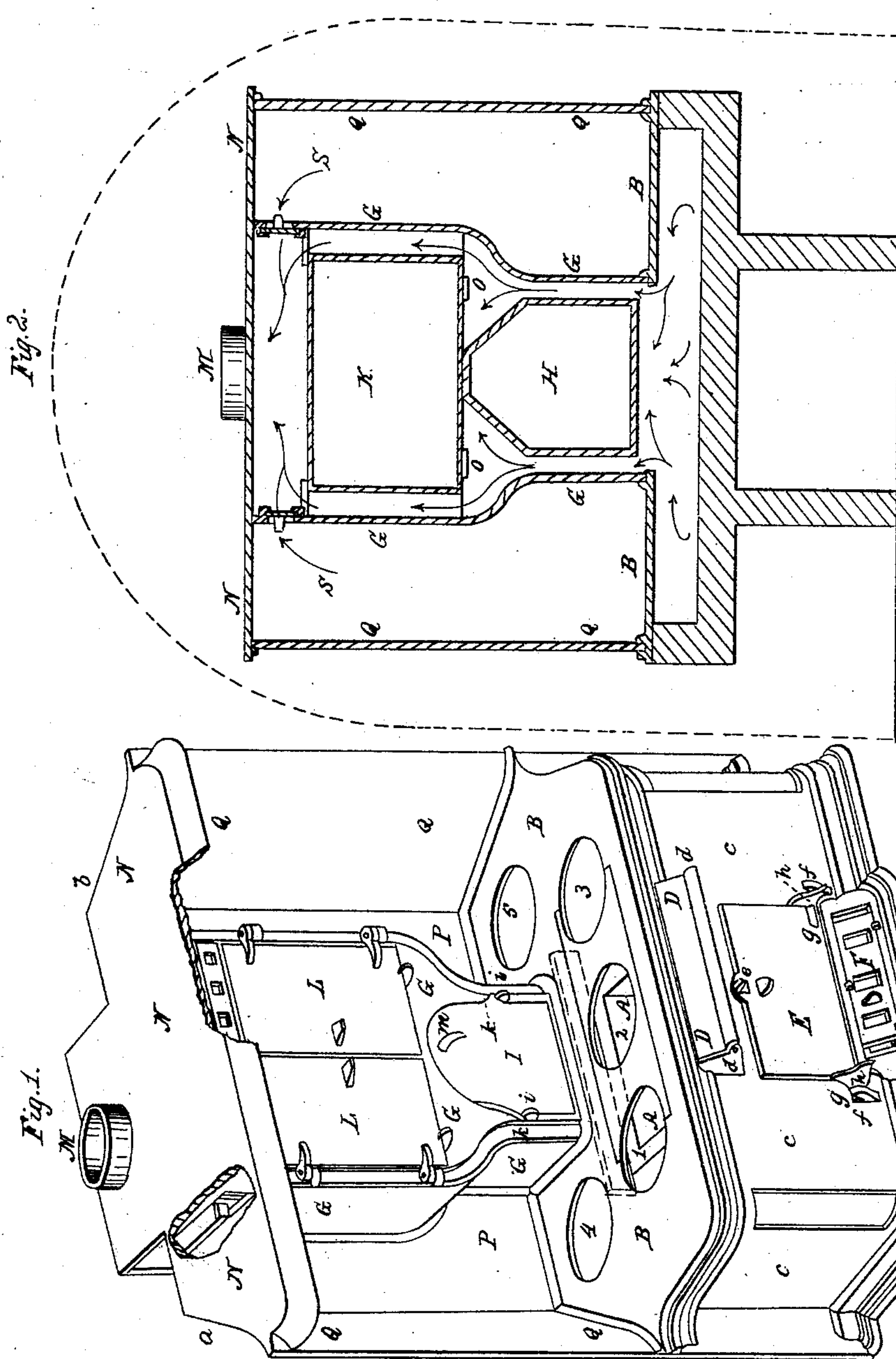


A. C. BARSTOW.

Cooking Range.

No. 41,355.

Patented Jan. 26, 1864.



Witnesses:
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UNITED STATES PATENT OFFICE.

AMOS C. BARSTOW, OF PROVIDENCE, RHODE ISLAND.

IMPROVEMENT IN COOKING-RANGES.

Specification forming part of Letters Patent No. 41,355, dated January 26, 1864.

To all whom it may concern:

Be it known that I, AMOS C. BARSTOW, of Providence, in the county of Providence and State of Rhode Island, have invented certain new and useful Improvements in Cooking-Ranges; and I hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, in which—

Figure 1 is a perspective view of my new cooking-range, and Fig. 2 a vertical section of the same on line *a b* in the preceding figure.

