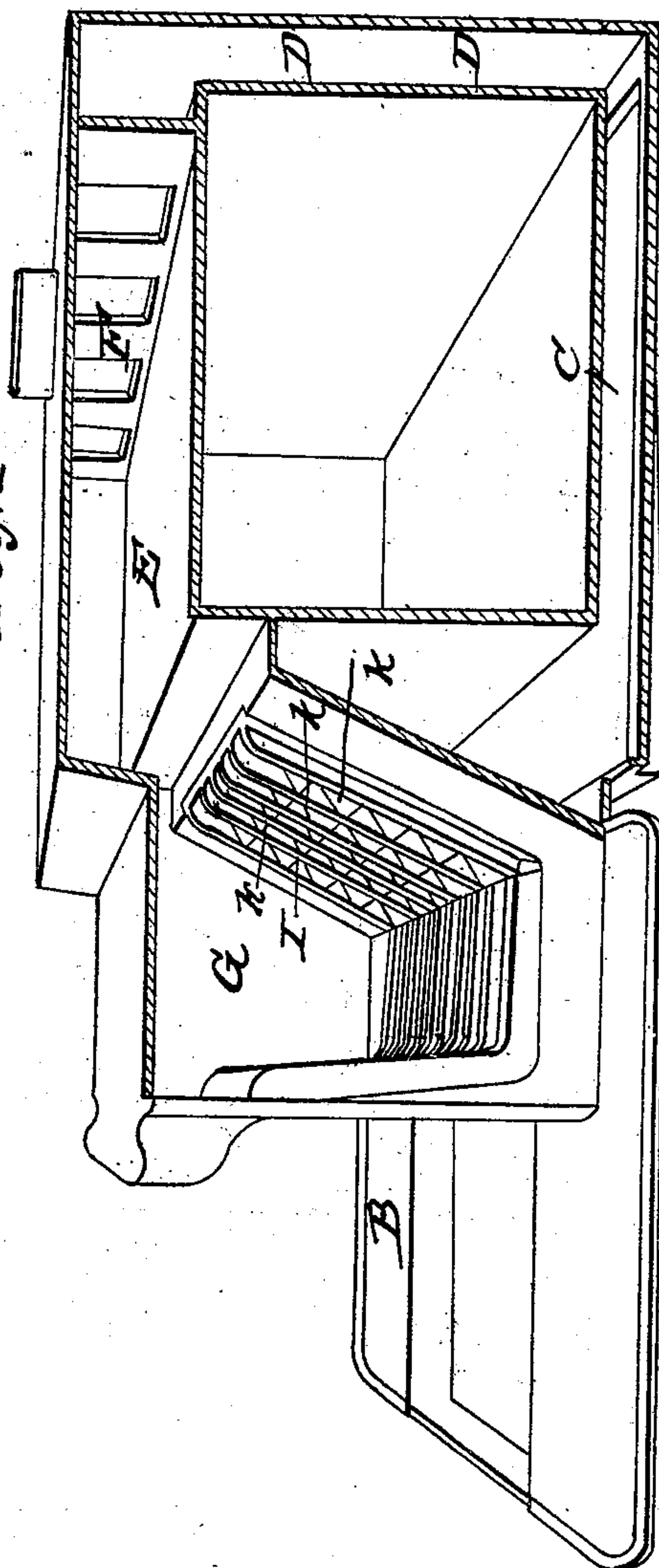


Fig. 4

