(No Model.)

G. S. BLODGETT.

OVEN FOR COOKING, BAKING, OR DRYING.

No. 288,201. Patented Nov. 13, 1883.

Fig. 1.

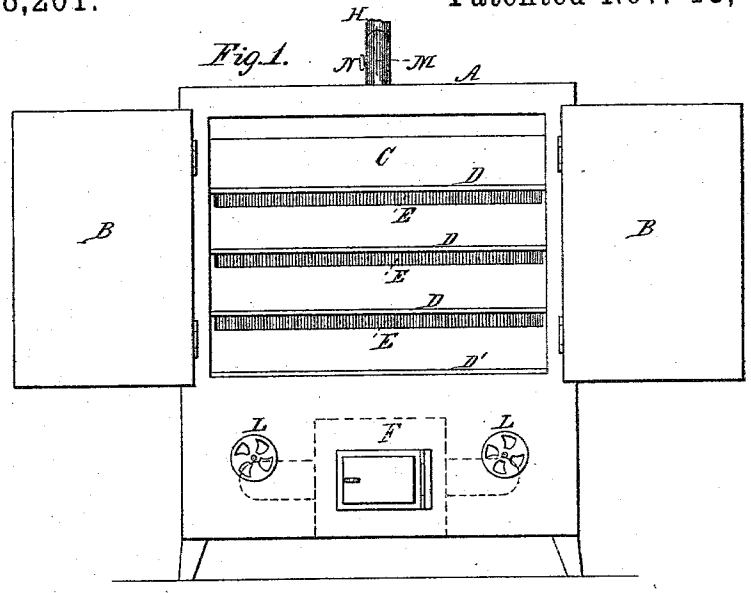


Fig. 2.

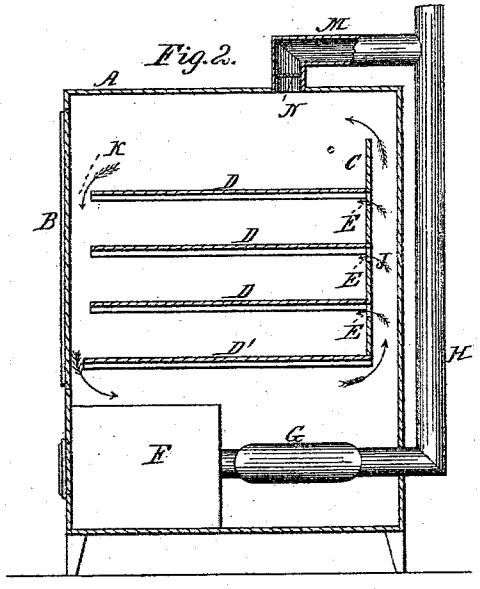
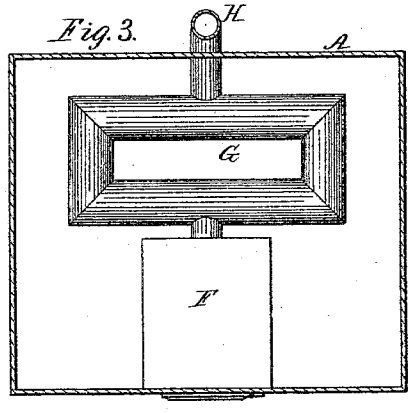


Fig. 3.



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UNITED STATES PATENT OFFICE.

GARDNER S. BLODGETT, OF BURLINGTON, VERMONT, ASSIGNOR OF ONE-HALF TO EDWARD P. MANOR, OF SAME PLACE.

OVEN FOR COOKING, BAKING, OR DRYING.

SPECIFICATION forming part of Letters Patent No. 288,201, dated November 13, 1883.

Application filed May 18, 1883. (No model.)

To all whom it may concern:

Be it known that I, GARDNER S. BLODGETT, of Burlington, in the county of Chittenden and State of Vermont, have invented certain new and useful Improvements in Ovens for Baking, Cooking, or Drying; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification, and to the figures and letters of reference marked thereon.

