F. KUHN & J. A. HAND.

OVEN.

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1,298,358.

Patented Mar. 25, 1919.

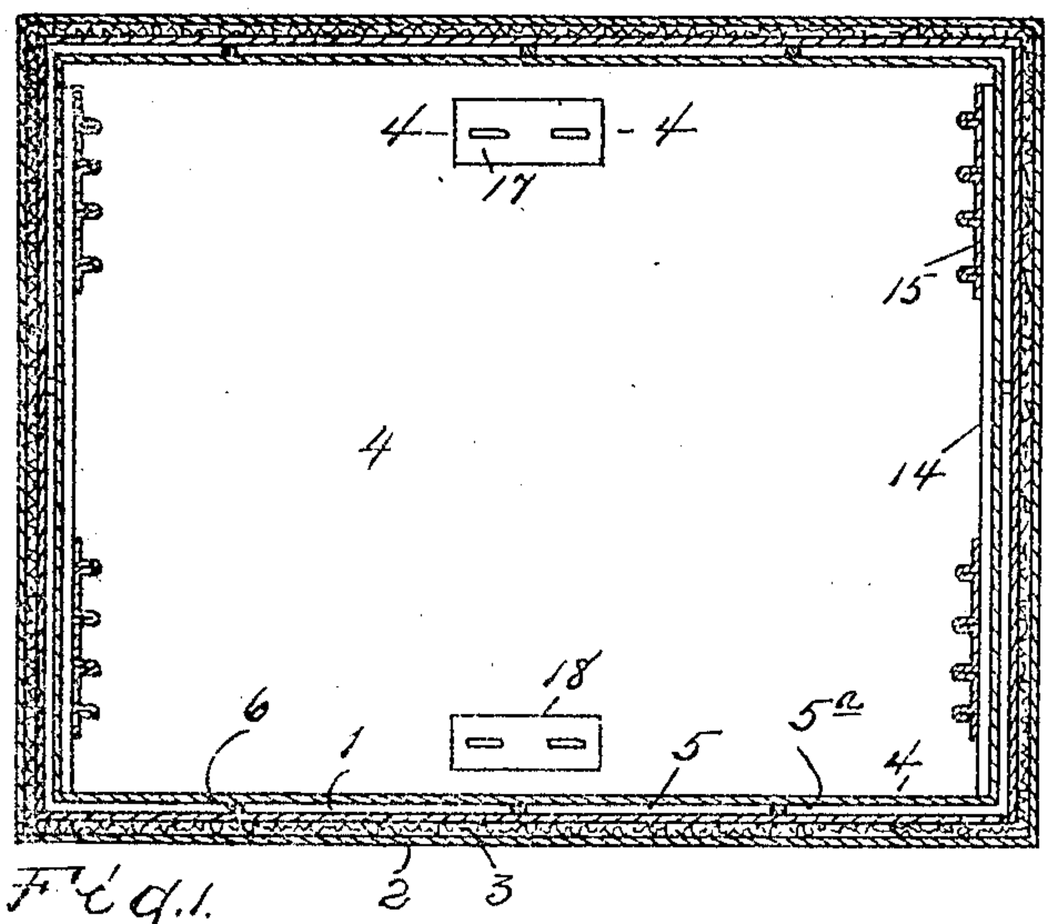


Fig. 1.