Heretofore cooking-ranges have been made either with an oven on one or both sides of the fire beneath the boiler-plate, or with an oven back of the fire and boilers, and raised just above the boiler-plate; or with an oven on the right and left of the fire and boilers, and elevated immediately above the boiler-plate; or, lastly, with two ovens raised above the boiler-plate and overhanging a part of all the boilers. These may be considered the four principal types of cooking-ranges. In the first, which are, perhaps, the most extensively used, though with great diversity in the arrangement of flues, the ovens are necessarily low and small, and, therefore, inconvenient; and, as the draft must be divided in order to heat both ovens, it is difficult to secure an equal distribution of heat without such complication of dampers as proves embarrassing to most cooks. The second and third class of ranges have been very generally abandoned, because provision is made for but one oven, while two are usually required or wanted; also, because the arrangement of the flues in the former and the distance of the oven from the fire in the latter is such as to require, to properly heat the ovens, a great consumption of fuel, rendering the use of these ranges very uneconomical. The fourth method of disposing two ovens in cooking-ranges, although easy of access, and therefore attractive to the cook, attains this peculiar convenience at the sacrifice of two boiler-holes in the boiler-plate, the ovens so overhanging them and at such low elevation as to render them entirely useless. On the other hand, these ovens being arranged side by side and at some distance from the fire, the heat cannot be passed first to the boilers and then to one or both ovens without the employment of several dampers, which is always more or less perplexing to most cooks.

The main object of my improvements, therefore, is to combine the advantages of having two ovens with their being elevated without, however, so overhanging the boilers as to interfere with the perfect use of either or all.

To this end my invention consists, first, in locating two ovens, one over the other, back of and above the fire, substantially in the manner hereinafter shown and described.

And the object of the second part of my invention is to dispense in cooking-ranges having two elevated ovens with dampers or registers generally adopted for the proper distribution of the heat through all the parts of the range.

To this end my invention consists, secondly, in combining with the ovens, when disposed one over the other, back of and above the fire, side flues arranged in such manner as to convey the products of combustion and the heat generated in the fire-chamber under the boiler-plate to all the boilers, and then around each oven, substantially in the manner hereinafter more fully set forth.

And the object of the third part of my invention is to provide a convenient place for warming plates or keeping things warm or exposed to a gentle heat.

To this end the third part of my invention consists in providing cooking-ranges with a top plate and recessing the brick-work so as to force between it and the top plate a space for warming plates and for other purposes.

And the object of the fourth part of my invention is to afford facility economically to set cooking-ranges, and so that when set they shall present a neat and finished appearance.

To this end the fourth part of my invention consists in forming around the range a mantel composed of jambs, and a rear plate supporting a top plate, under the arrangement substantially as hereinafter described.

And the object of the fifth part of my invention is to provide the lower oven with a door of such construction and operation as that access may be had to the said oven without interfering with the boilers that may be immediately in front thereof.

To this end the fifth part of my invention consists in the employment of a pendant door hung upon hooks on either side of the oven in such manner that it shall perfectly close the opening thereof, while its removal may be ef-

fectured by lifting without intervening with the boilers.

And the sixth part of my invention has for its object the expulsion of smoke, vapor, or other exhalations from within the inclosure or recess of the range.

To this end the sixth part of my invention consists in the arrangement in the flues at or near the chimney of slides, so that the vapor, &c., shall be drawn into and issue through the chimney by the ascending currents in the flue.

To enable others to make and use my said invention, I shall now proceed to describe the same more particularly, omitting such features which my cooking-range has in common with those heretofore in use.