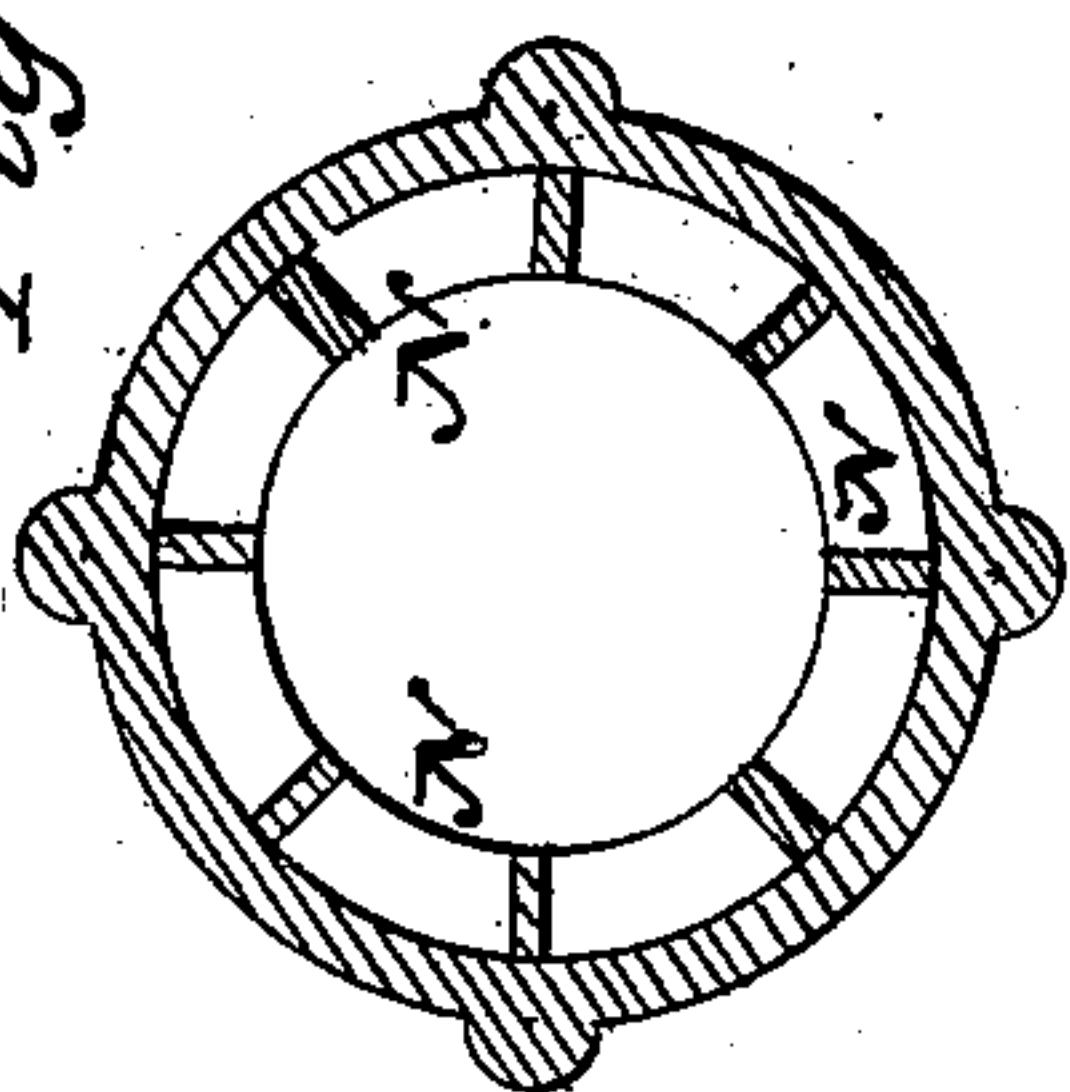
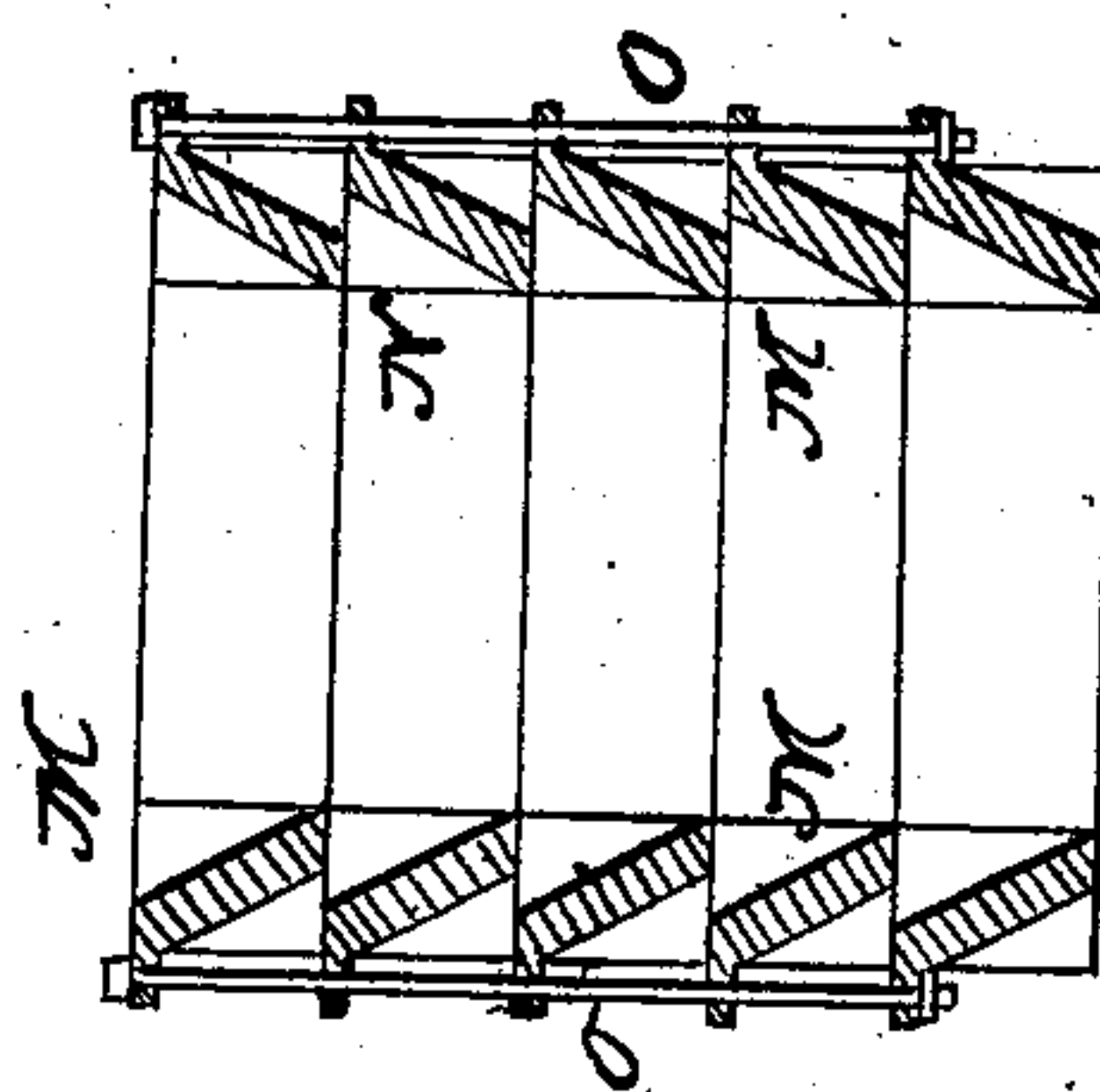


