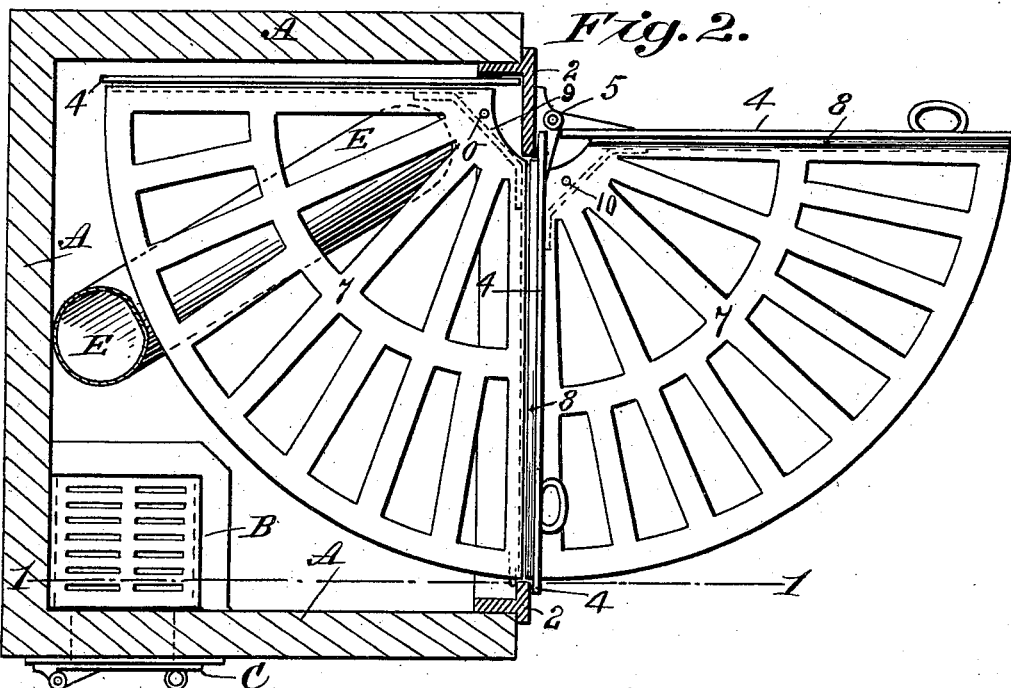
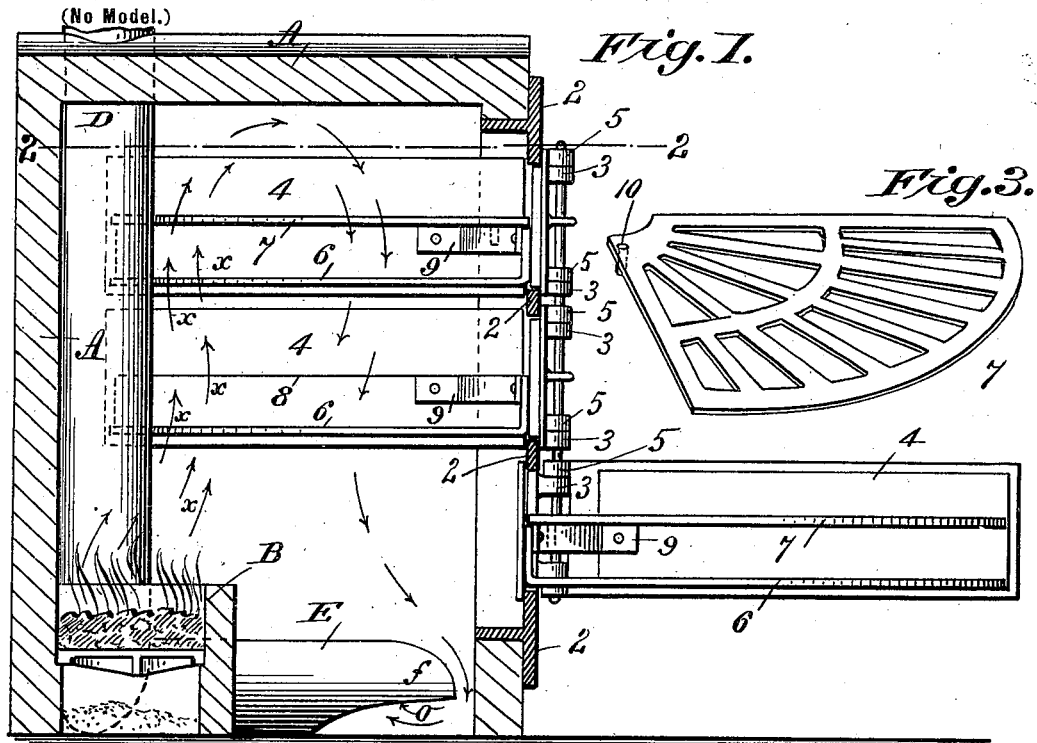


No. 649,135.

Patented May 8, 1900.

E. MILLETT.  
CORE OVEN.

(Application filed Jan. 8, 1900.)



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# UNITED STATES PATENT OFFICE.

ELI MILLETT, OF SPRINGFIELD, MASSACHUSETTS.

## CORE-OVEN.

SPECIFICATION forming part of Letters Patent No. 649,135, dated May 8, 1900.

Application filed January 8, 1900. Serial No. 651. (No model.)

