B. T. RONEY.

Cooking Stove.

No. 6,349. Patented April 17, 1849.

Fig. 1

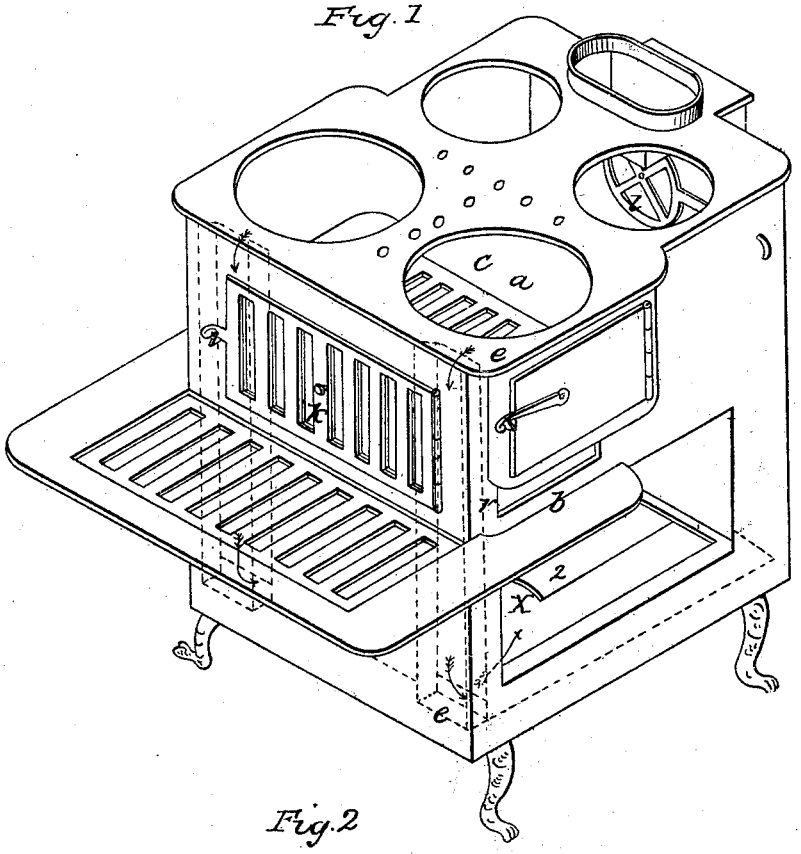
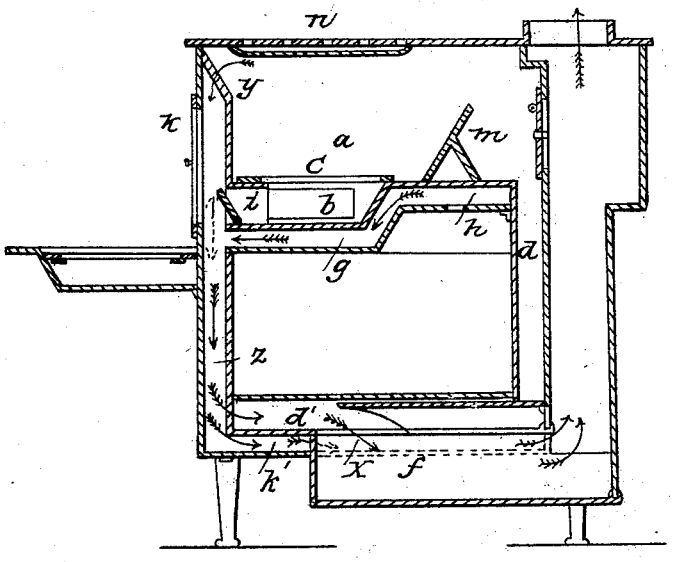


Fig. 2



UNITED STATES PATENT OFFICE.

B. T. RONEY, OF NEWTOWN, PENNSYLVANIA.

COOKING-STOVE.

Specification of Letters Patent No. 6,349, dated April 17, 1849.

To all whom it may concern:

Be it known that I, B. T. RONEY, of Newtown, in the county of Bucks and State of Pennsylvania, 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, in which—

Figure 1, is an isometrical view of the stove with the covers and oven door and oven bottom removed to show the internal structure. Fig. 2, is a vertical longitudinal section through the center of the stove.

The nature of my invention consists first in forming a compound flue for carrying the heat from the top, and concentrating it at the bottom, and preventing its outward radition; and secondly, the continuation of the air chamber up in front, so that it can be brought into use through a lattice door, for the purpose of roasting, and so constructed as to have a drop door between it and the ash pan, by which means the ashes may be taken out in front, as hereafter described; and lastly, the formation of the top frame around the holes of the boiler, by casting a recess in it, which communicates with the external air by which the plate is preserved against the action of the intense heat below.

The construction is as follows: The exterior of the stove is nearly cubical, the fire chamber *a* being over the oven; there is a depression *b* in the front of this chamber for the ash pit, covered by a grate *c;* there is a descending flue *d* at the back of the stove, and in each corner at the front are also two small descending flues *e* that open into the fire chamber; these all join in a large flue *d'* at the bottom, and descend into a recessed flue *f* at the center, at *x* and thence up the back to the exit pipes. Between the fire chamber and oven top there is a space *g*, which I call an air flue; it opens into the oven at *h*, and at the front end into a space *z* between the flues *e*, that extends from the inclined plate *y* (that disconnects it from the fire chamber at the top) to the bottom of the stove in front. On a level with the ash pit bottom in front, there is a drop damper or door *i*, that cuts off this space, as clearly shown in the drawing, and in the front plate there is a door *k*, in which there is a lattice damper. The drop door above alluded to, opens into the ash pan when down, and when up forms the plate between it and the front air space or flue as above set forth. The lattice door and damper may be connected, so as to open and shut together if desired; the lower end of the above named air flue *z* connects with a bottom one *k'* below the flue *d'* above named, and said flue *k'* is divided at the recess *f*, passing back on each side of it to the ascending flue, into which it opens. A revolving lattice damper *l* is placed at the back of the fire chamber for the usual direct draft, and there is a movable plate *m* in said chamber to enlarge or diminish the space for fuel. The draft may be admitted at *r* at the side. In the space of the top plate between the boiler holes there is a recess cast, into which several holes *n* from the top are made; this serves to protect the plate from the action of the fire, and render it more durable.

The operation of this stove is as follows: When the heat from the fire descends down the two corner flues *e* in front and the flue *d* behind, which latter is within the outer flue, so as to radiate very little heat outward, it passes under the oven bottom, where there is a stratum of hot air below it to protect it from being cooled. The heat rises in the oven, and instead of concentrating there and heating the open too much above, it passes off through the upper flue, which prevents the radiation of heat from the fire hearth in too great proportion, and conveys said heat down to the bottom, by which the heat is equalized in such manner as to bake equally above and below. The red arrows show the direction of the draft from fire, the blue arrows the direction of heated air. They are dotted when the flues pass behind a partition in the section.

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

1. Forming a compound flue substantially as set forth, by conveying the smoke flue around the bottom and sides of the oven, and an air flue so arranged as to convey off the surplus heat from the top of the oven

to the bottom of the stove by which the heat is concentrated there in any proportion desired.

2. I also claim extending the air chamber up the front, where it can be used for roasting, substantially as herein described. I also claim in combination with the flue *z* the drop damper or door *i* in the fire chamber to open a communication with the ash pan for the purposes above designated.

B. T. RONEY.

Witnesses:
J. J. GREENOUGH,
WM. GREENOUGH.