S. GRAVES.

Cooking Stove.

No. 4,380.

Patented Feb. 10, 1846.

Fig. 4

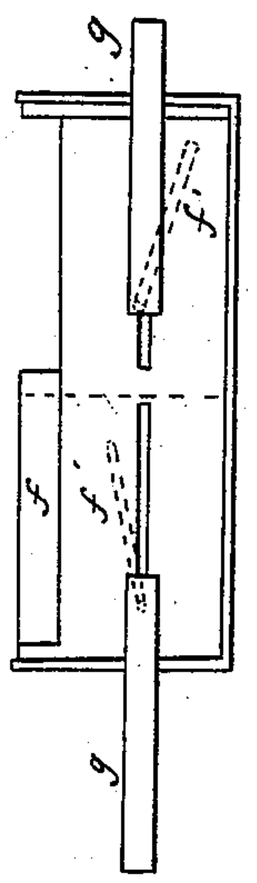


Fig. 1

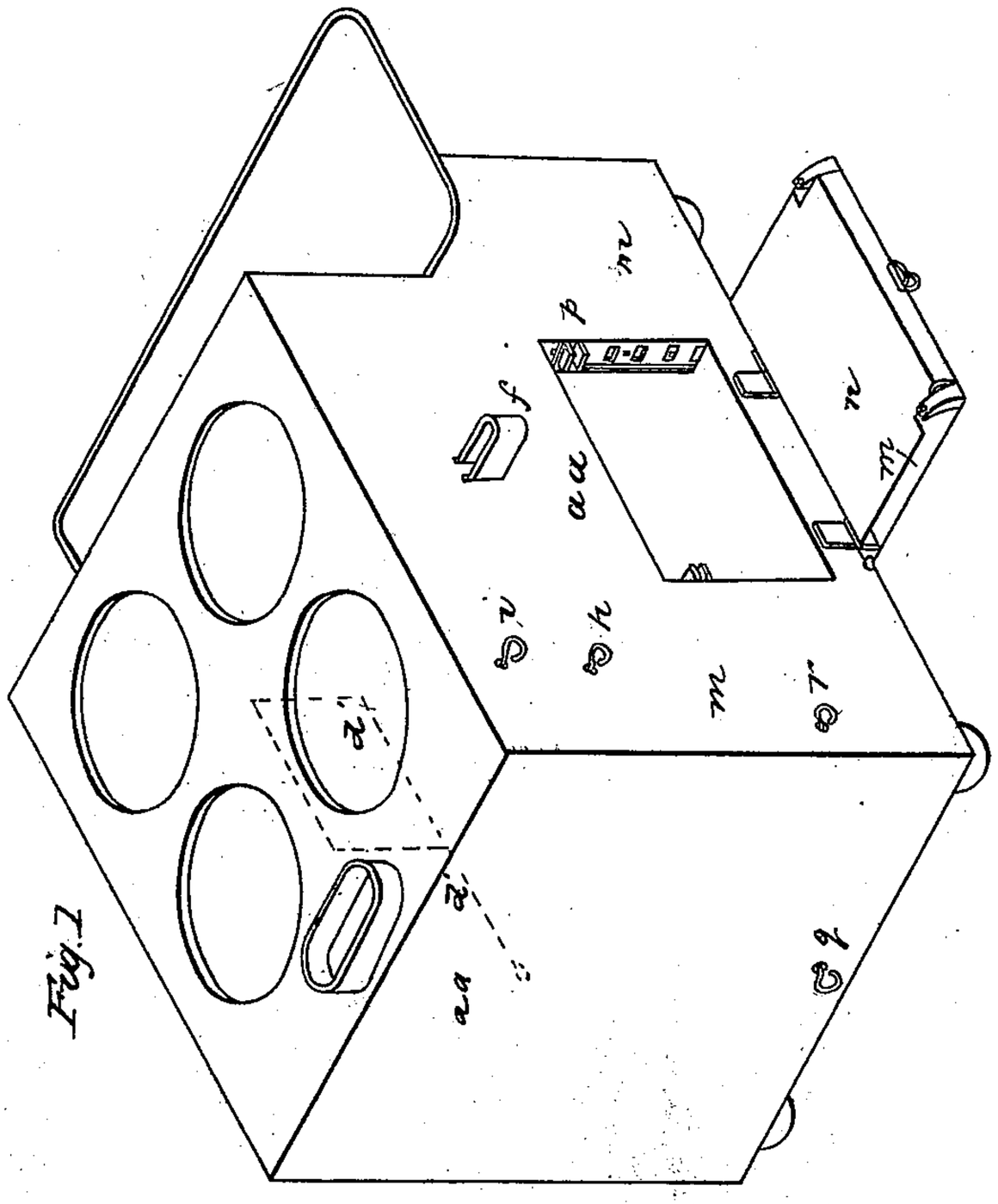


