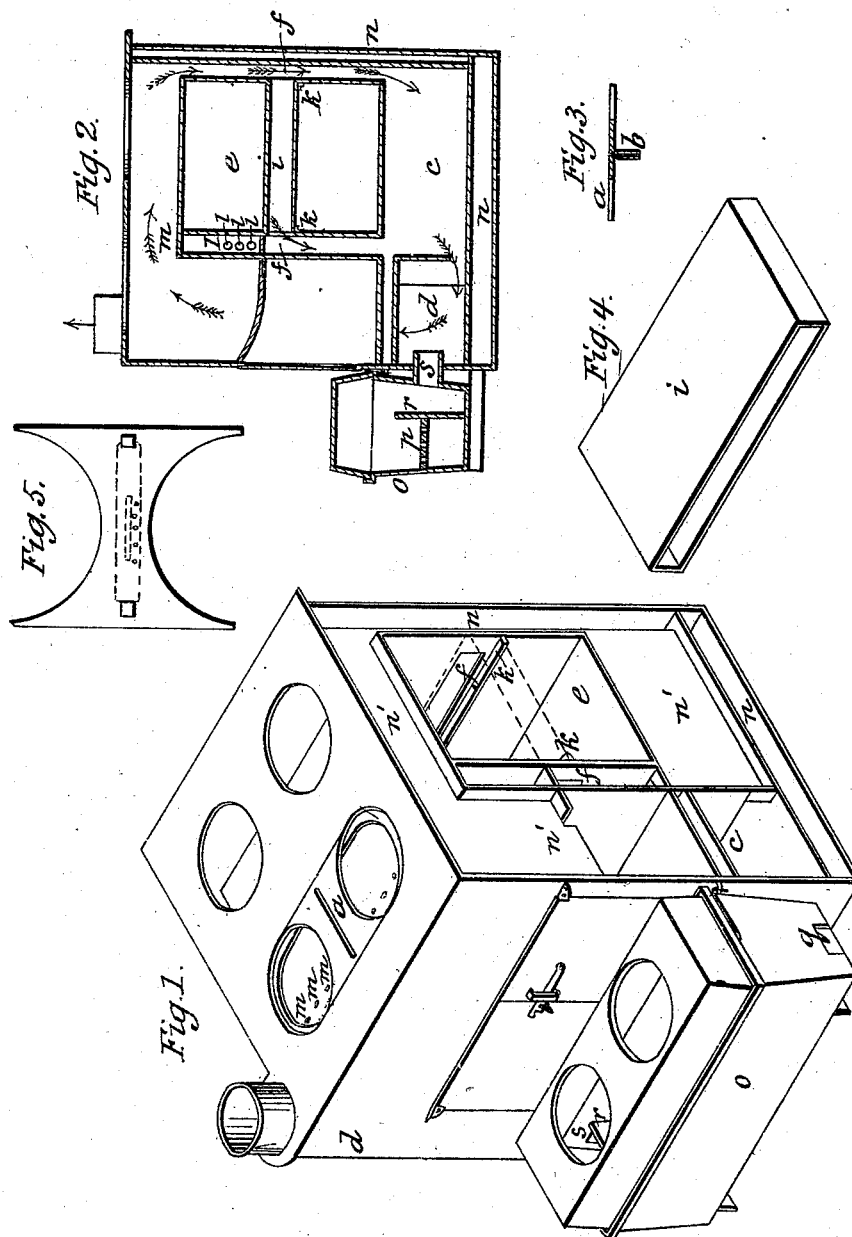


J. McGREGOR, Jr.

Cooking Stove.

No. 7,193.

Patented March 19, 1850.



# UNITED STATES PATENT OFFICE.

JAMES MACGREGOR, JR., OF WILTON, NEW YORK.

## DOUBLE-OVEN COOKING-STOVE.

Specification of Letters Patent No. 7,193, dated March 19, 1850.

*To all whom it may concern:*

Be it known that I, JAMES MACGREGOR, Jr., of Wilton, in the county of Saratoga and State of New York, have invented 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 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 projection of the stove with one side removed; Fig. 2, is a vertical longitudinal section through the fire chamber and flues; Fig. 3, is a section through the division plate (*a*) that goes between the front boilers; Fig. 4, the center oven flue detached.

The same letters indicate like parts in all the figures.

