

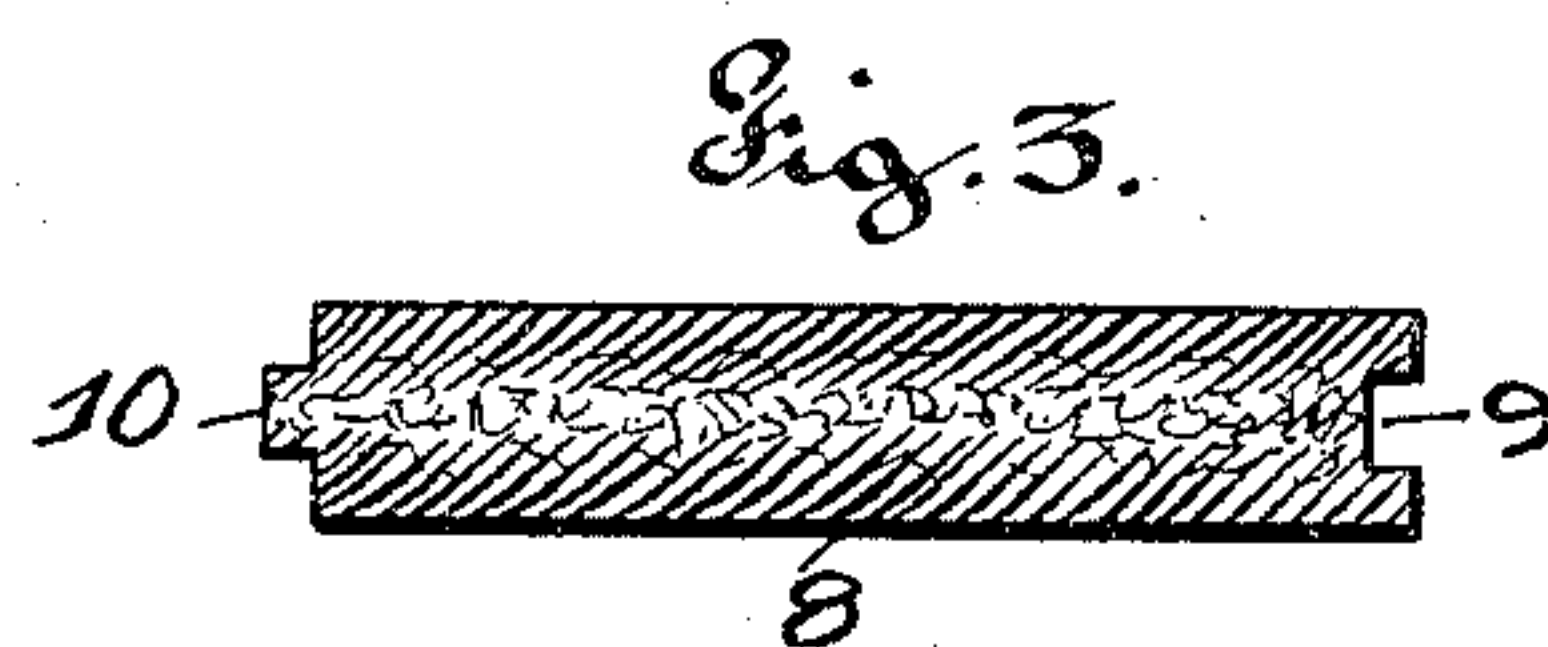
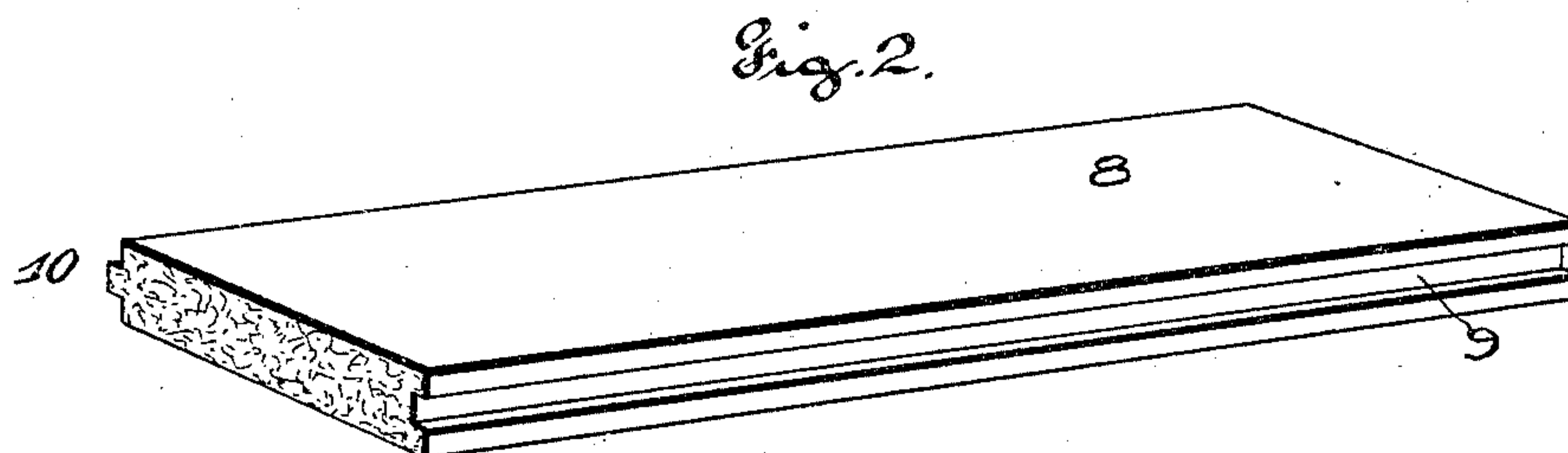
