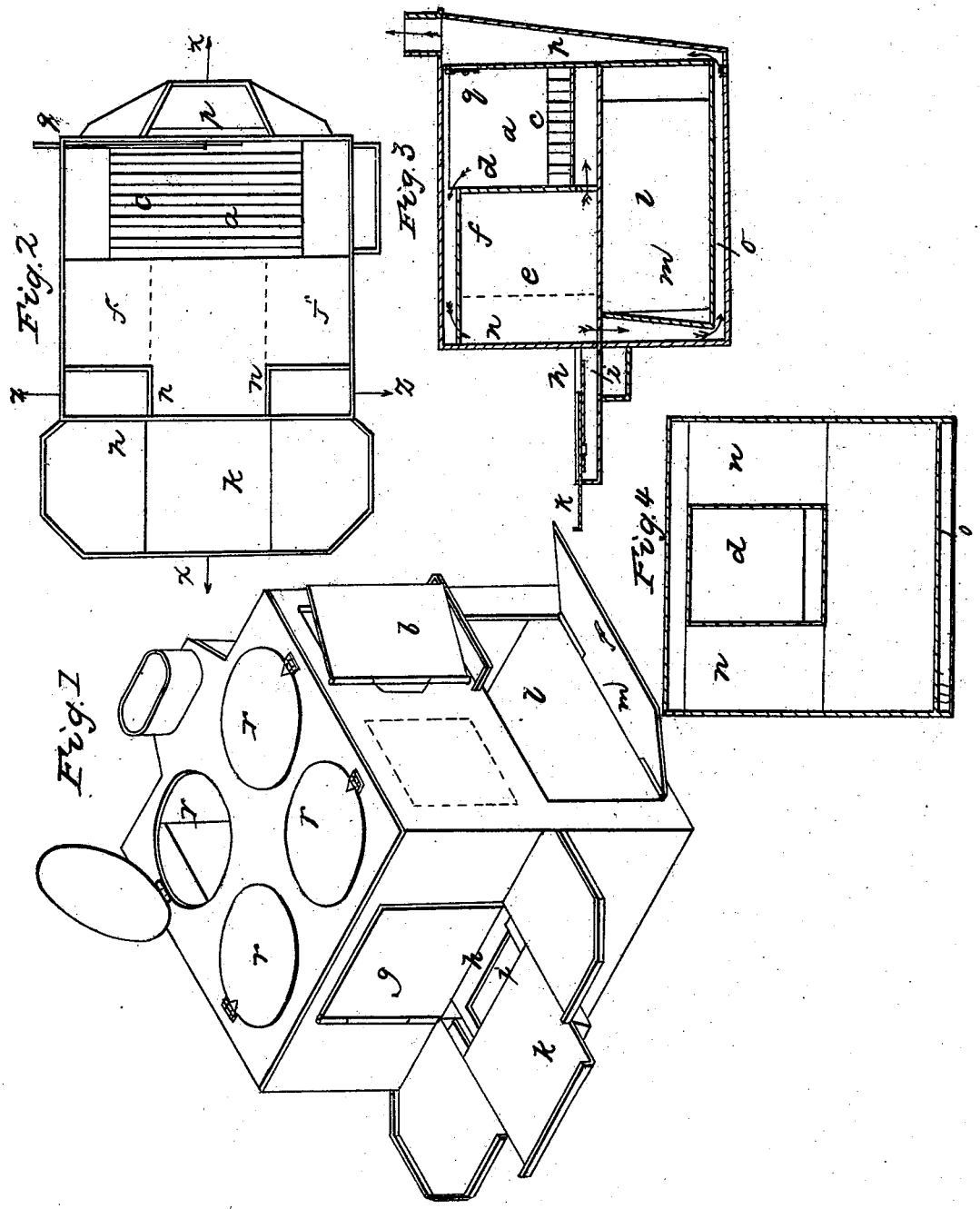
J. M. THATCHER.

Cook Stove.

No. 5,154.

Patented June 12, 1847.