*To all whom it may concern:*

Be it known that I, ELI MILLETT, a citizen of the United States of America, residing at Springfield, in the county of Hampden and State of Massachusetts, have invented new and useful Improvements in Core-Ovens, of which the following is a specification.

This invention relates to core-ovens, and is in the nature of an improvement upon the oven construction shown and described in United States Letters Patent issued to me on July 19, 1887, No. 366,733, the object being to provide improvements upon said patented construction in respect to the oven-heating devices and to the increase of the core-baking capacity of the oven; and the invention consists in the improved construction of the combined oven-doors and core-shelves, whereby said baking capacity is increased, and in an improved construction of the draft-flue of the oven and the disposition of the lower end thereof within the oven, whereby the heated air therein is prevented from leaving the oven until it shall have expended more of its core-baking effects than is the case in said patented oven whereby said object is attained.

In the drawings forming part of this specification, Figure 1 is a vertical sectional view on line 1 1, Fig. 2, of a core-baking oven embodying my improvements and showing one of the pivoted core-holding shelves in open or outswung position and the arrangement of the draft-flue within the oven. Fig. 2 is a horizontal sectional view of the oven on line 2 2, Fig. 1. Fig. 3 is a perspective view of a removable core-holding shelf and is fully described below.

In the drawings, A indicates the usual oven structure of suitable masonry, into and out from which the core-holding shelves are swung, as below described. A furnace or grate B is arranged in the oven for heating the same, having a door C on the outer side of the oven, Fig. 2. The above-referred-to vertical draft or smoke pipe D of the oven has a horizontal branch E extending from the lower end thereof diagonally across the bottom of the oven under the lower core-shelf, as shown in Fig. 2, toward a corner opposite to that in which said grate is located, and said branch is continuous to its curved extremity f, the only inlet thereto at that end

being through an opening o under said extremity, the object of said draft-pipe construction being to induce a hot-air movement within the furnace in the directions indicated by the several arrows in Fig. 1—that is, after the hot air moving upward from the furnace B, as indicated by the arrows a, approaches the top of the oven it shall be then drawn downwardly toward and into said outlet-opening o and thence be drawn into and discharged through said smoke-pipe D. By said arrangement of the pipes D and E a more effective heat is maintained than when the draft-pipe is connected at or near the top of the oven, as heretofore practiced. A metallic shelf-holding frame 2 is bolted or otherwise secured to the front side of the oven, having suitable openings therein through which said core-holding shelves swing inwardly and outwardly, and on the outer face of said frame is a series of perforated knuckles 3, and to said knuckles and frame are hung in the usual way the below-described core-shelves and doors, which comprise for each opening through the frame 2 two metal doors 4, rigidly united by one end thereof to their hinge parts 5 and extending at right angles to each other, as shown, and one open-work metallic core-shelf 6, rigidly secured to the inner faces of said doors, near the lower edges thereof. Said doors are of proper length and width to close against the outer and inner sides of said frame 2, the inner door closing the shelf-opening in said frame when the shelf or shelves are outside the oven and the outer door closing against the outer side of said frame when said shelves are within the oven. To provide for said increased core-baking capacity, said doors are made wide enough to insert a second core-shelf 7 above the lower shelf 6, thus doubling the capacity of the oven, and for convenience in manipulating the oven to admit large cores, if need be, on the lower shelf and to permit one shelf to be withdrawn for placing delicate cores thereon said upper shelf is made removable and is adapted to be supported and held in place over the lower one as follows: A suitable longitudinal projecting lip 8 (see Fig. 2) is formed on the inner side of each door 4, on which the two straight borders of said shelf 7 lie. A door-uniting strap

9 of metal (shown in dotted lines in Fig. 2 and in full lines in Fig. 1) extends between the inner opposite sides of said doors, near their hinge-carrying parts. Said upper or removable shelf 7 (shown separate from said doors in Fig. 3 and applied therebetween in Figs. 1 and 2) is held in operative position on said lips and over the lower shelf by the engagement of a downwardly-projecting part 10 thereon, which may be a pin fixed in the shelf or any similar part of the latter integral with said door-uniting strap, as shown. To remove said upper shelf 7, it has only to be lifted slightly and then withdrawn.

15 Having thus described my invention, what I claim, and desire to secure by Letters Patent of the United States, is—

1. An oven for baking cores and analogous purposes, having a shelf-frame substantially as described, with one or more shelf-openings 20 therein, combined with a core-holding shelf hung to swing on said frame, having an oven-closing door attached to its opposite edges, one swinging within and one without the 25 oven, on each of which doors is a shelf-supporting projection between said shelf and the upper edges of the doors, a strap uniting the ends of said doors near their hinge parts, a

second shelf supported removably on said projection and there retained by engagement 30 with said door-uniting part, substantially as described.

2. In an oven for baking cores containing a fire-grate therein for heating said oven, a draft-flue for removing the products of combustion from said oven consisting of a horizontal section extending from a point near said grate diagonally across the bottom of the oven and terminating near a corner thereof opposite said grate, and having an inlet-opening under the extremity thereof near said corner, and a vertical flue-section connected to the end of said horizontal section near said grate, running from thence upwardly through the top of the oven, combined with a series 45 of core-holding shelves between said grate and the upper wall of the oven through which the heat generated by said grate must pass upwardly, and downwardly, before reaching the said inlet-opening under the extremity of 50 said horizontal flue-section, substantially as described.

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