

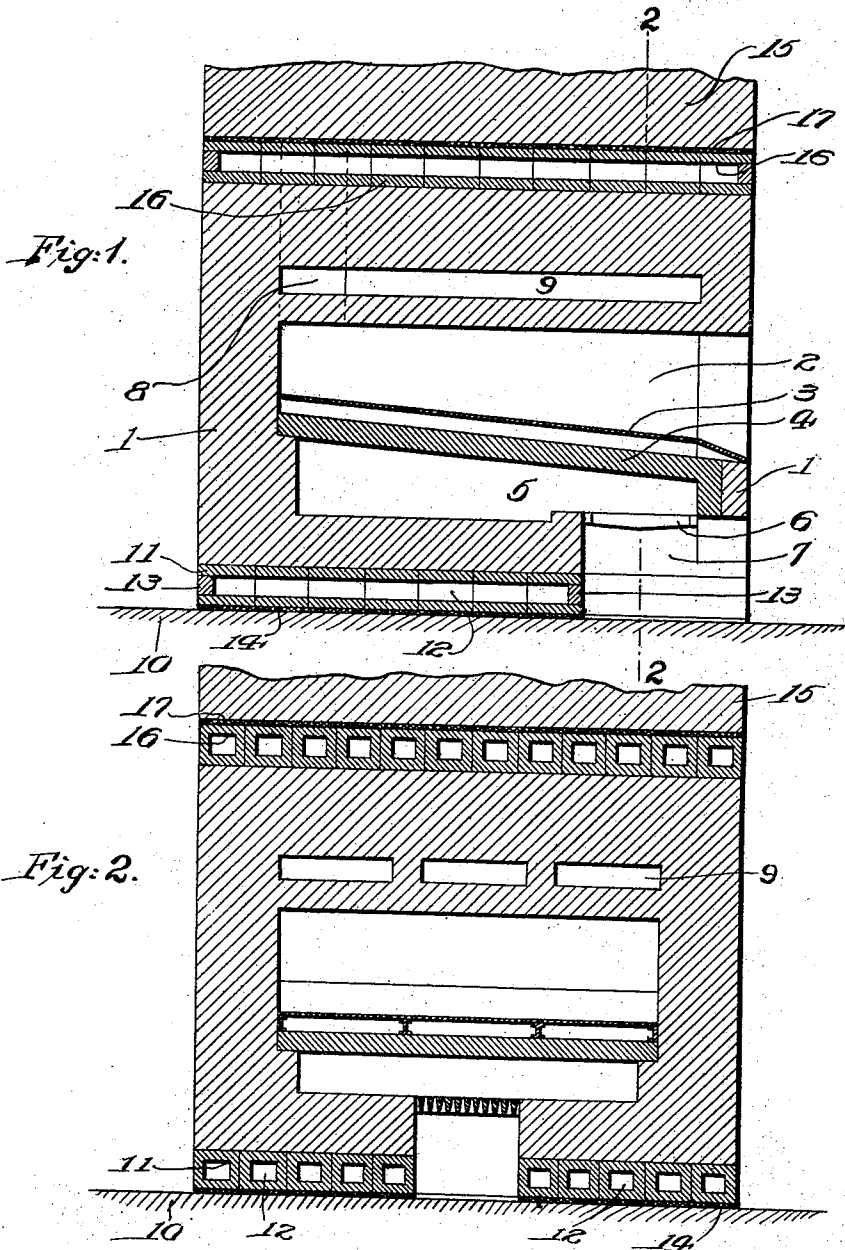
L. J. KOLB.

BAKE OVEN.

APPLICATION FILED OCT. 21, 1908.

968,168.

Patented Aug. 23, 1910.



WITNESSES:

*Robt. R. Little*

*Harold S. Moulton*

INVENTOR

*Louis J. Kolb.*

BY *Harold S. Moulton*

ATTORNEY

# UNITED STATES PATENT OFFICE.

LOUIS J. KOLB, OF PHILADELPHIA, PENNSYLVANIA.

## BAKE-OVEN.

968,168.

Specification of Letters Patent. Patented Aug. 23, 1910.

Application filed October 21, 1908. Serial No. 458,782.