UNITED STATES PATENT OFFICE.

J. M. THATCHER, OF DANVILLE, PENNSYLVANIA.

COOKING-STOVE.

Specification of Letters Patent No. 5,154, dated June 12, 1847.

To all whom it may concern:

Be it known that I, J. M. THATCHER, of Danville, in the county of Columbia and State of Pennsylvania, 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 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 a perspective view; Fig. 2, a plan with the top plate removed; Fig. 3, a longitudinal vertical section taken at the line (X X) of Fig. 2; and Fig. 4, a transverse vertical section taken at the line (Z Z) of Fig. 2.

The same letters indicate like parts in all the figures.

The nature of my invention consists in so arranging the parts of a stove as to cause the air which supplies the combustion in the fire chamber to pass through a cooking chamber on its way to the underside of the grate, the back of the said cooking and heating chamber being the front plate of the fire chamber, and the draft which passes around to heat the oven being made to pass over the top plate of the said heating and cooking chamber.

In the accompanying drawing (*a*) represents the fire chamber which extends entirely across the back of the stove with a door (*b*) at each end for the purpose of supplying fuel when wood is to be used or to rake the grate (*c*) (when coal is used) the bars of which are placed at some distance above the bottom plate of this chamber to admit of the free entrance and circulation of the heated air to supply the combustion. When the grate is not used and wood is to be substituted for coal, it should be placed on dogs of the same height as the bottom of the grate and for the same purpose. The front plate (*d*) of the fire chamber extends entirely through the width of the stove and divides the fire chamber from the air heating chamber (*e*) and the two chambers (*f*, *f*) on each side thereof which may be used as ovens by having a door to each. The air heating chamber (*e*) extends to and is provided with a door (*g*) in front which only extends down to the hearth (*h*), but the bottom plate of this chamber extends down lower than the hearth so as to communicate with the ash pan (*i*) into which the ashes, &c., can be raked from the space below the grate. The ash pan is provided with a sliding cover (*k*) which answers the purpose of a register to regulate the admission of air to the heating and fire chambers. The main oven (*l*) is situated below the fire and heating chambers their bottom plate constituting its top plate, and it is provided with a door (*m*) at one or both ends.

The products of combustion pass from the fire chamber over the top plate of the heating chamber, down two diving flues (*n*, *n*) in front and on each side of the heating chamber which, below the heating chamber, spread out into one flue extending along the whole front of the oven, thence along the flue (*o*) under the oven to the vertical flue (*p*) at the back which leads to the chimney. The back plate of the fire chamber has an aperture governed with a damper (*q*) which leads directly into the exit pipe, in the usual manner, to carry the draft directly out into the chimney when desired. The top plate of the stove is provided with boiler holes (*r*, *r*, *r*, *r*,) in the usual manner.

The air heating chamber is heated at the back by the front plate of the fire chamber, at the top, by the passage of the products of combustion directly, from the fire over its top plate, and at the sides by the front diving flues, so that the heat is abundantly sufficient to heat the air to the required temperature to economize fuel, and, when anthracite coal is used, to admit of burning coal in small quantities which cannot be done with the supply of cold air, and to admit of using this chamber for the purposes of baking as the chamber is of sufficient capacity to receive a baker for roasting, or any other desired implement to do any other kind of cooking. In addition to these advantages the location of the air heating chamber above the oven and between this and the top flue protects the top of the oven from too high a degree of temperature so injurious in other stoves.

It will be obvious that the arrangement of the various parts of the stove can be changed at pleasure so long as the character above pointed out is retained.

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

1. The employment in combination with the fire chamber of a chamber of sufficient

capacity for baking, roasting, or other culinary operation through which the air to supply the combustion in the fire chamber must pass to be heated, substantially as herein described.

2. And I also claim the arrangement of the air heating chamber in front of the fire chamber and on top of the oven, substantially as described, whereby the top of the oven is prevented from being overheated, and the air heating chamber can be employed for roasting, baking, &c., as described.

J. M. THATCHER.

Witnesses:
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