

F. H. STIMPSON.

Cooking Range.

No. 7,151.

Patented March 5, 1850.

Fig. 1.

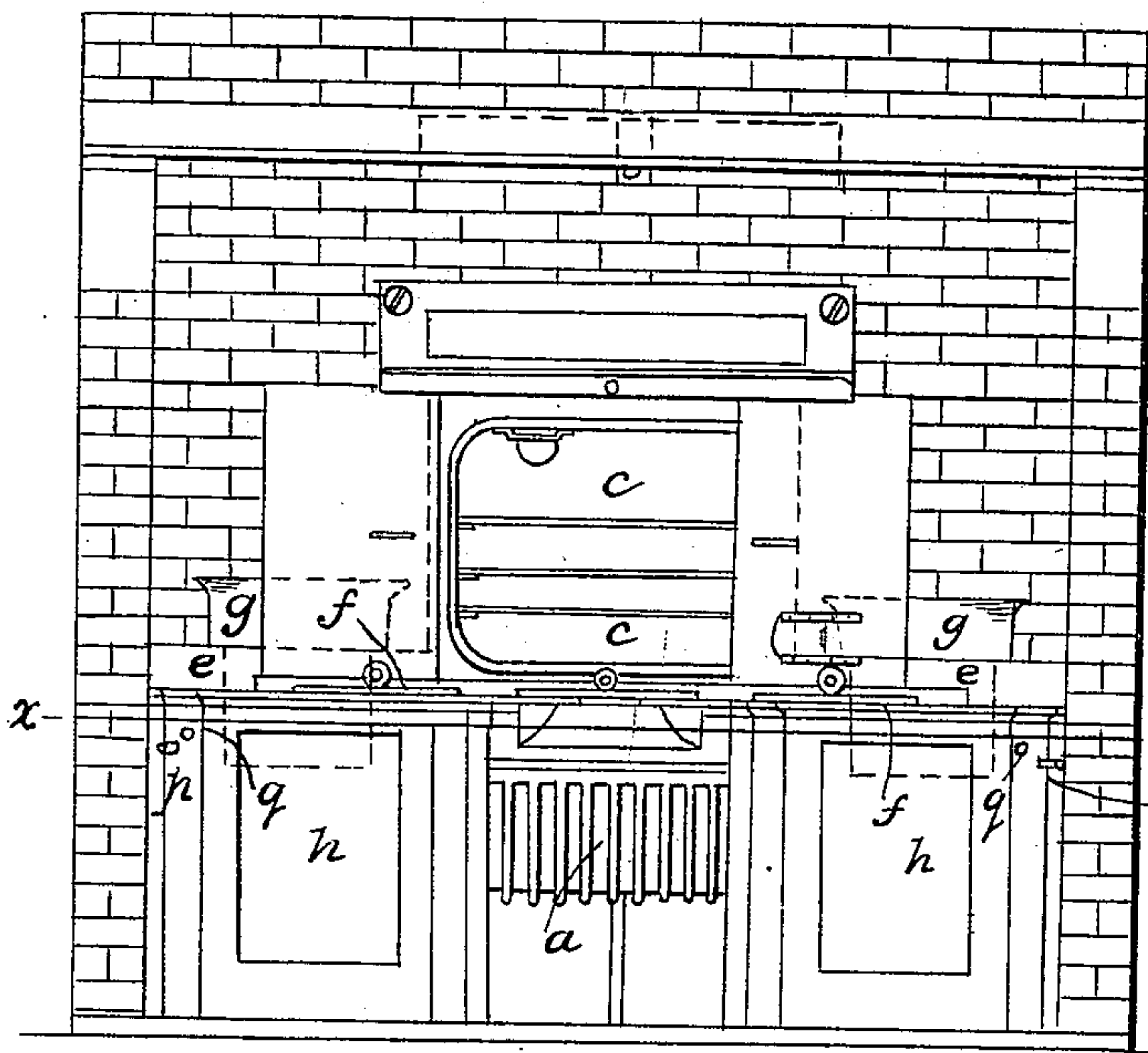


Fig. 3.