Fig. 3



UNITED STATES PATENT OFFICE.

GARRETTSON SMITH AND HENRY BROWN, OF PHILADELPHIA, PENNSYLVANIA.

FLUE-PLATE OF STOVES.

Specification of Letters Patent No. 5,113, dated May 15, 1847.

To all whom it may concern:

Be it known that we, GARRETTSON SMITH and HENRY BROWN, of the city and county of Philadelphia and State of Pennsylvania, have invented a new and useful improvement in the manner of obtaining a down or side draft in all kinds of cooking-stoves, heating-stoves, ranges, or heaters; and we do hereby declare that the following is a full and exact description of the same, reference being had to the annexed drawings of the same, making part of this specification.

Figure 1 is a perspective view of a cooking stove with the improvement attached, the outer plates of the stove being removed. Fig. 2 is a vertical longitudinal section of ditto. Fig. 3 is a vertical section of a heating or parlor stove with the improvement applied. Fig. 4 is a horizontal section of ditto.

The same letter in the several figures refer to corresponding parts.

The nature of this invention consists in placing in the fire chamber immediately in front of the oven, a series of inclined ribbed flue plates composed of cast iron or other suitable material for the purpose of directing the draft in any direction required, and preventing the lower flues from being obstructed by ashes or other particles arising from the fire.

The oven A, hearth plate B, flues C, D, E, register plate F, and fire chamber G, are made in the usual or most approved manner, and need not therefore be particularly described.

The plate H against which the ribbed plates I, rest, is secured in front of the oven, and extends upward from the lower part of the fire chamber, in an inclined direction to within a short distance of the top of the oven, and then extends in a horizontal direction toward the front oven plate, to which it is attached. This plate H, has a large opening or space left in its inclined part, for the purpose of receiving

the inclined ribbed flue plates, I. They consist of a series of inclined plates forming partitions I, extending transversely in a horizontal line, and longitudinally at an angle of about 45 degrees, being held together by a series of bars K, running in an inclined direction, and resting against the lower end of the grate, and at their upper ends against the edge of the horizontal part of the plate H.

The plates I, and bars K, when placed in their proper positions, form flues or channels L, and cause the draft to first ascend before turning around to pass through the lower flue under the oven as indicated by the arrows; and while they form a screen to prevent the front plate of the oven from being burned, and prevent the ashes and other particles from falling through into the space, also cause an increased and more free draft.

When it is desired to apply this improvement to heating, or parlor stoves a series of rings composed of cast iron or other material or bands M, arranged one above the other are placed inside the cylinder. These rings or bands are in form similar to an inverted frustum of a hollow cone, and have on their inner periphery near the upper part, a number of projections N, as shown at Fig. 4. These projections extend toward the center, and are formed on all except the upper one, for the purpose of supporting the ring next above—the whole being secured and held firmly together by means of vertical bolts O, and nuts, passing through ears on the outer periphery of the rings, and placed inside the stove.

What we claim as our invention and which we desire to secure by Letters Patent is—

The flue plates and cylinder, constructed substantially in the manner above described.

GARRETTSON SMITH.
HENRY BROWN.

Witnesses:

GEORGE LEACOCK,
C. BRAYER.