Fig. 2

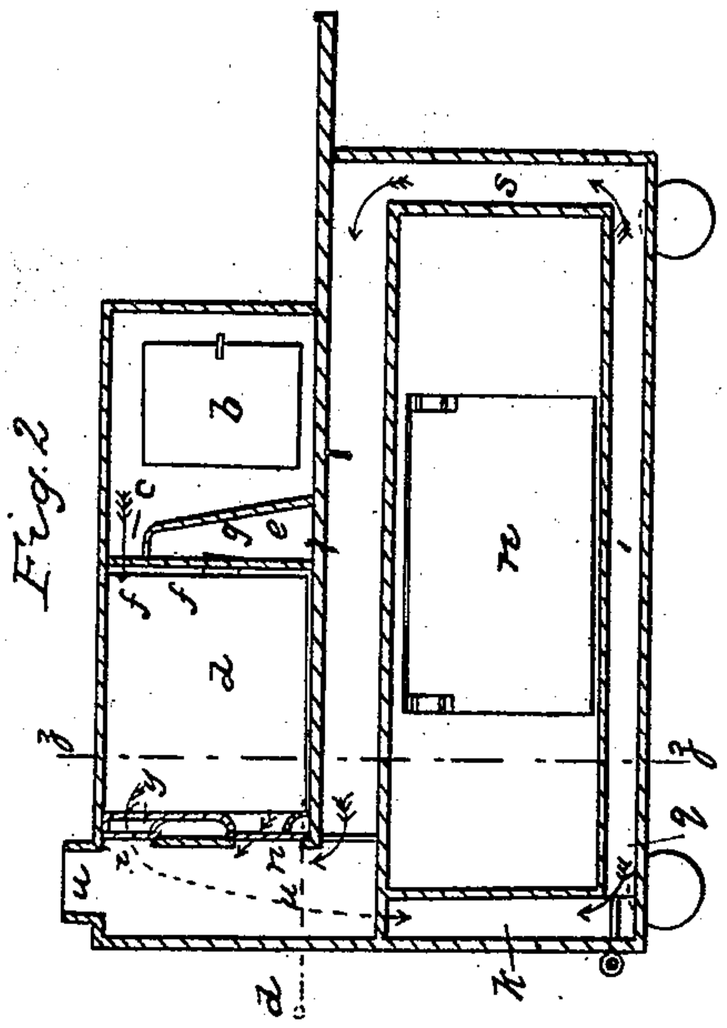
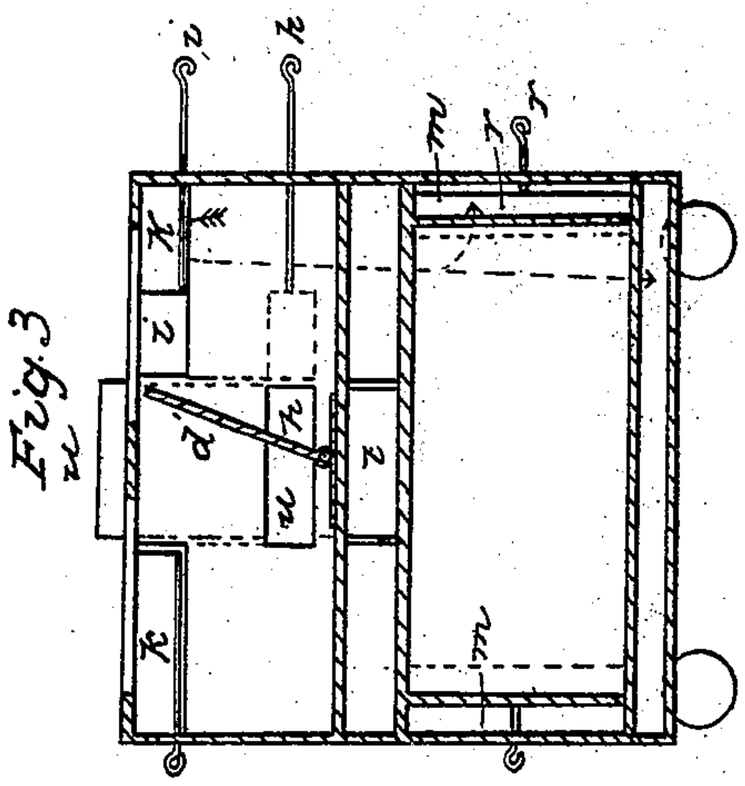


Fig. 3



UNITED STATES PATENT OFFICE.

