

No. 126,695.

Patented May 14, 1872.

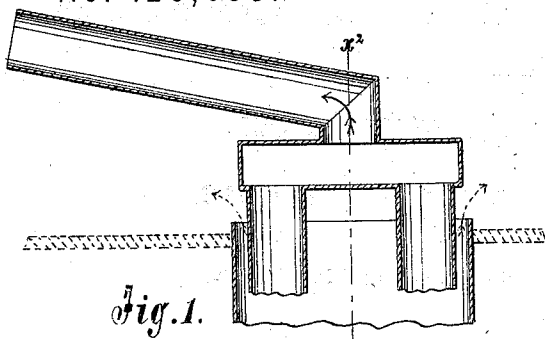


Fig. 1.

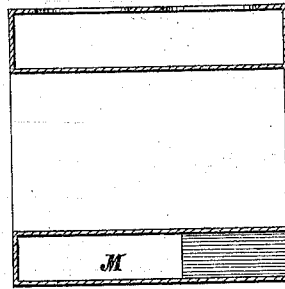


Fig. 4.

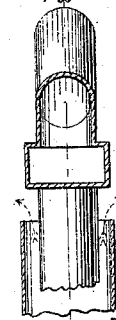


Fig. 5.

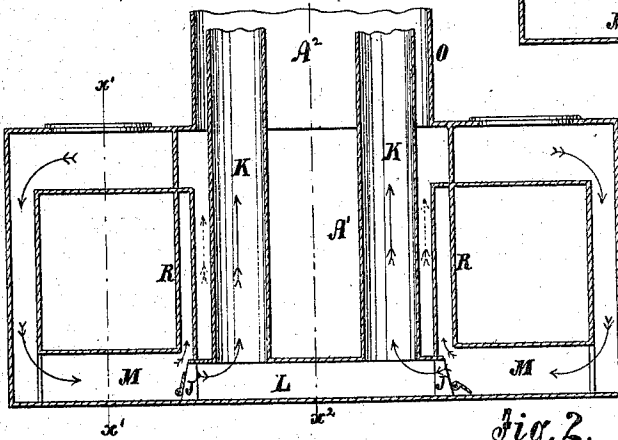


Fig. 2.

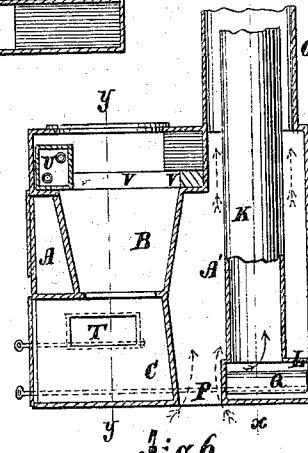


Fig. 6.

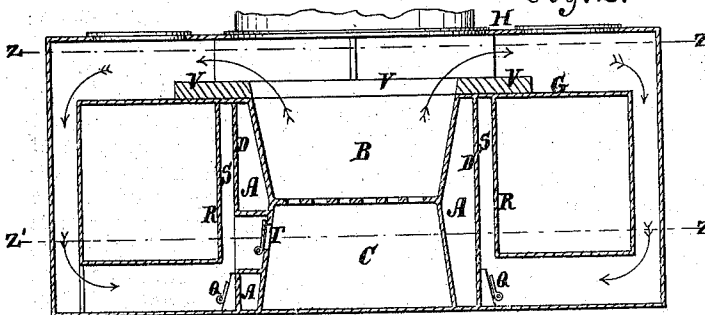
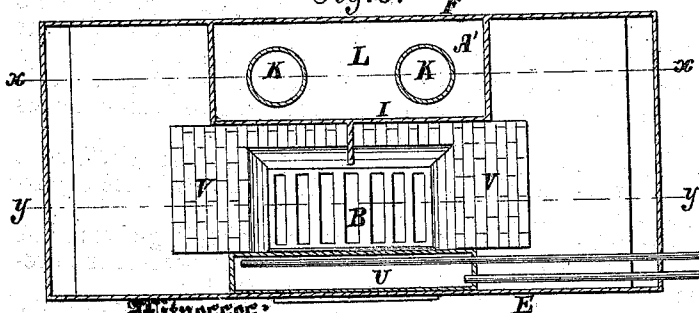
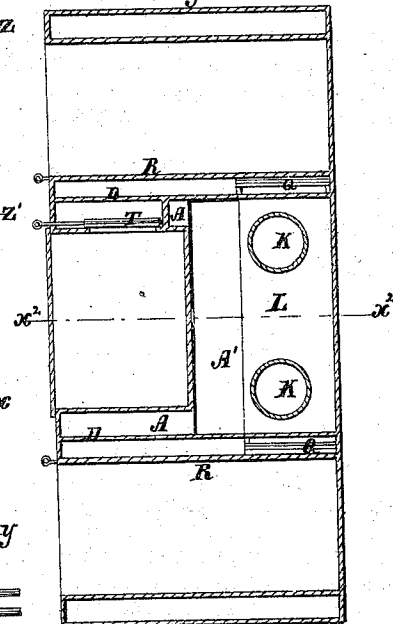


