

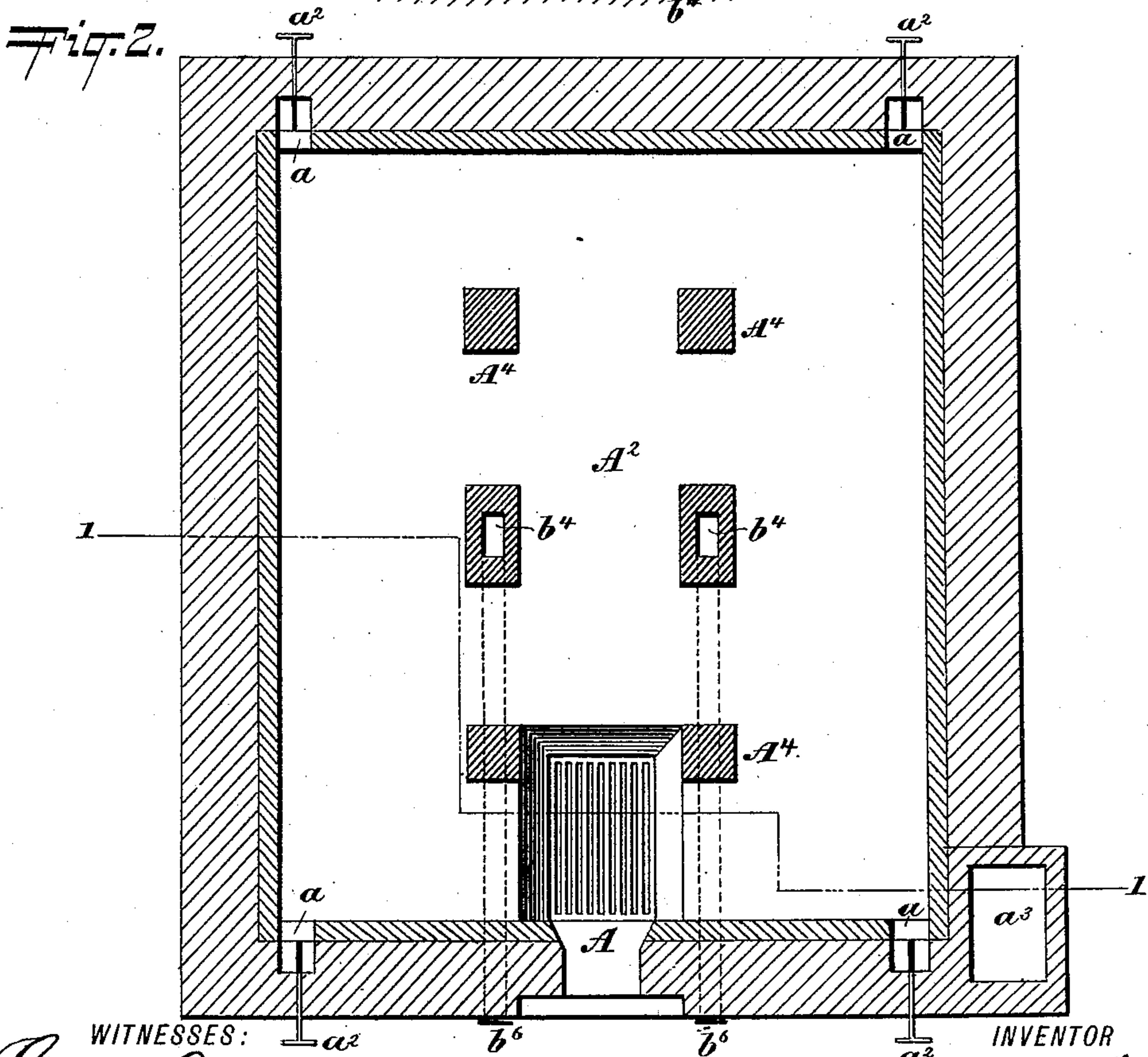
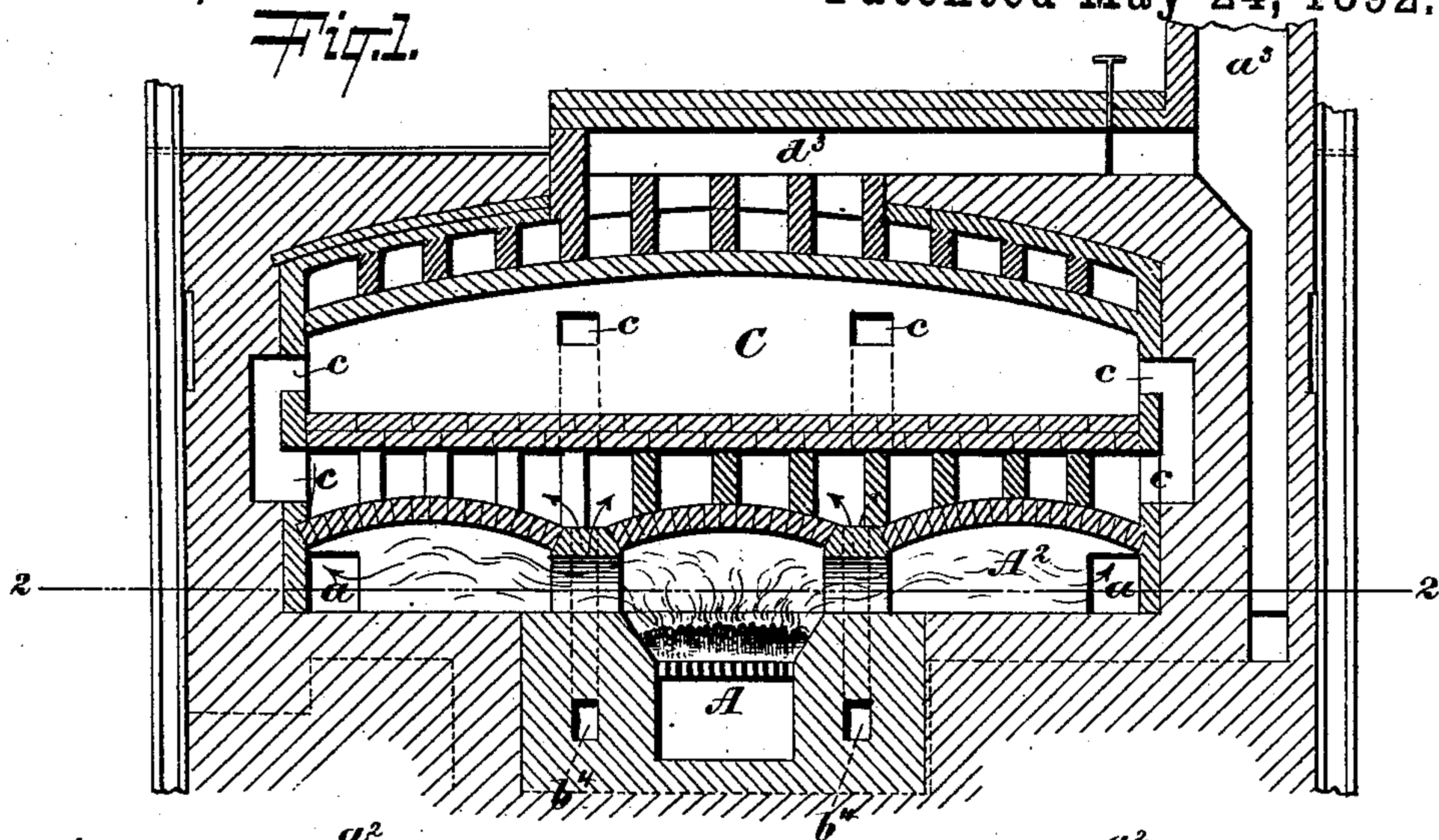
(No Model.)

