

DOOR FOR BAKERS' OVENS.

APPLICATION FILED MAY 26, 1910.

969,312.

Patented Sept. 6, 1910.

2 SHEETS—SHEET 1.

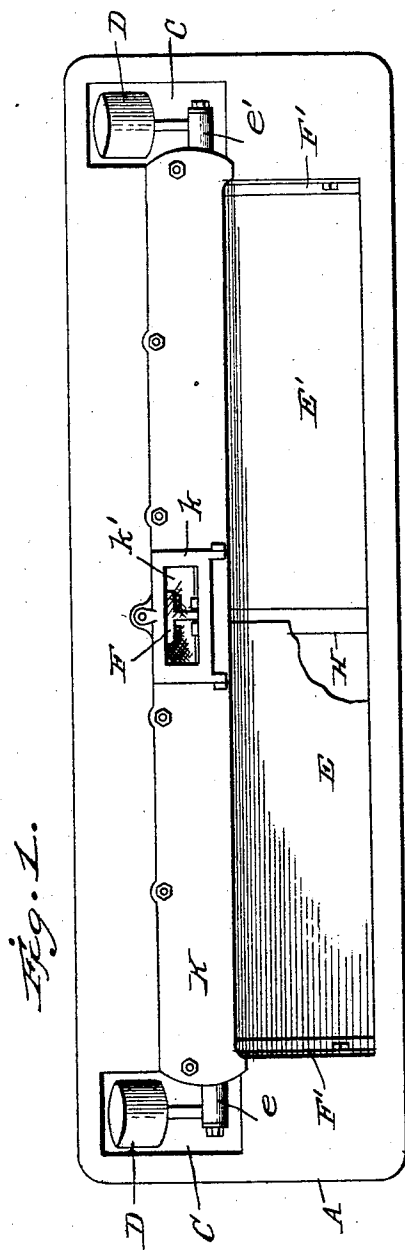


Fig. 1.

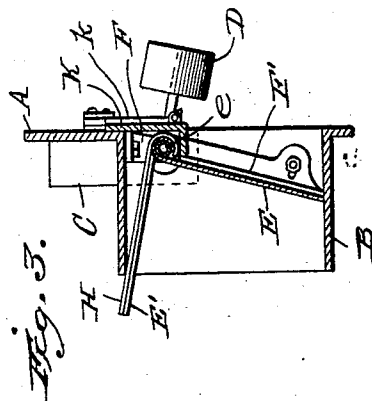


Fig. 3.

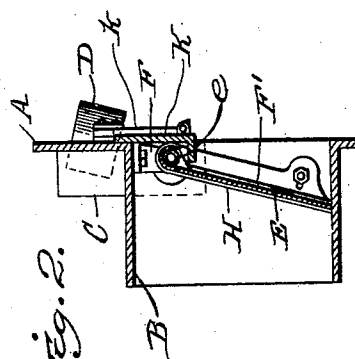


Fig. 2.

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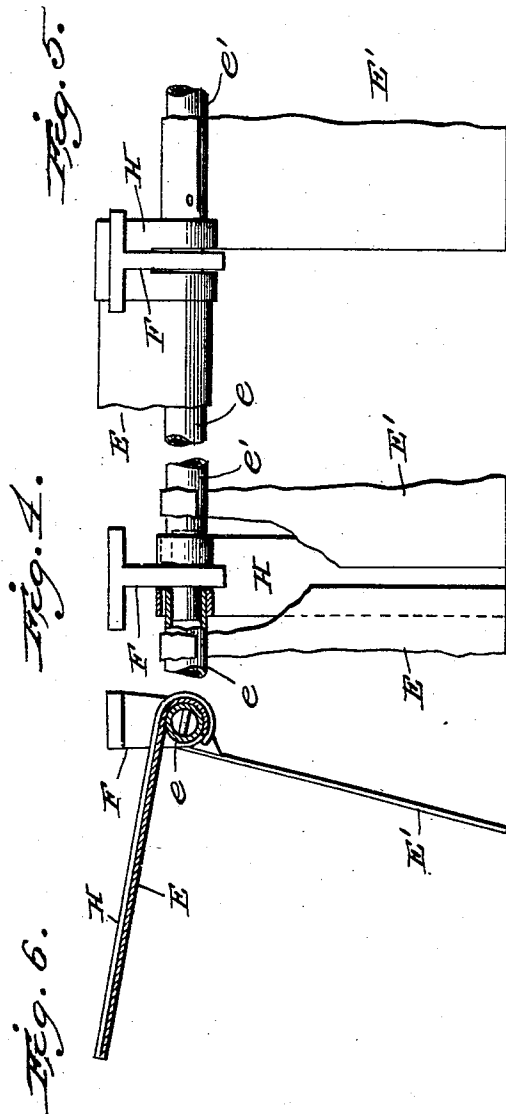
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2 SHEETS—SHEET 2.



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UNITED STATES PATENT OFFICE.

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DOOR FOR BAKERS' OVENS.

969,312.

Specification of Letters Patent.

Patented Sept. 6, 1910.

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To all whom it may concern:

Be it known that we, FRANK H. VAN HOUTEN and DAVID J. HANNA, citizens of the United States, residing at Fishkill-on-the-Hudson, county of Dutchess, and State of New York, have invented certain new and useful Improvements in Doors for Bakers' Ovens; and we 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.

The object of the present invention is to provide an oven door for use in bakers' ovens which will permit of a wide opening being formed in the oven so as to facilitate the rapid handling of the dough or loaves and, at the same time, permit, if so desired, a portion of the opening to remain closed during inspection or when the dough or loaves are to be handled in one part only of the oven.