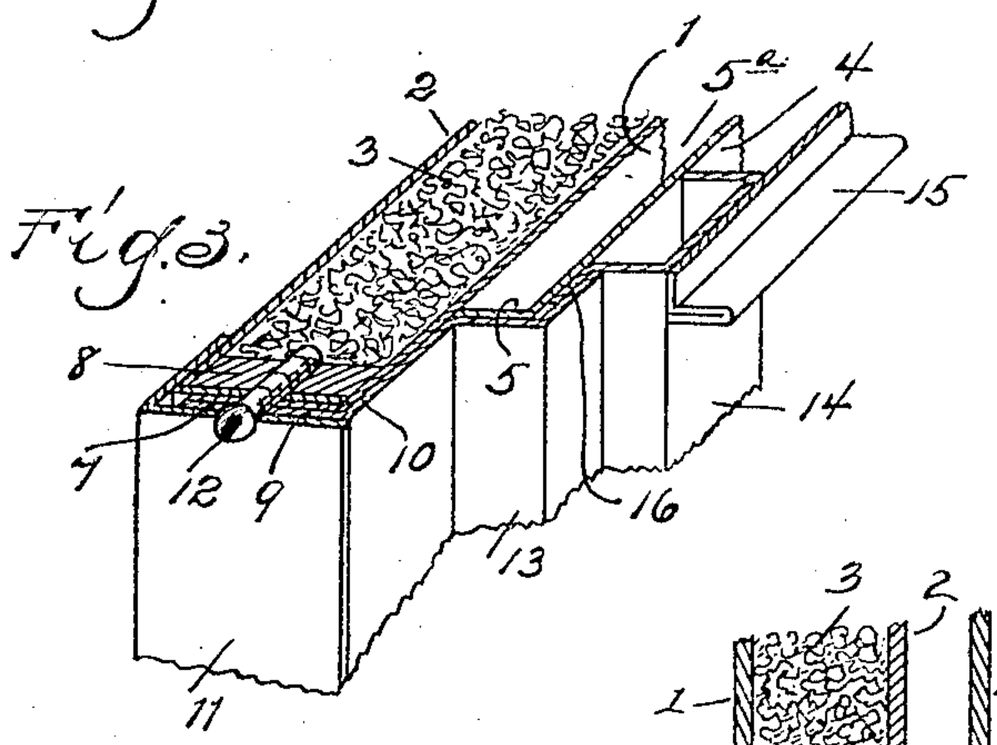


Fig. 3.

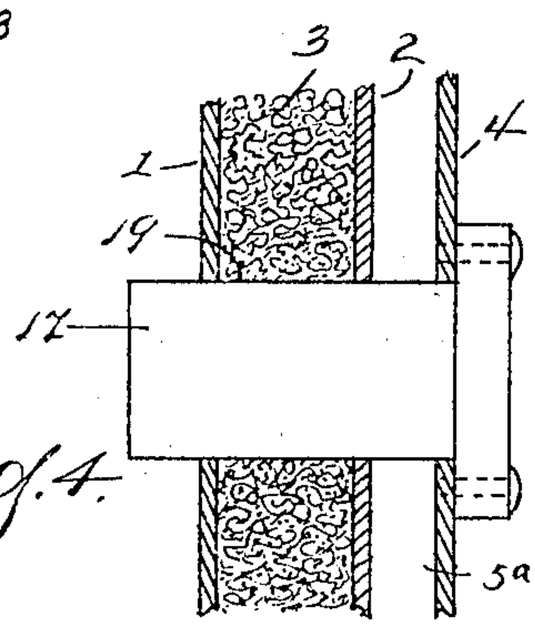


Fig. 4.

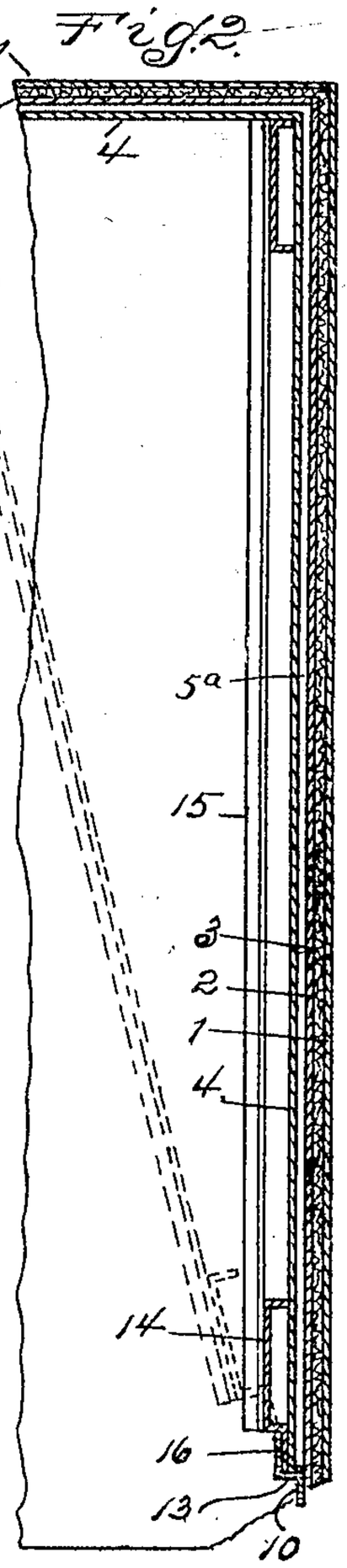


Fig. 2.

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# UNITED STATES PATENT OFFICE.

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## OVEN.

1,298,358. Specification of Letters Patent. Patented Mar. 25, 1919.

Application filed February 21, 1918. Serial No. 218,406.

*To all whom it may concern:*

Be it known that we, FRANK KUHN and JAY A. HAND, both citizens of the United States of America, both residing at Detroit, in the county of Wayne and State of Michigan, have invented certain new and useful Improvements in Ovens, of which the following is a specification, reference being had therein to the accompanying drawings.

The invention relates to ovens and consists primarily in certain features of the oven lining and in the means employed to mount racks at each side of the oven.

In the accompanying drawings:

Figure 1 is a vertical section taken parallel to the front and back walls of an oven embodying the novel features of this invention;

Fig. 2 is a horizontal sectional view of such an oven showing a side portion thereof only;

Fig. 3 is a detail perspective view showing the front edge of one of the oven side walls, and disclosing how a rack member is engaged adjacent said edge;

Fig. 4 is a section on line 4—4 of Fig. 1 showing the mounting of a terminal block in the oven.

