

M. Pond.

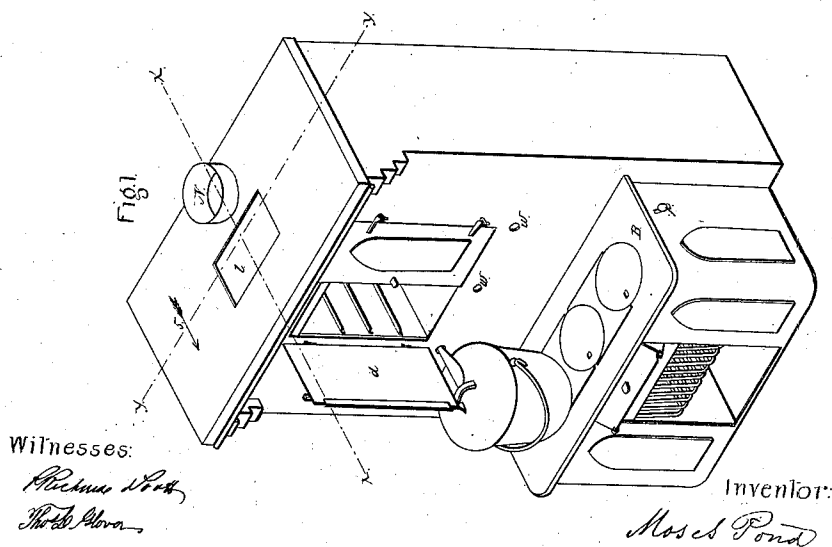
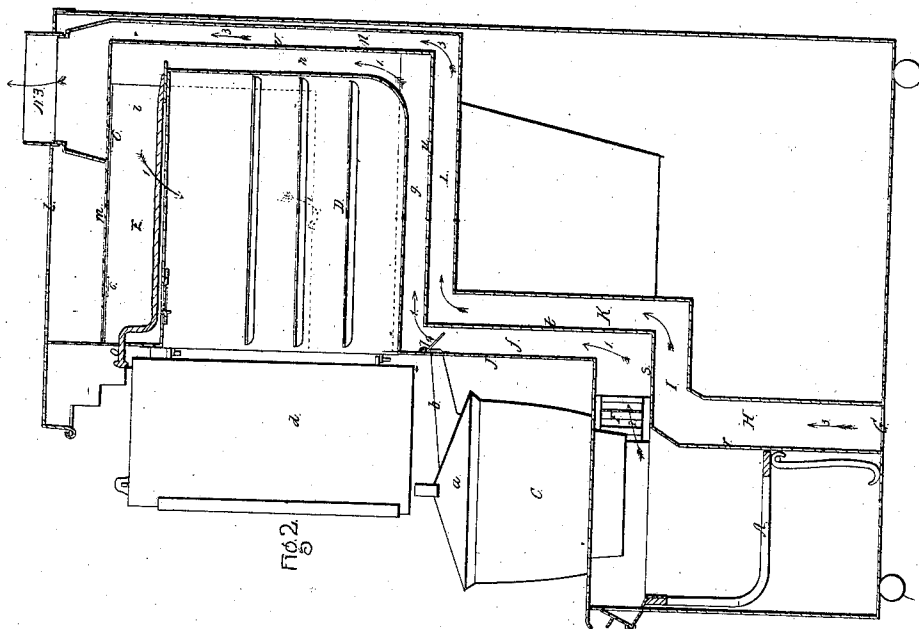
Sheet 1,
24 Sheets.

Range.

No

33,050.

Patented Aug. 13, 1861.



Street 2,
2 Street 5.

Patented Aug. 13, 1861.

33,050.



Richard South
Thos. B. Glover

Inventor: Moses Pond

UNITED STATES PATENT OFFICE.

MOSES POND, OF BOSTON, MASSACHUSETTS.

COOKING-RANGE.

Specification of Letters Patent No. 33,050, dated August 13, 1861.

To all whom it may concern:

Be it known that I, MOSES POND, of Boston, in the county of Suffolk and State of Massachusetts, have invented certain Improvements in Cooking-Ranges, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a perspective view of my improved range. Fig. 2 a transverse vertical section on the line *x x* of Fig. 1. Fig. 3 a longitudinal vertical section on the line *y y* of Fig. 1 looking in the direction of the arrow 5. Fig. 4 a horizontal section upon the line *z z* of Fig. 3.