The fire-chamber B is arranged within the casing C in the center and immediately behind the front and underneath the boiler-plate, as is usual in most cooking-ranges. Fuel is supplied through an opening, which is here shown closed by a hinged plate, D, which may be adjusted by turning upon its hinge *d* to act as a hopper for the convenient introduction of the coal. The ash-pit is accessible through an opening in the front plate of the casing C (it is here shown closed) by means of a door, E, which is hung upon a hook, *e*, and supported by means of axles *g* in brackets *f*, cast to the front plate. This door is also provided with studs *h*, arranged in such a manner that when the door E is lifted off its supporting-hook and turned upon the axles *g* as a pivot it may be set in a horizontal position, constituting a platform in front of the grate, which may be rendered available for roasting and other purposes. Underneath this door there is a simple register appliance, F, whereby the draft, and consequently the heat, may be regulated in and through the range with perfect ease. The boiler-plate B is provided with five boiler holes, 1, 2, 3, 4, and 5, three of which, 1, 2, and 3, are arranged in front and in a line parallel with the axis, or thereabout, of the fire chamber and grate. The two others, 4 and 5, are set back but divergingly from the first (1) and third (3.) Between the two last boiler-holes and back of the three first rises the oven-structure—that is, the casing G, containing two ovens and the flues requisite. The casing shown in the accompanying drawings is wider at the top than at the bottom, the upper part being designed to contain the baking-oven, while the lower part is arranged as a roasting-oven. The latter, marked H, (see Fig. 2,) is made of cast-iron plates, forming a rectangular bottom and sides, surmounted by arched or converging plates extending from the front to the rear of the casing G. The roasting oven is open in front and provided with a door, I, to close it when in operation. This door is supported upon hooks *i*, projecting from the face of the oven-case by means of two ears, *k*, cast to its sides about midway of its height. *m* is a knob or hook, whereby the door may be lifted off its supports. In the lower part of the door, as well as in

the interior of the roasting-oven, small holes or apertures may be provided to allow of ingress and egress of the air for the purpose of ventilation. The upper or baking oven, K, I prefer to make of sheet-iron, and it consists of a quadrangular box, open in front, capable of being slid in and out of the oven-case upon ways or supports *o o*. This oven may be closed by means of a single or double door, L, hinged to the oven-case, as shown in Fig. 1. Many advantages are derived from the peculiar form and arrangement of the oven-case. Thus the contracted roasting-oven arranged in relation to the boiler-holes, as hereinbefore shown, allows of a more complete use of the boilers, inasmuch as ready access may be had to the rear boiler-holes, while the boilers or other vessels may be conveniently removed therefrom in the same manner as from the front boilers, no obstruction being placed above them to prevent this being effected. Again, the contents of the roasting-oven may be examined at any time (an important consideration in cooking ranges) without involving the necessity of first removing the boilers or vessels in front thereof, it being obvious that the door may be lifted off its supports vertically and let down in the same way, like a curtain, without disturbing the articles that may be arranged or placed around it, in front, or upon the sides. The lateral space between the two ovens and the case constitute the flues. I have indicated in red lines the direction of the currents, which, by this arrangement, is imparted to the flame or heated gases or other products of combustion emanating from the fire-chamber. It will be seen that both ovens are entirely, or nearly so, surrounded with the gases. I thus place the ovens in a heated medium of greater or lesser temperature, which may be regulated by the attendant at his or her pleasure, in the manner hereinbefore referred to. The gases or smoke finally issues at the chimney M. The oven-case is closed on top by means of a plate extending transversely and somewhat to the front to fill, or nearly fill, the recess in the wall in which the range is set. In Fig. 2 I indicate in red lines such recess; but I wish it to be understood that this range may be used without being set in any recess in the wall. If a recess be used, I prefer to arch it on top or otherwise provide for a space above the top plate, which space may be used with great advantage for keeping dishes hot, for warming plates, for raising bread, and for other purposes, a gentle heat being there maintained by radiation of the range. The top plate I support in the rear and upon the sides by the rear plate, P, and side jambs, Q. They mask the masonry of the recess in the wall, and thus give a pleasing appearance to the surroundings of the range, with the additional advantage of affording facility of keeping that part of the kitchen clean and bright. At the intersection of the oven-case with the top plate I arrange in the former register or slide valves, whereby communication may be estab-

lished between the space inclosed by the mantle and the flues, the object of which is to draw off the vapors or other exhalations from within the said inclosure, or from the kitchen itself, into the chimney. The arrangement of these slide-valves is represented in Fig. 1, for which purpose two portions of the top plate are shown broken off.

In Fig. 2 arrows *s* indicate the current established by opening the slide-valves.

Having now fully described my invention and the manner in which the same is or may be carried into effect, I shall state my claims, as follows:

1. Locating two ovens, one over the other, back of and above the fire substantially in the manner hereinbefore shown and described.

2. Forming around the range a mantel composed of jambs and a rear plate supporting a top plate under the arrangement substantially as herein described.

3. The employment of a pendent door hung upon hooks on either side of the oven in such manner that it shall perfectly close the opening thereof, while its removal may be effected by lifting without interfering with the boilers, substantially as set forth.

In testimony whereof I have signed my name to this specification before two subscribing witnesses.

A. C. BARSTOW.

Witnesses:

A. POLLOK,
GEO. GILBERT RICHMOND.