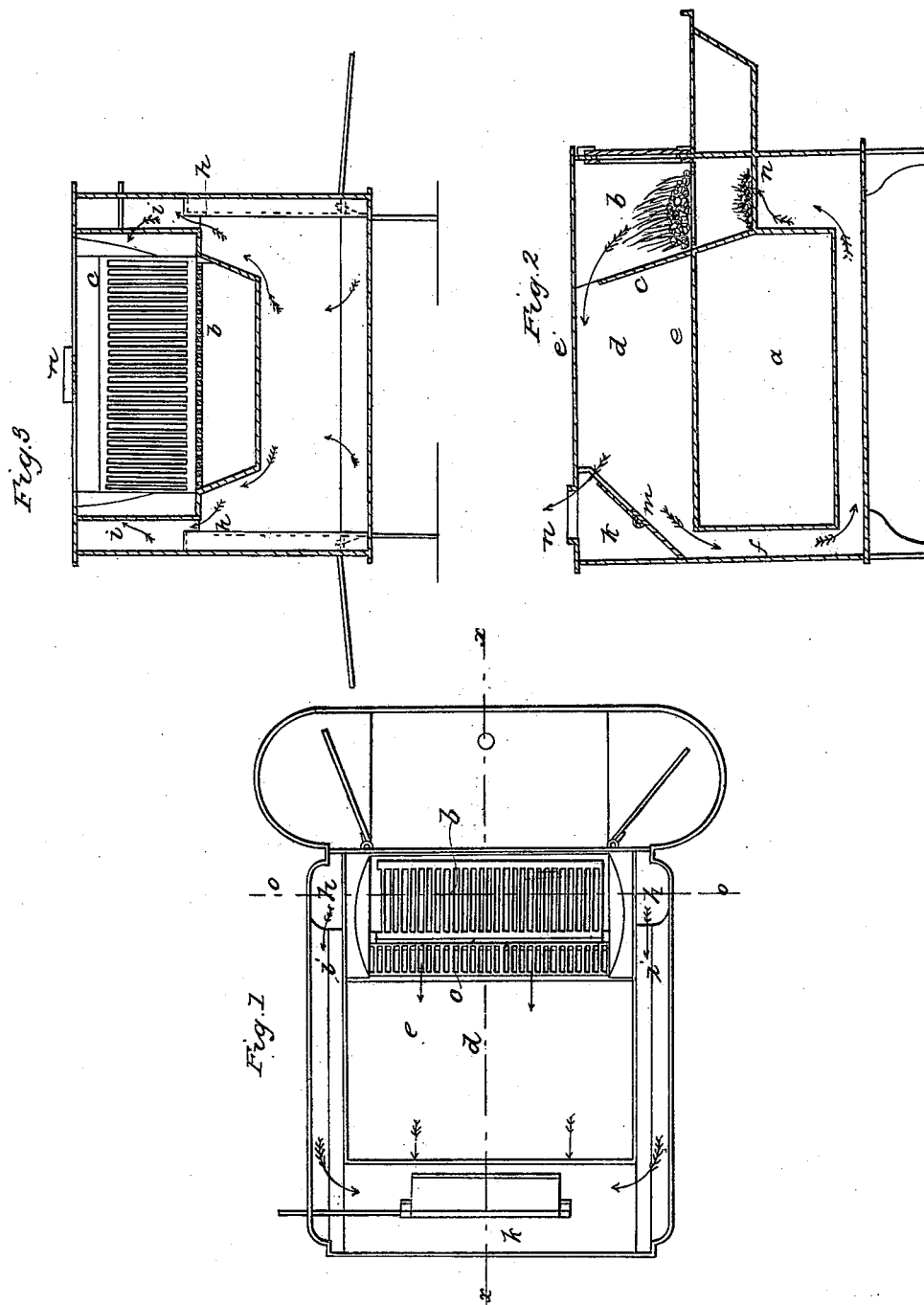


E. KAIGHN.
Cooking Stove.

No. 6,721.

Patented Sept. 18, 1849.



UNITED STATES PATENT OFFICE.

ELIAS KAIGHN, OF CAMDEN, NEW JERSEY.

COOKING-STOVE.

Specification of Letters Patent No. 6,721, dated September 18, 1849.

To all whom it may concern:

Be it known that I, ELIAS KAIGHN, of Camden, in the county of Camden and State of New Jersey, have invented certain new and useful Improvements in Cooking-Stoves, and that the following is a full, clear, and exact description of the principle or character which distinguishes them from all other things before known and of the usual manner of making, modifying, and using the same, reference being had to the accompanying drawings in which—

Figure 1 is a plan with the top removed.

Fig. 2 is a section on line *x, x*, of Fig. 1.

Fig. 3 is a section on line *o, o*, of Fig. 1.

The purposes of my invention are to cause the draft to pass directly from the fire chamber around the oven, and thence out of the exit pipe, without any return flue, the fire chamber being situated in the upper part of the stove in front, and the exit pipe in the rear end of the stove at top. The advantages which I get from this arrangement is an increased draft, and great boiler surface, a diminished heat at the oven top, and an increased heat at the bottom, and an advantageous arrangement for the escape of the heat by the employment of a grate at the back of the fire.

The stove is of the usual oblong form, with the oven (*a*,) below the level of the fire chamber (*b*,); this fire chamber is built in the front upper corner of the stove, and extends nearly from side to side, having only a space on each side for a flue, to be hereafter described; the back (*c*,) as well as the front and bottom, is formed of grate bars, to contain the fuel; but being open, permit a free draft horizontally through the fire; directly behind this fire chamber is the flue (*d*,) of the same depth as the fire chamber, said flue being found between the top oven plate (*e*,) and the boiler plate (*e'*,), and the two side flues hereafter

named; thence it descends behind the oven in a flue (*f*,) the whole width of the stove; thence it passes under the whole of the oven bottom and up front, and into two ascending flues (*h*,) in each front corner, which flues extend up on each side of the fire chamber to the top of the stove, where they open into horizontal flues (*i*,) that extend back along the sides of the stove, just under the boiler plate or stove top; at their rear ends they open into a transverse flue (*k*,) formed across the back of the stove, by an inclosed plate (*m*,) and the back and top plates of the stove; this flue is of triangular form, which gives an opening under it between the back plate and oven, for the descending flue (*f*,) above named; the exit pipe (*n*,) opens into this triangular flue (*k*,), and the circuit is thus formed. An opening in the inclined plate (*m*,), which is covered by a damper (*p*,), serves to admit a direct draft to the exit pipe, without passing around the oven. The red arrows trace in the various drawings the course of the draft.

Having thus fully described my improvement, what I claim therein as new, and which I desire to secure by Letters Patent, is—

1. The combination of the flues, substantially as described, so as to cause the draft to pass around the oven the whole breadth on their sides, and thence along side flues, on top to the exit pipe, through the triangular flue in the rear.

2. I also claim, in combination therewith, the fire chamber with a grated back, by which I effect an economy of heat, by exposing a larger portion of the ignited fuel to the chamber over the oven.

ELIAS KAIGHN.

Witnesses:

A. BROWNING,
THOMAS W. STUNGER.