3 Sheets—Sheet 1.

W. LENDEROTH.
BAKER'S OVEN.

No. 475,403.

Patented May 24, 1892.



WITNESSES:

Gustav Dietrich
Henry E. Eording

INVENTOR

William Lenderoth

BY *Briesen & Knauth*

his ATTORNEYS

(No Model.)

3 Sheets—Sheet 3.

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Fig. 5.

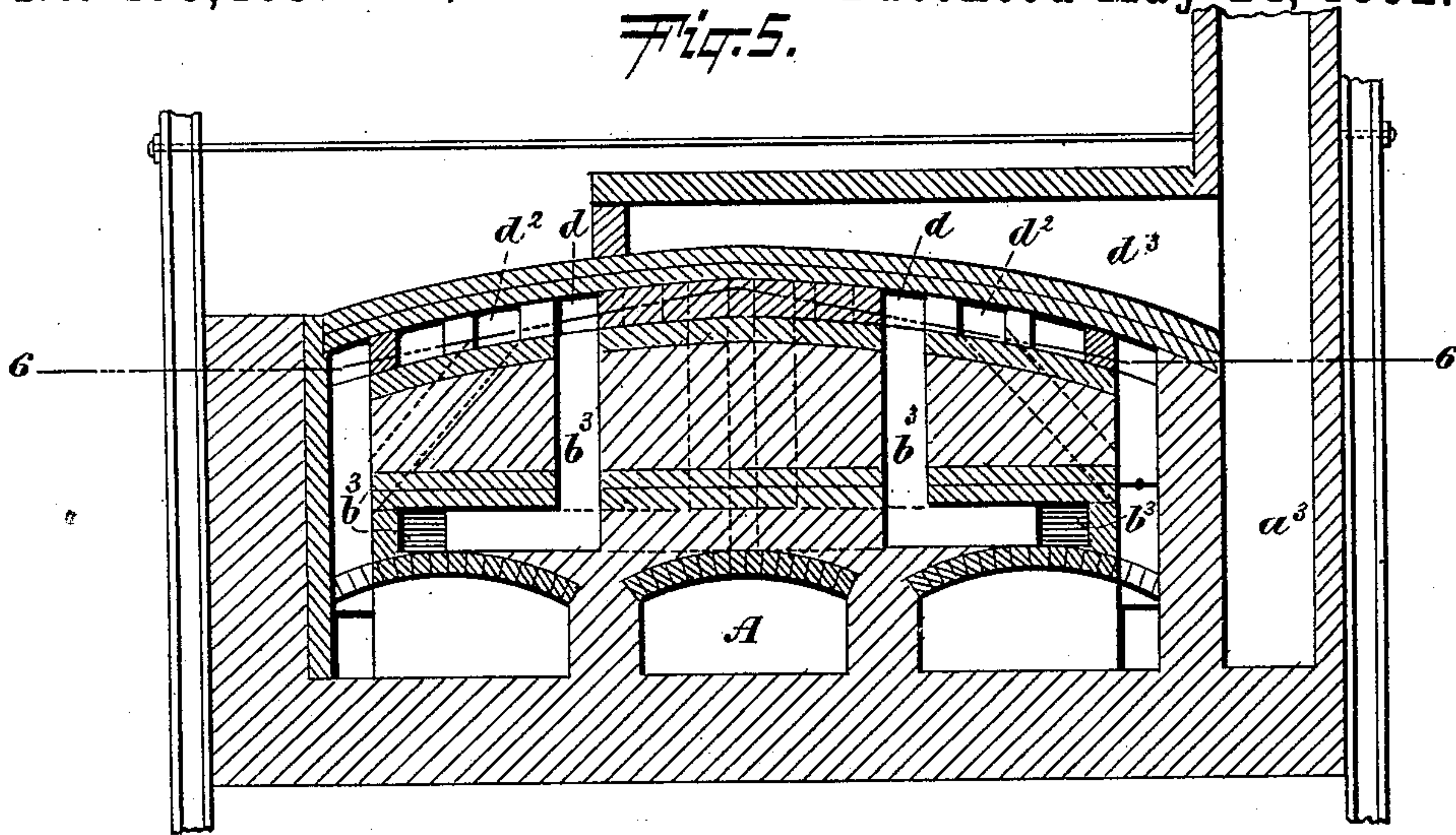
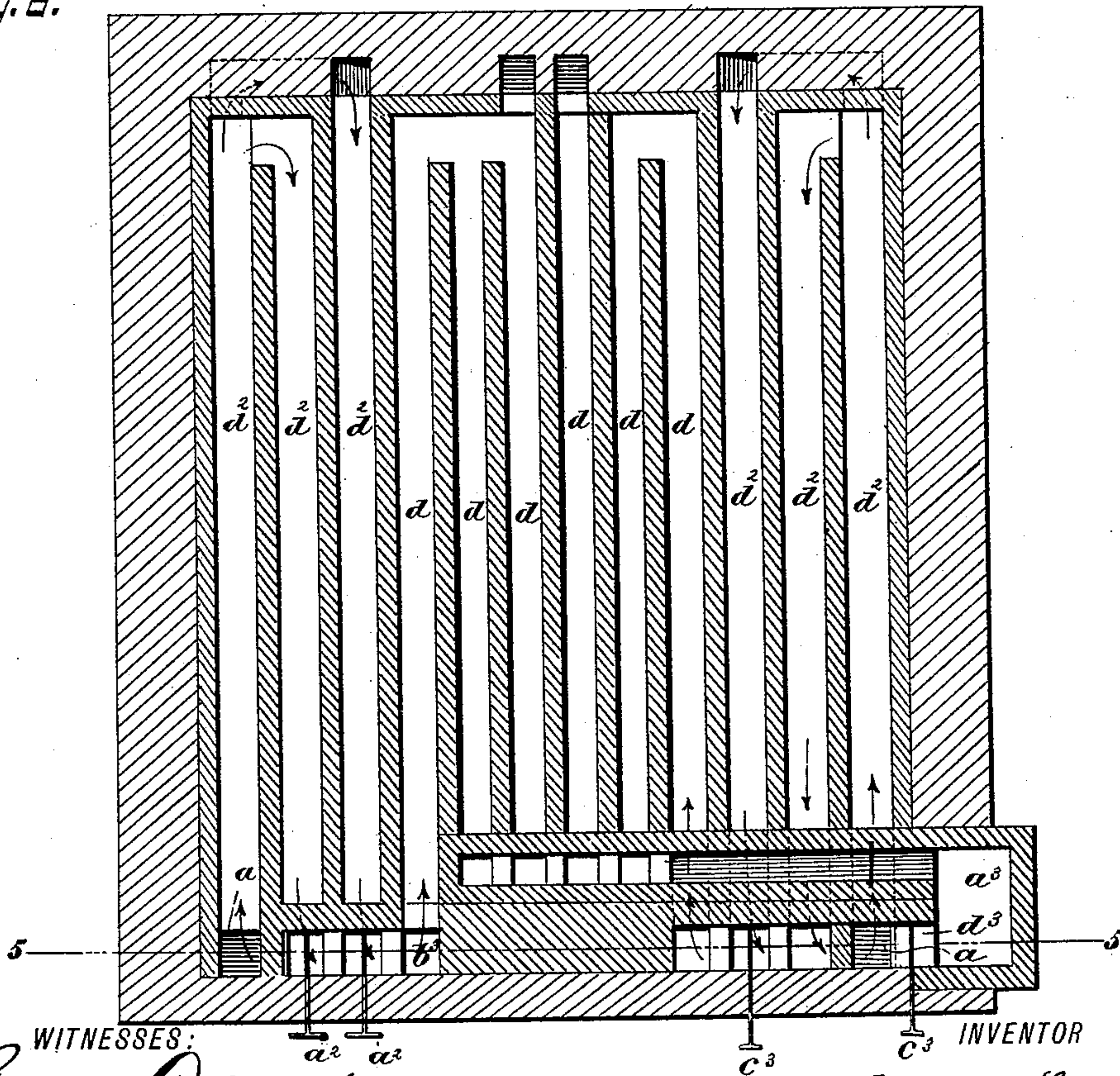