Fig. 3.



Witnesses:

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UNITED STATES PATENT OFFICE.

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IMPROVEMENT IN HEATING AND COOKING RANGES.

Specification forming part of Letters Patent No. 126,695, dated May 14, 1872.

Specification describing a new and Improved Heating-Range invented by WILLIAM A. GREENE, of Brooklyn, in the county of Kings and State of New York.

The invention consists in arranging heating-chambers at the sides and back of the fire, substantially as hereinafter described.

Figure 1 is a sectional elevation of the improved heating-range, taken on the line xx of Figs. 3 and 5. Fig. 2 is a similar section on the line yy of Figs. 3 and 5. Fig. 3 is a horizontal section on the line zz of Fig. 2. Fig. 4 is a transverse section on the line xx of Fig. 1. Fig. 5 is a section on the line x^2x^2 of Figs. 1 and 6; and Fig. 6 is a horizontal section on the line z^1z^1 of Fig. 2.

Similar letters of reference indicate corresponding parts.

I make an air-heating chamber, A, at the front two sides, and A¹ at the back of the fire-pot B and ash-pit C, and also in front of the fire-pot by the dividing-plates D, extending from front plate E to the back plate F, and from top plate G to the bottom between the fire-pot and the ovens and back of the fire-pot extending to the top H, and these extensions connected above plate G and below the top plate H by the plate I, and I extend the flues K down through the part A¹ of this heating-chamber to a flue-box, L, into which the products of combustion escape through passages J from under the ovens at M after passing around them, as indicated by the arrows, and the heating-chamber is extended upward around the flues at A² by the oval tube O, which it is designed to have extend through the floor above, and discharge into the room, say, at the hearth, or within the ordinary fire-place, while a little above the two flues K will form a junction, and discharge into any suitable flue above. The air to be heated is admitted to these heating-chambers through the bottom at P, and, after being heated, discharges at the top. It will be observed that I have all the products of combustion pass over the ovens and under them into the flues, instead of passing into the flues above also, as in other ranges; and I provide large passages J to insure ample draught when required, and have dampers Q partially closing them for slackening the heat-currents and causing them to set back against

the walls of the oven for baking, but leaving openings of sufficient capacity for the necessary combustion for baking. The dividing-plates D are placed some distance from the oven-walls R to afford a space, S, for the heat to set upward, both for heating the ovens on that side and for heating the air in the chamber A. T is a dust-passage and damper, to be opened when shaking the grate to have the dust drawn into the flues to prevent it from coming out into the room. It will only be opened at the time of shaking the grate, or in case it is desired to slacken the draught through the fire. I propose to arrange the water-heater U along the top and front of the fire-pot and overhanging the fire, as shown in Figs. 3 and 5, instead of at the back, as heretofore, in order that the heat along the back may be given up to the air-chamber to a greater extent than it could be if placed thereat; also to economize in heat by utilizing that at the front which is commonly given off to the air in the room. It is also arranged in this way to expose it to the heat more, because of being higher than in the common arrangement, and in this position it may overhang the fire somewhat, so that the upward currents impinge against the bottom in part as well as the side. I propose to protect the top plates G for some distance from the fire-pot with fire-brick cover V, which parts of these plates, having always heretofore been exposed to the heat, which is very intense thereat, burn out very soon, and have to be replaced. The said bricks also cause the heat to impinge against the cooking-top to a greater extent than it does without them.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. The arrangement of the heating-chamber A A¹ A² at the front, sides, and back of the fire-pot, substantially as specified.
2. The arrangement of the fire-brick V on the top plates of the oven, substantially in the manner described.

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