The invention consists broadly in an oven door construction embodying a door frame having a horizontally elongated opening adapted to be closed by a plurality of independent doors arranged side by side, each counter-balanced independently of the other, and a supplemental pivoted door or tongue for closing the space or joint between adjacent doors but capable of being moved by either of the main doors when the latter are moved to their open position.

The invention further consists in certain novel details of construction and combinations and arrangements of parts, all as will be now described and pointed out particularly in the appended claims.

In the accompanying drawings—Figure 1 is a front elevation of an oven door construction embodying the present improvement. Figs. 2 and 3 are transverse sectional views of the same, Fig. 2 showing the doors in their closed position, and Fig. 3 showing one of the doors open. Fig. 4 is a detail elevation partly broken away showing the meeting edges of the two main doors, the tongue or supplemental door and the bracket or hanger for supporting the proximate ends of the door shaft. Fig. 5 is a similar view with one of the doors swung into its open position.

Fig. 6 is an elevation looking at one edge of the parts in the position shown in Fig. 5.

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

Doors of the character to which the present invention is particularly applicable are subjected to a high degree of heat and are, therefore, usually constructed entirely of iron. The door frame or jamb is composed of a face plate A from which a relatively wide flange B extends inwardly around the elongated door opening so as to form the top, bottom and side plates between which the doors are mounted and operate. At each side of the main door opening, recesses or pockets which may be of the same general character as the main door opening are formed in the face plate, as shown at C, to receive the projecting ends of the shafts on which the doors are hung together with the counter-balance weights D connected with said shafts.

In accordance with the present invention, instead of employing as heretofore a single door for closing the opening to the oven, a plurality of doors are employed each independent of the other insofar as the opening and closing movements are concerned, whereby we are enabled to provide a wide door opening without unduly increasing the weight or size of the doors themselves and, at the same time, when it is not desired to charge and discharge loaves from the entire oven, one portion at a time of the oven may be exposed or opened, thus conserving the heat and, at the same time providing a structure which will permit of the rapid handling of the loaves when the oven is being pushed to its full capacity.

The doors illustrated are two in number, lettered E and E', respectively, and each is mounted on its own shaft indicated at e, e' said shafts being arranged in alinement with each other and at their proximate ends supported by pivotal connection with a central bracket or hanger F. The shafts are usually tubular and the bracket is provided with pivots which extend into the ends of the shafts, as indicated clearly in Figs. 4 and 5, but obviously any other well known or approved construction may be adopted.

The doors when closed normally occupy a slightly inclined position within the jamb of the door frame, as indicated in Fig. 2, their outer edges resting on or in proximity to adjustable angle flanges F' of the usual construction. The proximate edges of the doors, it is obvious, must be slightly separated one from the other so as to avoid interference even if subjected to high temperatures and, in order to close the opening thus left without in anywise interfering with the operation of the doors, or leaving an obstruction in the opening when both doors are open, a supplemental door or tongue H is pivotally mounted in position to hang down against the inner faces of the proximate ends of the doors so as to bridge and close the aforesaid opening. Conveniently, the said supplemental door or tongue H is bifurcated at its pivotal end so as to embrace the hanger or bracket F whereby it is kept in proper position longitudinally of the axis and it is mounted on the ends of the shafts with sufficient looseness to insure its entire freedom of movement, whereby it will invariably follow the doors as they are being moved to their closed position. Obviously, the supplemental door or tongue will be picked up or swung to open position by the first one of the main doors to be opened and it will be held by the door last to be closed; but in no event can it interfere with the opening or closing of the doors and when both doors are closed the opening between them will also be closed.

The ends of the door shafts are supported in bearings in the jamb frame as is usual in this class of devices and the space between the said shafts and the top of the jamb frame is closed by a front cover plate K which, at the center may have an opening closed by a supplemental cover plate k with a window k' therein through which the interior of the oven may be viewed.

Having thus described our invention, what we claim as new and desire to secure by Letters Patent of the United States is—

1. In a door for bakers' ovens, the combination with the door frame having an elongated opening; of a plurality of doors independently pivoted on an axial line in proximity to the top of the opening, and a supplemental door loosely supported in position to rest against the proximate ends

of the doors to bridge and close the opening between the same.

2. In a door for bakers' ovens, the combination with the door frame having an elongated opening surrounded by an inwardly extending flange, of a plurality of doors mounted in said opening, independent alined shafts on which said doors are mounted, a hanger for supporting the proximate ends of the said shafts and a supplemental door pivotally mounted on an axis coincident with the axis of the main doors in position to rest upon the proximate ends of the main doors and close the opening therebetween.

3. In a door for bakers' ovens, the combination with the door frame having an elongated opening therein, an inwardly extending flange surrounding said opening and pockets at opposite ends of the opening, of independent shafts journaled in the flange of the door opening and projecting into the pockets, independent doors mounted on said shafts within the door opening, counterweights for the respective doors mounted on their shafts within the pockets and a movable supplemental door for closing the space between the proximate ends of the main doors.

4. In a door for bakers' ovens, the combination with the door frame embodying a face plate having an elongated opening therein an inwardly extending flange surrounding said opening and pocket openings at each end of the elongated opening, of independent shafts journaled in said frame in alinement with each other and with their outer ends projecting into the pockets, of a hanger forming the pivotal support for the proximate ends of the shafts, downwardly closing doors mounted on the shafts in the door opening, counterweights for said doors mounted on the shafts in the pockets, and a supplemental door loosely pivoted on the proximate ends of the shafts in position to rest against the proximate ends of the doors and close the opening therebetween when the doors are closed.

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