Fig. 6.



WITNESSES:

Gustave Detenich
Henry E. Harding

INVENTOR

William Lenderoth
BY *Briesen & Brant*
his ATTORNEYS

UNITED STATES PATENT OFFICE.

WILLIAM LENDEROTH, OF ROSEBANK, NEW YORK.

BAKER'S OVEN.

SPECIFICATION forming part of Letters Patent No. 475,403, dated May 24, 1892.

Application filed December 31, 1891. Serial No. 416,724. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM LENDEROTH, a resident of Rosebank, Richmond county, Staten Island, and State of New York, have
5 invented an Improvement in Bakers' Ovens, of which the following is a full, clear, and exact description.

My invention relates to certain new and useful improvements in bakers' ovens; and it
10 consists in the novel arrangement and combination of parts hereinafter more fully described and claimed.

My invention is illustrated in the accompanying drawings, in which—

15 Figure 1 is a vertical section of the improved oven on the line 1 1, Fig. 2. Fig. 2 is a horizontal section on the line 2 2, Fig. 1, showing the arrangement of the combustion-chamber. Fig. 3 is a vertical section on the line 3 3, Fig. 2; Fig. 4, a horizontal section on the line 4 4, Fig. 3, showing the arrangement of the hot-air flues. Fig. 5 is a vertical section on the
20 line 5 5, Fig. 6; and Fig. 6, a horizontal section on the line 6 6, Fig. 5, showing the arrangement of the hot-air and combustion flues.