This invention relates to that class of ovens designed for baking, cooking, or drying in which a circulation of heated air is kept up within a closed case or chamber by means of a fire-box or heater arranged in the lower part of said case or chamber; and it consists in a novel construction and arrangement of parts whereby all portions of the chamber in which the baking, cooking, or drying is done are subjected to uniform and sufficient heat by the consumption of a minimum quantity of fuel in the fire-box or heater.

Referring to the drawings, Figure 1 represents a front elevation of an oven constructed and arranged in accordance with my invention. Fig. 2 is a view of the same, partly in section and partly in elevation, taken on the line *x x*, Fig. 1; and Fig. 3 is a horizontal sectional view taken on the line *y y*, Fig. 1.

Similar letters of reference in the several figures indicate the same parts.

Letter A represents the case of the oven, extending over the top, back, sides, bottom, and a portion of the front of the oven, and forming, in connection with the doors B B at the front, a tightly-inclosed chamber.

Within the case A, near the rear thereof, is arranged a plate or partition, C, whose upper end extends nearly to the top of the chamber, while its lower end terminates some distance above the bottom of the chamber, as shown clearly in Fig. 2.

Extending across the chamber from side to side are a series of shelves, D, the rear edges of which abut against the vertical partition C, while their front edges terminate a short distance from the front wall of the chamber, so as to leave a clear passage, K, from top to bottom, as shown also in Fig. 2.

The vertical partition C is provided with slots or openings E, which extend transversely across the same, directly under the shelves D.

The lowest shelf, D′, is preferably constructed somewhat wider than the upper shelves, so as to contract somewhat the passage at the front of the chamber, though it may be arranged so as to be slid back and forth, to increase or diminish the size of the passage.

Below the shaft D′, in the space between said shelf and the bottom of the case, is located the fire-box or heater F, and the smoke and other volatile products of combustion which pass from it are conducted through the pipes G, also arranged in said space, and thence pass off up the flue H, at the back of the oven, on the outside thereof, as shown.

A fire being kindled in the fire-box, and the doors of the oven being closed, the air in the space where the fire-box is located becomes highly heated by contact with the fire-box and with the conducting-pipes G, and passes thence up the passage J, between the partition C and the rear wall of the case, and out through the openings E in said partition against the bottom of the several shelves, and thence continues outward and downward through the passage K at the front, and again into the space in which the fire-box is located, taking the course indicated by the arrows in Fig. 2. The impingement of the hot air against the bottoms of the shelves directly heats the latter; and insures the thorough cooking, baking, or drying of the articles placed therein, as well as of the portions of the articles which project up between the shelves. This feature I regard of primary importance.

It will be noticed that by passing the smoke, &c., from the fire-box through the system of pipes G the heat of such waste product is effectively utilized in raising the temperature in the lower space, and the maximum effect is thus obtained for a minimum quantity of fuel.

The shelves, especially the lowest one, are preferably applied so as to be put in and taken out when desired.

In order that fresh air may be admitted to the oven, and that the gases and vapor arising from the materials cooked, baked, or dried may be caused to pass out of the oven as they are

evolved, I provide air-inlets L, closed by suitable valves, and from the upper part of the case I extend a pipe, M, and cause it to discharge into the smoke-flue H, as shown in Fig. 2. A controlling-valve, N, is provided in said pipe M.

The oven may be constructed of galvanized iron, or any other suitable material that will answer the purpose.

Having thus described my invention, I claim as new—

The herein-described oven, consisting of the inclosing-case, the fire-box or heater located in the lower part of the case, the horizontal shelves extending from side to side of the chamber, but arranged to leave a space between their front edges and the front wall of the case, and the vertical partition at the rear of the chamber, having slots or openings arranged near the bottoms of the horizontal shelves, whereby the heat arising from the fire-box or heater is caused to pass up the space between the vertical partition and the rear wall of the case, and to pass laterally through the slots in the partition and impinge directly upon the bottoms of the shelves, and then pass out between the shelves and descend through the space at the front of the case back to the fire-box to be reheated, thus keeping up a constant circulation throughout all parts of the oven, as set forth.

GARDNER S. BLODGETT.

Witnesses:
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