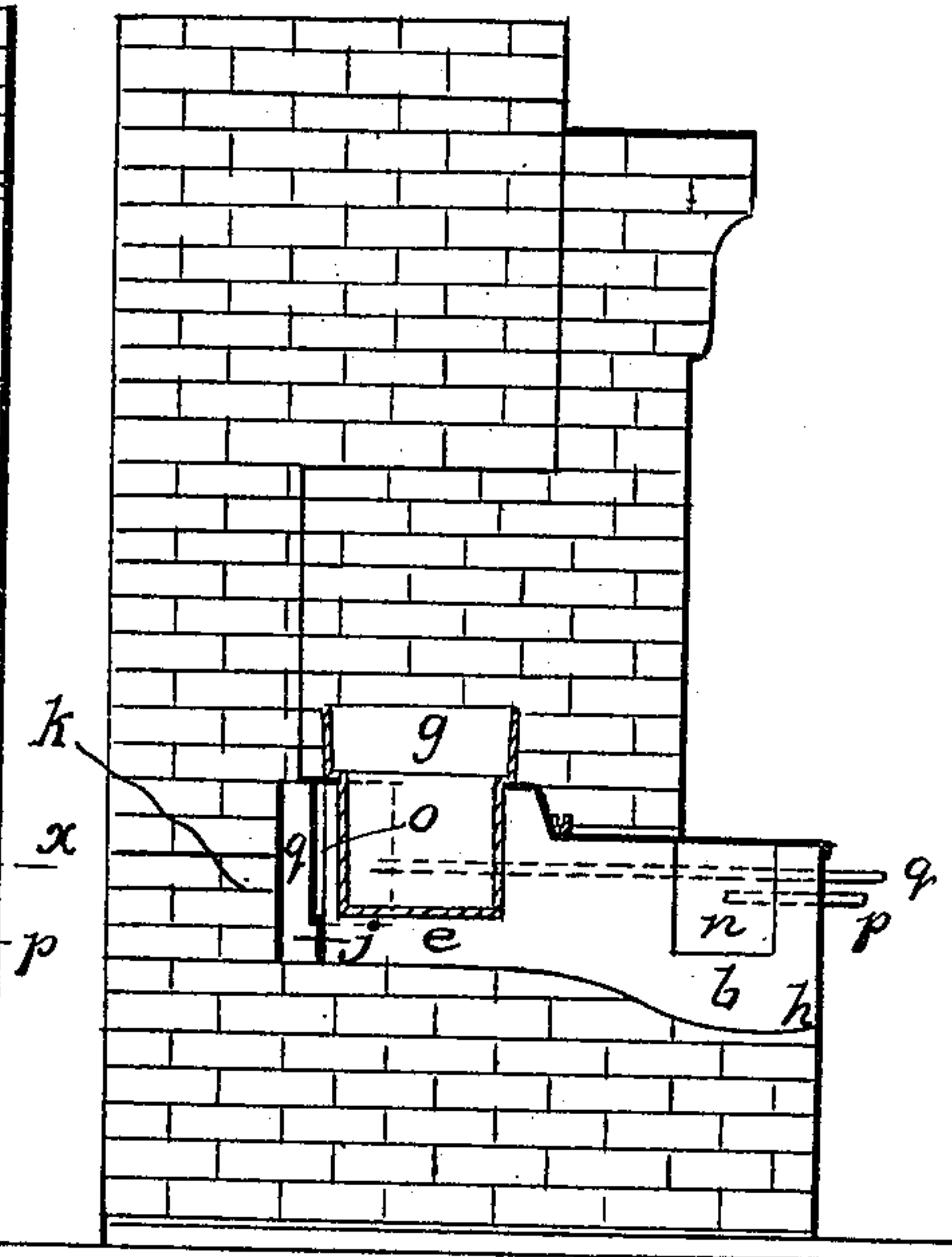