*To all whom it may concern:*

Be it known that I, LOUIS J. KOLB, a citizen of the United States, and a resident of the city of Philadelphia, State of Pennsylvania, have invented certain new and useful improvements in Bake-Ovens, of which the following is a full, clear, and exact disclosure, reference being had to the accompanying drawings, forming a part of this specification.

The main objects of this invention are to provide improvements in the construction of bake ovens which may be applied to any bake oven of the usual form, and whereby the heat of the oven will be economized and made more uniform; and to provide other improvements as will appear hereinafter.

In the accompanying drawings; Figure 1 is a longitudinal vertical section of a bake oven constructed in accordance with this invention; and Fig. 2 a vertical transverse section on line 2—2 of Fig. 1.

Referring to the drawings, the oven illustrated comprises the usual walls 1 of brick or other suitable material and provided with the usual baking chamber 2 having a false bottom 3 and the usual sole 4 beneath which is the fire place 5, grate bars 6 and ash pit 7. Leading from the fire place 5 is the usual chimney flue 8 as shown in dotted lines in Fig. 1. Above the roof of the baking chamber are the usual air spaces 9.

Between the walls 1 of the oven and the foundation or support 10 thereof, I have provided two layers of heat insulating material, the upper layer being composed of a plurality of hollow rectangular tiles 11 forming a series of air spaces 12, the outer ends of which may be closed by closures 13 in the hollow ends of the tiles. The lower layer of insulating material 14 which is between the layer of tiles and the foundation 10 of the oven is composed preferably of asbestos or other similar non-conducting material. Two similar layers of insulation are arranged between the walls 1 of the oven and the superstructure 15 of brick work or other material, these latter layers being arranged with the tiles 16 adjacent the walls 1 of the oven, and the layer 17 of asbestos or other similar material above the tiles and between the tiles and the superstructure.

By this construction and arrangement, the layers of tiles respectively below and above the oven provide a nearly perfect insulation,

and the insulation of any heat that passes the tiles is made practically perfect by the layers of asbestos which are arranged outside of the layers of the tiles.

From the above it will be seen that I have substantially provided a series of tubes arranged side by side and extending the length and breadth of the oven, said tubes being arranged between the oven and its foundation and the oven and its superstructure. By sealing the ends of the tubes so formed the air inclosed therein and forming a non-conductor of heat cannot be changed. If the ends of the tubes were open as the air within the tube became heated, it would be discharged out of the ends of the tubes and drafts formed therethrough, and while this would prevent the superstructure, or the foundation from becoming heated, the heat absorbed by the air and carried away by it would be lost. I prefer, therefore, to seal the ends of the tubes, and, consequently, prevent this waste of heat which would be otherwise used in continually heating up the cool air entering the tubes.

This invention may be applied with advantage to any ordinary form of oven and will result in preventing the loss of heat from the walls of the oven by conduction through the foundation or superstructure of the oven, thus economizing the heat and keeping the heat more uniform in temperature, with a consequent saving in fuel and improvement in the results attained in baking.

Although I have shown only one form in which this invention may be constructed, and applied, I wish it to be clearly understood that I do not limit myself to the exact construction herein set forth, as many changes might be made in the details of the construction within the scope of the appended claims.

Having thus described my invention, I claim and desire to protect by Letters Patent of the United States:

1. The combination with an oven, of a layer of hollow tiles below said oven for supporting and for insulating the same.

2. The combination with an oven of a support therefor comprising a layer of asbestos, and a layer of hollow tiles superimposed upon said layer of asbestos.

3. The combination with an oven, of layers of hollow tubes arranged above and below

the oven to form a non-conductor of heat, and means arranged to prevent circulation through said tubes.

4. The combination with an oven and its supporting structure, of means for insulating said oven from its support comprising a layer of closed hollow tiles arranged to form a series of tubes.

5. The combination with an oven and its supporting structure, of means for insulating said oven from its support comprising a layer of hollow tiles arranged to form a

series of tubes and means for closing the ends of said tubes.

6. The combination with an oven, of a series of non-conducting tubes closed at their ends, arranged above and below said oven to form a non-conductor of heat.

In witness whereof, I have hereunto set my hand this 8th day of October, A. D. 1908.

LOUIS J. KOLB.

Witnesses:

HARRY COBB KENNEDY,  
ALEXANDER PARK.