A is the grate or fireplace of the oven, communicating with the fire-room A², which extends beneath the whole oven-floor. (See Fig. 2.) This fire-room A² is by preference formed
30 with an arched roof suitably supported upon the walls of the oven and upon piers A⁴. The heat from the fireplace communicates with the entire space of the fire-room. At the four corners of this fire-room are placed flues a a
35 a a, each provided with a damper a², and leading, as hereinafter more fully described, to a common flue or chimney a³. The dampers a² may be placed at the lower parts of the flues a, as shown in Fig. 2, or at the upper
40 part of said flue a, as shown in Fig. 6, or at any convenient part of said flue. Immediately above the fire-room is placed a series of air-flues b, divided by partitions which support the floor of the baking-chamber. At the
45 corners of the series of air-flues b are four flues b³ b³ b³ b³. Air is admitted to the series of air-flues b through flues b⁴ b⁴, leading from the outside of the oven. The flues b³ may be provided with dampers b⁵. The flues b⁴ b⁴
50 may also be provided with outside dampers b⁶. Directly above the air-flues b is the baking-chamber C, which is connected with the

air-flues b by one or more flues c c, and also connected directly with the smoke-stack or chimney a³ by passage c², provided with a
55 damper c³. Above the baking-chamber C is arranged a series of channels d d², into which channels the air and heat flues respectively lead. These channels conduct both air and heat over the top of the oven to horizontal
60 flues to the smoke-stack or chimney a³.

The operation is as follows: Heat is led from the fireplace A through the fire-room A² to the flues a at the corners of the oven up to the channels d² on top of the baking-chamber C,
65 the products of combustion being led into and through said channels d² to the horizontal flues d³, from which they escape into the chimney a³. Air is admitted through the flues b⁴ b⁴, regulated by outside dampers b⁶, into the
70 hot-air flues b, through which flues it circulates, and being heated to a high degree passes freely in and out of the baking-compartment C through the flues c c, and also passes into the corner vertical flues b³ and up to the chan-
75 nels d on top of the baking-chamber. The air circulates in these channels d until it is finally conducted to the horizontal flue b⁴, through which it passes to the chimney a³. The air in the baking-chamber C, instead of
80 passing back into the air-flues, may be passed directly from the chamber C into the chimney.

The advantages of this construction of furnace are many.

First. By the arrangement of the flues a a
85 a a and their dampers a² the heat in the fire-chamber A² may be easily regulated and localized, thus saving fuel and time.

Second. The connection of the air-flues b with the outside air forms a steady current of
90 heated air beneath the floor of and in the baking-compartment, and the heat is thereby evenly distributed to any part of the baking-chamber.

Third. The direct communication between
95 the baking-chamber C and the air-flues b as regulated by the dampers allows of the admission of air into the baking-chamber to a more or less extent, and so the temperature of the baking-chamber C may be regulated at
100 will.

Fourth. By reason of the direct communication between the baking-chamber C and the chimney a³ and the interposed damper c³ and

by opening the outside damper b^6 the heated air in the baking-chamber may be rapidly or slowly drawn off and cold air substituted to cool the chamber as desired.

5 Having described my invention, what I claim is—

1. The combination of the baking-chamber C, fire-room A^2 , and series of air-flues b with one or more flues b^4 for conducting air from
10 the exterior of the oven into said flues b , said air-flues b being interposed between the baking-chamber C and fire-room A^2 , substantially as and for the purposes described.

2. The combination of the fire-room A^2 , baking-chamber C, and air-flues b , interposed between said fire-room A^2 and baking-chamber

C, with air-flues b^4 and flues $c c$ leading from said air-flues b into the baking-chamber C, substantially as described.

3. The combination of the fire-room A^2 , baking-chamber C, and air-flues b , interposed between said fire-room A^2 and baking-chamber C, with air-flues b^4 and flues $c c$, leading from said air-flues b into the baking-chamber C, and with outside dampers b^6 , flue c^2 , damper
25 c^3 , and chimney a^3 , said flue c^2 leading from said baking-chamber C direct to said chimney a^3 , substantially as described.

WILLIAM LENDEROTH.

Witnesses:

HARRY M. TURK,
L. M. WACHSCHLAGER.