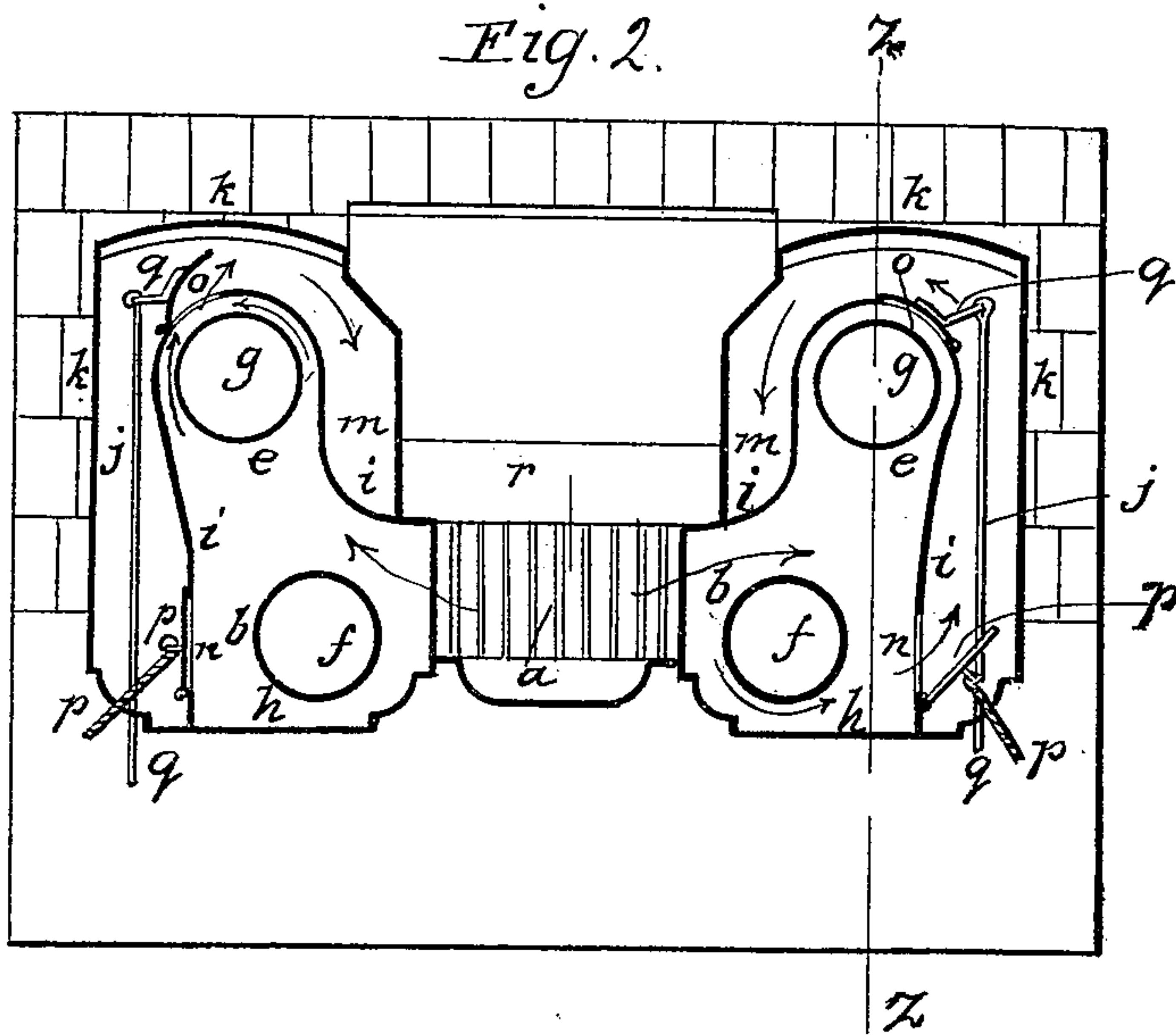


