R. D. GRANGER.

Cooking Stove.

No. 6,069.

Patented Jan'y 30, 1849.

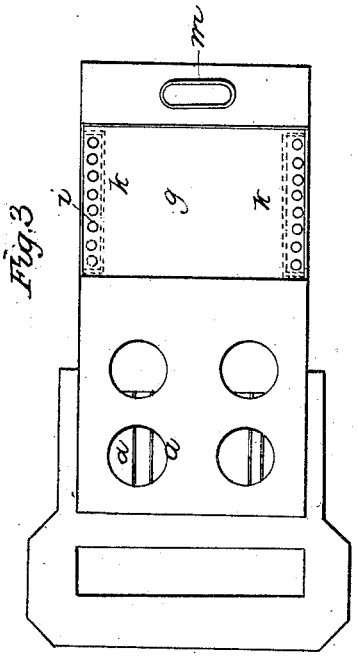

Fig. 3

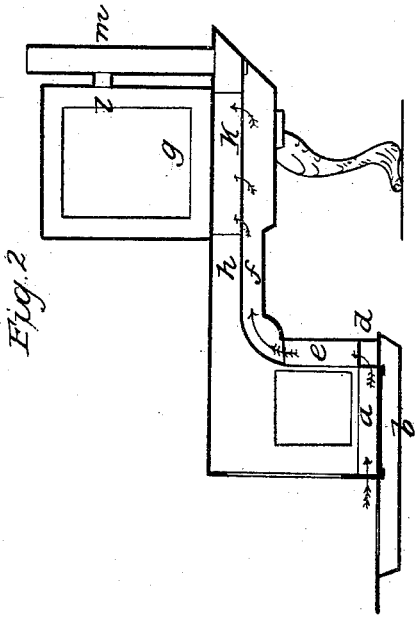

Fig. 2

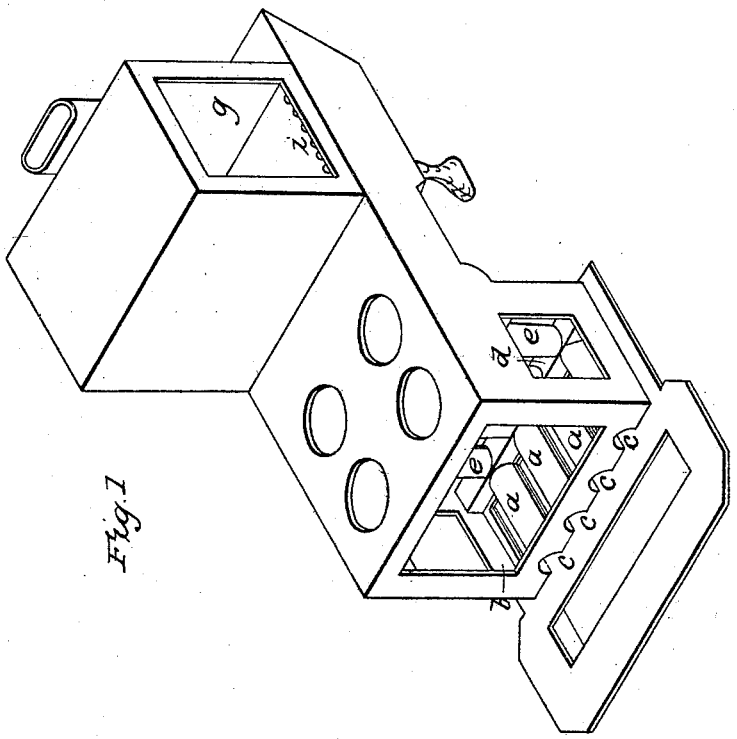

Fig. 1

UNITED STATES PATENT OFFICE.

R. D. GRANGER, OF ALBANY, NEW YORK.

COOKING-STOVE.

Specification of Letters Patent No. 6,069, dated January 30, 1849.

To all whom it may concern:

Be it known that I, R. D. GRANGER, of Albany, in the county of Albany and State of New York, 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 drawing, making a part of the same, in which—

Figure 1, is an isometrical view of the stove. Fig. 2, is a longitudinal section. Fig. 3, is a top plan with a portion of the oven removed.

This improved stove is constructed in the most convenient way, by making it with an elevated oven in rear of, and above the fire chamber, as clearly represented in Fig. 1, which represents an isometrical view of the stove, with all the doors removed:—but I do not intend to confine myself to this exact form.

The improvements which are novel consist in the bottom grate of the fire chamber, composed of a series of tubes, (*a*, *a*) the under sides of which are flat, with a space between each, as clearly shown in the drawing; below this grate there is a sliding lattice damper (*b*) of common construction, which fits up against the bottom of the tubes, and can be made to close the spaces between them, or partially so, as desired. The front ends of the tubes (*a*) open through the front plate at (*c*) into the exterior airs, and at their rear end connect with a chamber (*d*), from which tubes (*e*) rise upward at the back of the fire, and join a broad horizontal flue (*f*) the whole width of the stove:—a modification of this arrangement would be, to join the bottom and rear tubes, without the intervention of the chamber (*d*); or the back tubes may be replaced by a corrugated plate; but I do not deem that so efficacious as the mode first described. The chamber (*f*) extends back as shown in Fig. 2, under the oven (*g*) and horizontal smoke flue (*h*) to the back of the stove; the lower plate may be bonneted up or down, as shown in the drawing, either to diminish or enlarge that part of the chamber, as may be found most expedient; or the chamber may be divided into two, one on each side. At each end of the oven (*g*) next the doors there is a row of holes (*i*), shown more clearly in Fig. 3, which is a plan, with the oven in section. These holes open into a short pipe (*k*) (represented in red lines in Fig. 3,) which communicates with the chamber (*f*) below: near the top of the oven a lateral pipe (*l*) connects it with the smoke pipe (*m*), by means of which a circulation if air is maintained through the oven.

The operation of this stove is as follows: When a fire is made in the fire chamber the air in the tubes of the grate is heated, and passes on to the oven; if the fire gets low, the damper is closed, or nearly so, and the small coals and ashes accumulate around, and envelop the tubes, so as to keep up the heat, and circulation of air as long as there is any fire in the grate, which will economize the fuel to the greatest practical extent.

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

1. The combination of the tubular grate, or air heating tubes, with damper (*b*) below the same, in the manner described substantially.

2. I also claim the combination of the air heating grate tubes at the bottom and back of the fire chamber, together with the oblong chamber (*f*) under the smoke flue, for the purpose of conveying air into each end of the oven, by which a greater amount of radiating surface for heating air is obtained, with the oven as set forth, for the purpose of baking by means of heated air, substantially in the manner above described.

R. D. GRANGER.

Witnesses:

J. J. GREENOUGH,

WM. GREENOUGH.