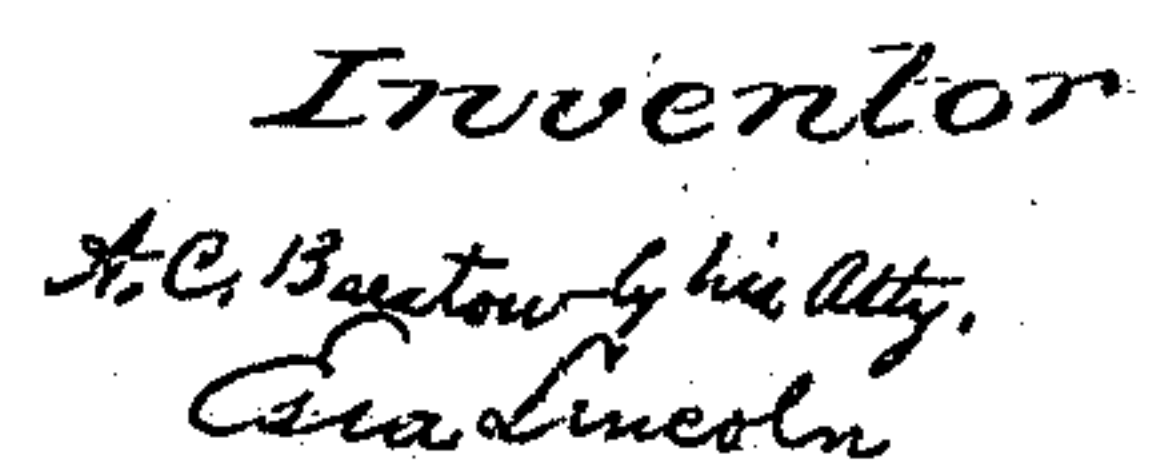


Cooking Stove.

Patented April 30, 1861.



UNITED STATES PATENT OFFICE.

A. C. BARSTOW, OF PROVIDENCE, RHODE ISLAND, ASSIGNOR TO BARSTOW STOVE COMPANY, OF SAME PLACE.

COOKING-STOVE.

Specification of Letters Patent No. 32,228, dated April 30, 1861.

To all whom it may concern:

Be it known that I, A. C. BARSTOW, of Providence, in the county of Providence and State of Rhode Island, have invented certain new and useful Improvements in Cooking-Stoves, and that the following description, taken in connection with the accompanying drawings, hereinafter referred to, forms a full and exact specification of the same, wherein I have set forth the nature and principles of my said improvements, by which my invention may be distinguished from all others of a similar class, together with such parts as I claim and desire to have secured to me by Letters Patent.

The figures of the accompanying plate of drawings represent my improvements.

Figure 1 is a plan or top view of my improved stove. Fig. 2 is a central longitudinal vertical section. Fig. 3 is a transverse vertical section.

The present invention consists first, in so arranging and placing in addition to the usual baking oven in square cook-stoves, a roasting oven as to allow it to be used either separately or in combination with the baking oven for the purposes of roasting or baking; second, in combining with the two ovens—baking and roasting—a peculiar mode of heating the same, which consists in the use of but a single set of flues for both ovens, whereby the heat and products of combustion after leaving the fire-pot are made to pass in one body over the entire surface of the top plate of the baking-oven, then over a greater portion of the back and bottom plates of the two ovens and finally to return passing over the remaining portion of the surfaces of the bottom and back plates and out at the chimney flue.

In the ordinary double oven stoves and ranges now in use, where the ovens are on opposite sides of the fire-chamber a set of flues is provided for each oven and the currents of heat are thus divided as they leave the fire-chamber. Imperfect construction and other causes, sometimes give undue advantage to one set of flues, to the injury of the heating of the other oven. And when it is desirable, to turn all the heat to one oven, it can only be accomplished by the use of dampers, which are a sore embarrassment to the inexperienced. Also, in ordinary stoves the heat and products of combustion passing

to the baking oven, are usually passed over the back and bottom plates of the same, by two flues on the outside ends thereof and returned by a central flue to the chimney. By my arrangement however, the stove is greatly simplified, first, by reducing the number of flues and passing all the heat to both ovens by a single set of flues, second, by thus dispensing with the use of dampers, and, third, by giving at all times the full current of heat first to the baking oven where most heat is required, and at the same time securing an ample supply to the roasting-oven.