The nature of my improvements consists in protecting the division plate (*a*) between the front boilers by forming an oblong opening therein and permitting a current of cold air to pass through it and in dividing the oven of the stove when desired into two parts by introducing a movable horizontal flue through which when in place a portion of the smoke and heat passes, there being openings in the front and back plates of the oven for that purpose.

The construction is as follows: The exterior is of nearly cubical shape, with four boiler holes (more or less) on the top. The division plate (*a*) between the front boilers being subjected to the most intense heat from the fire over which it is situated is liable to be warped and injured thereby, to prevent which I form an oblong opening through its center very narrow and surrounded by a flanch (*b*) to stiffen the plate. From the fire chamber the heat passes back in a horizontal flue of proper proportion over the oven thence it descends behind the oven into the lower flue (*c*) which flue is made of great capacity, being the whole width of the oven and of double the depth (more or less) of that above; thence the draft passes into an upright flue (*d*) on one side of the fire chamber and out through the pipe. On each side of the oven (*e*) there is an opening (*f*) nearly the whole width of the stove; immediately below these openings are brackets (*h*) on which a mov-

able flue (*i*) slides into the oven so as to divide it (when desired) into two parts and form a flue through the center; (in Fig. 1 this flue is removed—its position is indicated by red lines), the flue is shown detached in Fig. 4; it consists of two horizontal plates joined at each side by vertical ones which keep them at proper distance apart for the flue. The course of the draft is denoted by red arrows. The holes in the front and back oven plates may be stopped by sliding dampers or in any other convenient way, and they may be made to have openings sufficient to ventilate the oven by the air admitted at the doors, or an aperture may be made through the front oven plate from the air chamber between the oven and fire back and another aperture with a proper damper applied communicating with the descending back flue for the purpose of ventilating the oven. An air chamber (*T*) is formed as above named between the back of the fire chamber and the front oven plate above the division flue (*i*) of the oven; the air is admitted to this air chamber *T* through apertures (*l*) in the side plates of the stove, (but in some instances through the front, and in others through the bottom plates), and after being in some degree heated it passes up through apertures (*m*) at top into the horizontal flue, and aids in the combustion of the gas, &c., that passes off from the burning fuel while it prevents the loss of heat at that point and keeps the front oven plate at a proper temperature—a proper register being fitted to regulate the amount of air to pass through. (*n*, *n*,) are air chambers which surround the back and bottom of the stove outside the flues—they communicate with each other and with side flues (*n'*, *n'*) formed on the sides or edges of the flues above and below the oven doors; the upper air flues (*n'*) open under the grate of the fire chamber where it discharges the heated air from the other flues, and by this means the combustion is kept up, and an economy of fuel is effected while there is no heat wasted by radiation from the outside of the stove. The summer arrangement (*o*) is attached to the front of the stove so that it can readily be removed; the fire chamber is furnished with a grate (*p*); this chamber receives the draft of air through air opening (*q*) at one end under the grate; at the opposite end in the corner

next the stove there is a partition (*r*) that rises above the grate sufficient to prevent the fuel from falling into the flue space which it there forms and from which there  
5 is a short pipe (*s*) that leads into the flue of the stove at or near the point where the ascending flue (*d*) opens into it; by this arrangement a diving flue is formed for the summer arrangement the upper part or  
10 cover of which is raised so as to contain the heated air and products of combustion till they are consumed and their heat evolved before they escape.

It will be obvious that any portion of the  
15 heating chamber (*n, n, n', n'*) may be connected with the ash pit by a direct flue to the same, and that many changes in the general arrangement of the parts of my stove may be made while my improvements are  
20 retained; the flues (*n, n, n', n'*) may be on the outside of the stove and movable at

pleasure. The form of division plate represented in Fig. 3 may be provided. The apertures may be covered that leads to the fire and the air let in to the center fire at each  
25 end, forming a hollow tube, with a slot to let the air into the chamber of combustion as shown at Fig. 5.

What I claim as my invention and desire  
to secure by Letters Patent is— 30

1. The movable flue (*i*) for dividing the oven into two parts, as above specified.

2. I also claim forming an aperture in the division plate (*a*) between the front  
35 boilers to protect it from the intense heat of the fire and to supply air for combustion as described.

JAMES MacGREGOR, JR.

Witnesses:

ALEXR. PORTER BROWNE,  
J. J. GREENOUGH.