Fig. 2.



UNITED STATES PATENT OFFICE.

FREDERICK H. STIMPSON, OF BOSTON, MASSACHUSETTS.

COOKING-RANGE.

Specification of Letters Patent No. 7,151, dated March 5, 1850.

To all whom it may concern:

Be it known that I, FREDERICK H. STIMPSON, of Boston, in the county of Suffolk and State of Massachusetts, have invented
5 a certain new and useful Improvement in Cooking Ranges, called the "Double Range," and that the following is a full, clear, and exact description of the principle or character, which distinguishes it from all
10 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—

15 Figure 1, is an elevation of a double range with my improvement applied, Fig. 2, a horizontal section taken at the line (X, X,) of Fig. 1, and Fig. 3, a vertical section taken at the line (Z, Z,) of Fig. 2.

20 The same letters indicate like parts in all the figures.

In my improved range I employ back boilers, one on each side of the elevated oven, and back of the usual boiler holes,
25 although one only may be used. And the object of my improvement is so to arrange the flues and dampers as to insure the heating of these back boilers. In a range heretofore made the flues and dampers are so
30 arranged that the products of combustion in passing from the fire chamber to the flues around the oven, can only strike against a small part of each of the two back boilers, whether the draft be, on its way, carried
35 around the front boilers or directly to the back boilers.

With the view to avoid the objection above pointed out, the nature of my invention consists in making a direct flue from
40 the fire chamber, on one or both sides, and passing through the front boiler chamber to the back boiler chamber, when this is combined with a partition or plate outside of the front boilers, and passing around the
45 lower part of the back boilers, leaving sufficient space between the said partition and that part of the boilers which extends down into the boiler chambers for a free circulation around the boilers, the said partition
50 being provided with two flue holes governed by dampers, one at the side of the front boiler, and the other back of the back boiler, so that when the back damper is closed and the side one open, the whole draft shall pass
55 around and under the front boiler through the hole in the partition at the side, and

thence to the oven in the flue space formed between the said partition and the outside wall of the range, thus dividing the back boiler, and when the side damper is closed
60 and the back one open the draft shall pass directly from the fire chamber against and act on the entire bottom of the back boiler, and thence through the back hole in the said partition to the flue around the elevated
65 oven.

In the accompanying drawings (a) represents the grate or fire chamber, and (b, b,) the front boiler chambers placed on each side of the fire chamber, and (c) the elevated oven. The side plates of the fire chamber which divide it from the front boiler chambers are opened for the passage of the draft from each side to act on the front boilers (f, f.). The front boiler chambers are extended back on each side of the elevated oven (c) to form the back boiler chambers (e, e.). The front boilers (f, f.) and the back boilers (g, g.) extend down into their respective chambers to receive
80 the action of the heat. From the front plates (n, n,) of the range and outside of the two front boilers (f, f.) there are two partitions (i, i,) one on each side, which run back and around the back boilers (g, g.)
85 to complete the boiler chambers, sufficient space being left between these partitions and the boilers for the free passage of flame and other products of combustion. The spaces (j, j,) between these two partitions
90 and the walls k k of the range constitute flue spaces leading to the flues (m, m), around the elevated oven, and in each of these partitions there are two flue holes one (n) at the side of the front boiler, and
95 the other (o) back of the back boilers, which flue holes are governed by dampers (p, p,) and (q, q,). When all these dampers are closed the draft passes through the direct flue (r) from the back of the fire
100 chamber under the oven, and when the direct draft is closed by the usual damper in the direct flue, and the two side dampers (p, p,) are open and the back dampers (q, q,) are closed, then the flame and other
105 products of combustion pass from the sides of the fire chamber through the two front boiler chambers and under the entire bottom of the front boilers, out through the flue holes (n, n,) into the flue spaces (j, j,) and thence pass into the flues around the elevated oven avoiding the back boilers,
110

the whole intensity of the draft being applied to the front boilers, but when the dampers ($p, p,$) are closed and the back ones ($q, q,$) are open, then the draft will be
5 through the front and back boiler chambers, acting on only a part of the front boilers, and acting on the entire bottom of the back boilers, and then passing through the back
10 flue holes ($o, o,$) in the two partitions to the flue around the elevated oven. In this way the front boilers can be highly heated without heating the back ones, or the back ones can be highly heated as well as the front ones.
15 It will be obvious from the foregoing that only one back boiler can be used instead of two by dispensing with the arrangement on one side. Sliding or hinged dampers may be used at pleasure, and in fact the side
20 dampers may be dispensed with altogether for when the back dampers are open the draft through the back flue holes will be more direct than through the side ones, but

I prefer to use the side dampers as the effect is more sure. 25

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

Extending back the front boiler chamber, or chambers, to form the back boiler chamber, or chambers, at the side or sides of the
30 elevated oven, substantially as described, in combination with the partition or partitions at the side of the front boiler chamber or chambers and extending back of the back boiler chamber or chambers, when the said
35 partition (or partitions) is provided with flue holes at the side of the side boiler or boilers and back of the back boiler or boilers, and leading to the flue around the elevated oven, substantially in the manner and for
40 the purpose specified.

FRED. H. STIMPSON.

Witnesses:

CHARLES STIMPSON,
GEORGE F. STIMPSON.