Having thus premised in general terms the advantages of my improvements in cook-stoves I will now proceed to describe more particularly and in detail the arrangement and construction of the same.

a a in the drawings represent the top or boiler plate of the stove, *b b* &c. the boiler holes, *c, d, e* and *f* respectively the back, bottom and side plates, *g* the fire-pot, *h* the baking oven placed in the usual position in cook-stoves back of the fire-pot *g* and extending under the hearth or ash-pit *i* of the same.

j is the roasting oven placed on the opposite side of the fire-pot *g* to the baking oven.

k is a movable plate, placed between the two ovens—baking and roasting—and separating the same. By the removal of this plate *k*, the roasting-oven can be connected and used in combination with the baking-oven when necessary for the purpose of baking.

l l is a plate or partition, which divides the flue space *m* around the baking and roasting ovens into two unequal parts, extending from a point near the front plate *n* of the stove to the back plate *c* of the same and continuing up the back plate *c* until it reaches the delivery or chimney flue.

q is the damper.

By turning the damper *q* so as to close the direct communication of the fire-pot *g* with the chimney, the products of combustion after leaving the same, pass over—as indicated by blue arrows in the drawings—the entire surface of the top plate *o* of the baking-oven, then over a great portion *p* of the surface of the back plate *r* of the same—say about two thirds—then over a great portion *s* of the bottom plate *t* of the baking and roasting ovens—say about two thirds—till they nearly reach the front plate *n* of

the stove, whence they return, passing over the remaining portion *u* of the surface of the bottom plate *t* and the remaining portion *v* of the back plate *r* and finally out the delivery flue at or near the top plate *o* of the baking oven.

By the above described arrangement of flues, it will be seen that the currents of heat are first made to pass, in one body, to the baking oven, where most heat is needed, and then to the roasting oven and are not as is usually the case in double oven cook-stoves separated and passed at once around both the baking and roasting ovens, the disadvantages of which are apparent to all versed in the construction of cook-stoves, and therefore need not be herein more fully stated, also that the use of but one damper is rendered necessary, the expense of construction greatly reduced, and the operation of the stove, by the simplicity of the same, placed within the control of the most inexperienced.

w is an air-chamber formed between the front plate *x* of the fire-pot *g* and back plate *y* of the roasting oven *j* and extends the whole width of the stove from side plate *e* to side plate *f*. This air-chamber *w* has communication with the external air through apertures *z, z* in the side plates *e* and *f*.

In the plate *y* of the roasting oven *j* and air-chamber *w*, is an aperture *a'* which forms the communication between the air-chamber and the oven.

b', b' are apertures in the top plate *c'* of

the roasting oven, which open into the flue space *d'* above the same, of the fire pot *g*.

External air being admitted into the air-chamber *w* through the apertures *z, z* of the same, it becomes heated and passes from the chamber into the oven *j*, through the aperture *a'*, and after having circulated through the oven passes off at the apertures *b', b'* of the top plate *c'* into the flue space of the fire. By this means a constant circulation of fresh air is maintained in the roasting oven, which will thereby ventilate and remove from the same any vapor, smoke &c. that may arise from the meat while roasting carrying them off into the flues of the stove.

Having thus described my improvements, what I claim as my invention and desire to have secured to me by Letters Patent is,

In cooking stoves of square or quadrangular form having in addition of the ordinary baking oven parallel to and on the opposite side of the fire chamber, a roasting oven,—I claim the arrangement herein described of the fire chamber and ash-pit in combination with a movable plate or its equivalent, so that the said roasting oven may be used separately from or in connection with and as an enlargement of the baking oven, substantially as herein set forth.

A. C. BARSTOW.

Witnesses:

GEO. GILBERT RICHMOND,
WILLIAM F. ELLIOT.