My present improvements are particularly applicable to cooking ranges in which the oven is elevated above the level of the top plate where the pots and boiler rest; and have for their object to effect a more uniform diffusion of the heat upon the top, bottom and sides of the oven; and also to insure a saving of fuel.

In ranges with elevated ovens as heretofore constructed the heat from the fire pot has been carried to the oven either by a central flue or by two side flues, in either case the bottom of the oven has not been uniformly heated, and particularly there has been a deficiency of heat in its forward part.

The first part of my invention consists in bringing all the heat in a broad flue beneath the front of the oven whence it passes along the bottom and around the other sides of the oven as will be hereafter more fully described; and in connection with the above my invention consists in the adaptation of a hot air passage to the whole of the circuitous fire passage thus furnished.

In the said drawings A is the grate, B the top plate which receives the pots and boiler; C the boiler the lid *a* of which is furnished with a pipe *b*. The oven D is raised sufficiently high above the top plate B to enable the doors *d* when opened to clear the lid of the boiler C. The heated gases from the fire pass (as indicated by the arrows 1) up through a vertical flue *f* immediately behind the plate J which supports the front of the oven, and are thrown against the forward portion of the bottom of the oven along its

whole width; from this point they pass by the flue *g* uniformly beneath the bottom of the oven, thence up through a vertical flue *h* in contact with the back of the oven and are received into a chamber or horizontal flue *i* which extends over the entire top of the oven. From this chamber the smoke and heat are not permitted to pass immediately into the chimney but they are detained here and are then caused to descend through the flue *a*² formed by the sides of the oven and the vertical division plates E which descend from the top plate *m* to which they are secured by bolts 6 (Figs. 2 and 3). These plates may be adjusted more or less near to the sides of the oven to suit the draft of the chimney from the range. The smoke after passing between the sides of the oven and the plates E ascends through the vertical flue *k* and passes through an opening *l* to the chimney.

The flue *h* is commanded by a damper *n* which is operated by a handle *o*; and upon either side of the grate is a damper F operated by a handle *p*.

When the oven is not in use a direct draft is obtained through the flue *k* as indicated by the arrows 2 to the chimney by closing the damper *n* and opening the dampers F. The heat is prevented from passing from the flue *h* directly to the flue *a*² by the brick work at *b*² (Fig. 4) by which it is forced first to ascend to the space on top of the oven. The horizontal flue *g* is separated from the flues *k* on each side by plates *q* (Fig. 3).

It will be observed that by the above arrangement of flues the heat is thrown uniformly beneath the entire bottom and back of the oven, that it is detained in contact with its top over its whole extent, and ultimately caused to pass uniformly over the entire surface of the sides, by which the whole body of the oven is heated with uniformity.

For the purpose of economizing the waste heat from the flues around the oven I have adapted thereto a continuous air passage or flue H, I, K, L, M commencing immediately behind the back plate *r* of the fire box and passing in contact with the heated plates *r*, *s*, *t*, *u*, *v*, all of them of the entire width of the oven, by which means a large amount of

heating surface is secured, and any loss of heat from the fire flues is prevented; the current of cold air entering at the opening G passes as indicated by the arrows 3 to the
5 hot air pipe N.

The lid *a* of the boiler C as before stated is furnished with a pipe *b* the end of which is inserted in an opening *w* in the front plate J by which means the vapors and odor from
10 the cooking utensils are carried directly into the flue *f*. The holes *w* are commanded upon the inside by flaps 7 which are raised by the pipes *b* when they are thrust in, but
15 which close the openings when the pipes are withdrawn.

The position of the vertical fire flue *f* immediately back of the plate J gives ready access to it for the insertion of the tubes

from the boiler covers and also furnishes a large heating surface for the hot air flue K. 20

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

1. In combination with an elevated oven centrally placed over and above the fire-box and surrounded on five of its sides by flue
25 passages, the broad vertical flue *f*, for carrying the products of combustion into these surrounding flues, when arranged as set forth for the purpose specified.

2. In combination with the above de-
scribed flues *f. g. h.* the hot air flue H. I. K.
L. M. arranged substantially as set forth. 30

MOSES POND.

Witnesses:

P. RICHMOND POUTT,
THOS. L. GLOVER.