In these views the reference characters 1 and 2 designate inner and outer double walls, between which is interposed heat-insulating material 3, such as asbestos or mineral wool, the top, bottom, sides and ends of the oven being thus formed. The entire oven lining is formed of a unitary structure by plates 4 either integrally formed or rigidly connected. At its front and back this lining is formed with outwardly projecting ribs or flanges 5 whereby the lining is held spaced from the adjacent wall 1, forming a dead air chamber $5^a$ which constitutes a heat insulation supplementary to that designated by 3. Each wall of the lining 4 furthermore carries an outstanding rib 6 extending from front to back, reinforcing the central portion of said wall and preventing its being bent or dented. At their front edges the walls 1 and 2 are overlapped as indicated at 7 (see Fig. 3), and between said walls adjacent to their overlapped front edges a vertically extending metal bar 8 is located. An angular sheet-metal strip comprising flanges 9 and 10 is also associated with the front edge of each side wall, the flange 9 being clamped between the overlapping members 7 and a facing strip 11 by screws 12 which are passed through said facing strip, the flange 9 and the members 7 and are anchored in the bar 8. The flange 10 projects into the oven adjacent the wall 1 and is offset parallel to and adjacent its free edge, as indicated at 13, thus forming a shoulder which abuts against the lining 4 and prevents removal of the latter from the oven without first removing said flange. At each side of the oven there are provided the usual racks, each of which in this instance comprises front and back vertical channel members 14 and ribbed horizontal members 15 rigidly connecting said channel members. The front channel member of each of said racks is formed with a forwardly extending flange 16 which, as is shown in Fig. 3, may be engaged between the edge portion of the flange 10 and the adjacent lining 4.

In installing said racks, they are first engaged at their front edges with the flanges 10 while in an angular relation to the adjacent side walls, as indicated in dash lines in Fig. 2. The racks are then swung into parallelism with the side walls, under which conditions the rear wall of the lining forms an abutment for said racks so that they cannot be removed until they have been again swung to an angular position relative to the adjacent side wall.

When the above described construction is employed in an electric oven, upper and lower terminal blocks 17 and 18 may be mounted in the rear wall of the lining 4 and portions of the double walls 1 and 2 and the intermediate insulation may be cut away as indicated at 19 to allow said terminal blocks to project exteriorly of the oven.

What we claim as our invention is:—

1. In an oven, the combination with a side wall thereof, of a rack mounted against said side wall, interengaged flanges respectively formed upon one end of said rack and upon the adjacent side wall, and an abutment for the other end of said rack carried by the oven, the last-mentioned end being movable from the adjacent wall to effect disengagement of said flanges.

2. In an oven, the combination with a side wall thereof, of a rack mounted against said side wall and abutting against a rear wall thereof, and interengaged flanges respectively formed upon the front edge of said rack and the adjacent wall, the rear

end of the rack being movable from the adjacent wall to effect disengagement of said flanges.

3. In an oven, the combination with a side wall thereof, of an angular strip associated with the front edge of said wall having a flange clamped against said front edge and a flange inwardly extending adjacent said wall, and a rack mounted within the oven adjacent said wall formed with a flange adjacent its front edge engaged beneath said inwardly extending flange, the rear end of the rack being movable from the adjacent wall to effect disengagement of said flanges.

4. In an oven, the combination with the walls thereof, of a lining for said walls and angular strips respectively associated with the front edges of said walls, each comprising a flange clamped against a front edge of the wall and a flange extending into the oven and forming an abutment for the lining.

5. In an oven, the combination with a wall thereof, of a lining for said wall spaced therefrom to form a heat-insulating chamber, an angular strip associated with the front edge of said wall comprising a flange clamped against said edge and a flange projecting into the oven and offset to form an abutment for said lining, and a rack mounted against said lining and formed with a flange at its front edge engageable beneath the edge of said offset flange.

6. In an oven, the combination with a side wall thereof, of a rack mounted against said side wall, said rack having a flange adjacent one edge thereof, and a flange upon said oven wall interengaging with said flange of the rack, the rack being angularly movable about its flanged edge to allow disengagement of said edge from the oven wall.

7. The combination with an oven wall, of a lining adjacent to the interior face of said wall, a rack member adjacent said lining and a retaining strip secured to the oven at the front thereof having an intermediate offset engaging the front edge of the oven lining and having a flange engaging the front edge of said rack.

8. The combination with an oven wall, of a lining for said oven therewithin, and a sheet metal retaining strip secured to the oven at the front thereof and having a portion projecting within the oven offset to provide an abutment retaining the lining in place.

In testimony whereof we affix our signatures.

FRANK KUHN.
JAY A. HAND.