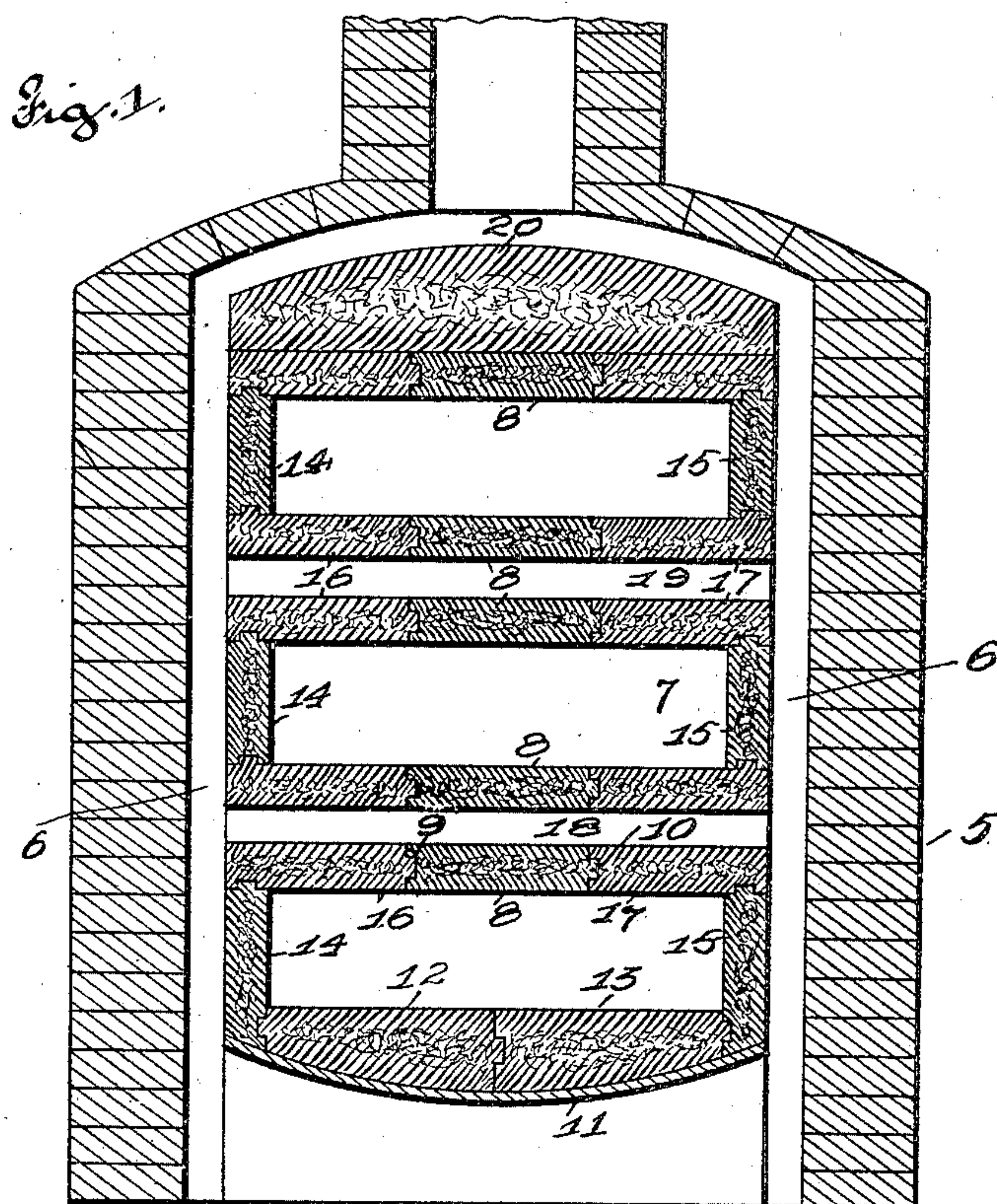
No. 725,066.