SAML. GRAVES, OF AUBURN, NEW YORK.

COOKING-STOVE.

Specification of Letters Patent No. 4,380, dated February 10, 1846.

To all whom it may concern:

Be it known that I, SAMUEL GRAVES, of Auburn, in the county of Cayuga and State of New York, have invented a new and useful Improvement in Cooking-Stoves, and that the following is a full, clear, and exact description of the principle or character thereof which distinguishes it from all other things before known and of the manner of making, constructing, and using the same, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is an isometrical view of the stove from the rear; Fig. 2 is a vertical section through the stove longitudinally; Fig. A front dampers, or a cross vertical section. Fig. 3 section on line *z*, *z*, of Fig. 2.

The same letters indicate like parts in all the figures.

In the stoves with which I am acquainted having the door double for the passage of heat &c., the direction of the flues and tendency of the current was away from the doors, and the object there attempted nearly or quite frustrated, but by my arrangement the heat can be caused to circulate directly under the oven, or around either or both ends through the doors, or through the doors and under the bottom, both at will; the draft can be also kept to one or both sides of the stove, as may be required in any operation of cooking.

In the accompanying drawings, (*a*, *a*) represent the outer plates of the stove, which (the stove) may be nearly cubical in form, but can be varied to suit the purposes intended by the manufacturers. From the fire chamber (*b*), placed in front, above the oven, the products of combustion pass over a bridge (*c*) at the back thereof, into another chamber (*d*), over which are two boiler holes; (two others being placed over the fire), this chamber can be divided longitudinally by a damper (*d'*) or partition that turns up or down, and when raised entirely confines the heat to one boiler.

In the bridge above named, there is an air chamber (*e*), next the fire and behind it are two dampers (*f*), which rise and fall by the action of the damper rods (*g*) that project horizontally through the side of the stove; these rods work in an inclined slot (*f'*), (shown in the detached figure (A) of the damper) which causes it to move; the draft is thence carried off directly through the funnel *u* by opening a damper (*h*) at the center flue *u'* back of the chamber (*d*,), or by closing damper (*h*) and opening either or both dampers (*i*) on each side of it, the draft is carried down descending side flues (*k*) that connect with a flue (*l*) under the bottom of the oven and also with two side flues (*m*) one on each side the direction of which is shown by dotted lines and arrows. The dampers (*h* and *i*, *i*) being also protected by an air chamber (*y*) in front of them. These last named flues (*m*) pass directly through the doors (*n*) which are double and form part of said flues *m*, when they are closed, and are cut off by means of dampers (*r*); on each side of the door; when open, as shown in Fig. 1, there are dampers (*o*, *o*) of a common lattice form, that slide up to open, and fall to close; on each side of the door, near the upper corner there is an inclined plane (*o'*) which passes in between two projections (*p*) from the damper and raises it as the door is closed; the bottom flue (*l*) has a damper (*q*) to close it at its junction with flue (*k*) and the side flues (*m*) are also furnished with dampers (*r*) to shut either or both at pleasure; by this contrivance, the draft, heat, &c. can be carried either under the bottom of the oven or sides, at the option of the cook, and any part heated or cooled as the work requires; the draft may be made to surround the oven or any part of it, the three last named flues terminating in an upright one (*s*) in front, which leads into a horizontal one (*t*) above the oven which latter terminates in the stove pipe (*u*). The other parts of the stove are of ordinary construction, and need no further description, but may be varied to suit the manufacturer.

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

1. The combination of the flues (*m*) having dampers (*r*) in them, constructed, substantially as described, with the dampers (*q*, and *r*, *r*) for directing the heat around

any part of the stove at will, in the manner and for the purpose described.

2. I claim protecting the dampers (*f*, *h*, and *i*) from the action of the fire, by means of the air chambers placed in front thereof as herein before described.

3. I claim the damper or partition (*d'*) for confining the heat to one of the boilers in chamber (*d*), as described.

SAMUEL GRAVES.

Witnesses:
J. J. GREENOUGH,
A. P. BROWNE.