PATENTED APR. 14, 1903.

W. FROHNE.
BAKE OVEN.

APPLICATION FILED APR. 15, 1902.

NO MODEL.



Witnesses
Alfred A. Eicker
Frank Turner

Inventor
William Frohne
by Hegdon & Dargan Attys.

UNITED STATES PATENT OFFICE.

WILLIAM FROHNE, OF ST. LOUIS, MISSOURI.

BAKE-OVEN.

SPECIFICATION forming part of Letters Patent No. 725,066, dated April 14, 1903.

Application filed April 15, 1902. Serial No. 103,057. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM FROHNE, of the city of St. Louis, State of Missouri, have invented certain new and useful Improvements in Bake-Ovens, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

The object of my invention is to construct an improved bake-oven in which the walls between the fire, heat, and products of combustion and the material being baked are capable of absorbing and retaining a large amount of heat, so that the temperature within the baking-chamber will be steady and not easily affected by sudden variations in the fire; and my invention consists of a suitable furnace and baking-chambers built within the furnace, the walls of said chambers being composed of porous burnt clay, so as to provide walls between the fire and the material to be baked which will absorb a large amount of heat, so as to provide a steady temperature in the baking-chamber and so as to protect the material being baked from sudden variations in the fire.

Figure 1 is a cross-section of a furnace and baking-oven constructed in accordance with the principles of my invention. Fig. 2 is a perspective of one of the porous slabs employed in forming the baking-chamber. Fig. 3 is a cross-section of the slab shown in Fig. 2.

Referring to the drawings in detail, the furnace 5 is formed of ordinary brick or similar non-heat-conducting material and forms the combustion-chamber 6, within which are mounted the walls forming the baking-chamber 7, said walls being composed of porous burnt-clay slabs 8 and other slabs, each slab having a groove 9 and a tongue 10, the tongue of one slab fitting in the groove of the next slab. The metal plate 11 forms the roof of the fire-box, said plate being curved in cross-section, the center of the plate being lower than the edges, and the porous slabs 12 and 13 rest upon this plate and form the bottom of the first baking-chamber. The porous slabs 14 and 15 extend upwardly from the edges of the plate 11 and from the outer edges of the slabs 12 and 13, there being grooves 9 in the inner faces of the lower parts of said slabs 14 and 15 and tongues 10 extending up-

wardly from the upper edges of said slabs 14 and 15. A porous slab 16 has a groove 9 in its lower face to receive the tongue 10 extending upwardly from the slab 14, and a similar porous slab 17 has a groove 9 in its lower face to receive the tongue 10 extending upwardly from the slab 15, and a slab 8 is inserted between the slabs 16 and 17 to form the roof of the first baking-chamber. The second baking-chamber is formed in a similar manner with a heating-space 18 between the upper surface of the roof of the first chamber and the lower surface of the bottom of the second chamber. The porous slabs 12 and 13 are rounded on their lower faces to fit the metal plate 11, and said slabs are substantially twice the normal thickness to protect the first baking-chamber from the excessive heat due to its being close to the fire-box. The third baking-chamber is exactly like the second, with a heat-space 19 between the roof of the second chamber and the bottom of the third chamber, and an extra-thick porous slab 20 is placed upon the roof of the third chamber.

The slabs are made by taking ordinary clay and mixing chopped straw or other fibrous material with the clay, molding the clay into the desired form, and then burning the clay to consume the fibrous material and leave coarse pores in the slabs; but the pores are preferably confined to the interior or body of the slabs, thereby leaving a smooth and imperforate outer surface, as shown more clearly in Fig. 2. This smooth outer surface is produced partially in molding the material, as the polished surface of the usual metal molds by frictional contact smooths the outer surface of the slabs and at the same time forces inwardly and covers up most of the portions of straw which primarily appear in the surface of the green slabs before they have been burned. The outer surface is further smoothed by dusting with fine sand in the usual manner practiced by brick and clay workers. It may also be smoothed in any other known manner. I have found by practical experience that these porous or cellular walls forming the baking-chambers will absorb and retain a large amount of heat, thus producing a steady temperature in the baking-chamber, that the noxious gases from the

fire-box will not penetrate said walls, and that the juices and flavors are retained in the materials being baked to the greatest possible extent.

5 I claim—

1. In a baker's oven, a baking-chamber the walls of which are composed of burnt-clay slabs having coarse pores formed therein, substantially as and for the purpose specified.

10 2. In a baker's oven, a baking-chamber the

walls of which are composed of molded and burnt slabs of mixed clay and straw, and said slabs having coarse pores, substantially as herein specified.

In testimony whereof I affix my signature 15
in presence of two witnesses.

WILLIAM FROHNE.

Witnesses:

ALFRED A. EICKS,

M. G. IRION.