

(No Model.)

2 Sheets—Sheet 1.

J. WAGNER.
BAKER'S OVEN.

No. 455,551.

Patented July 7, 1891.

Fig. 1.

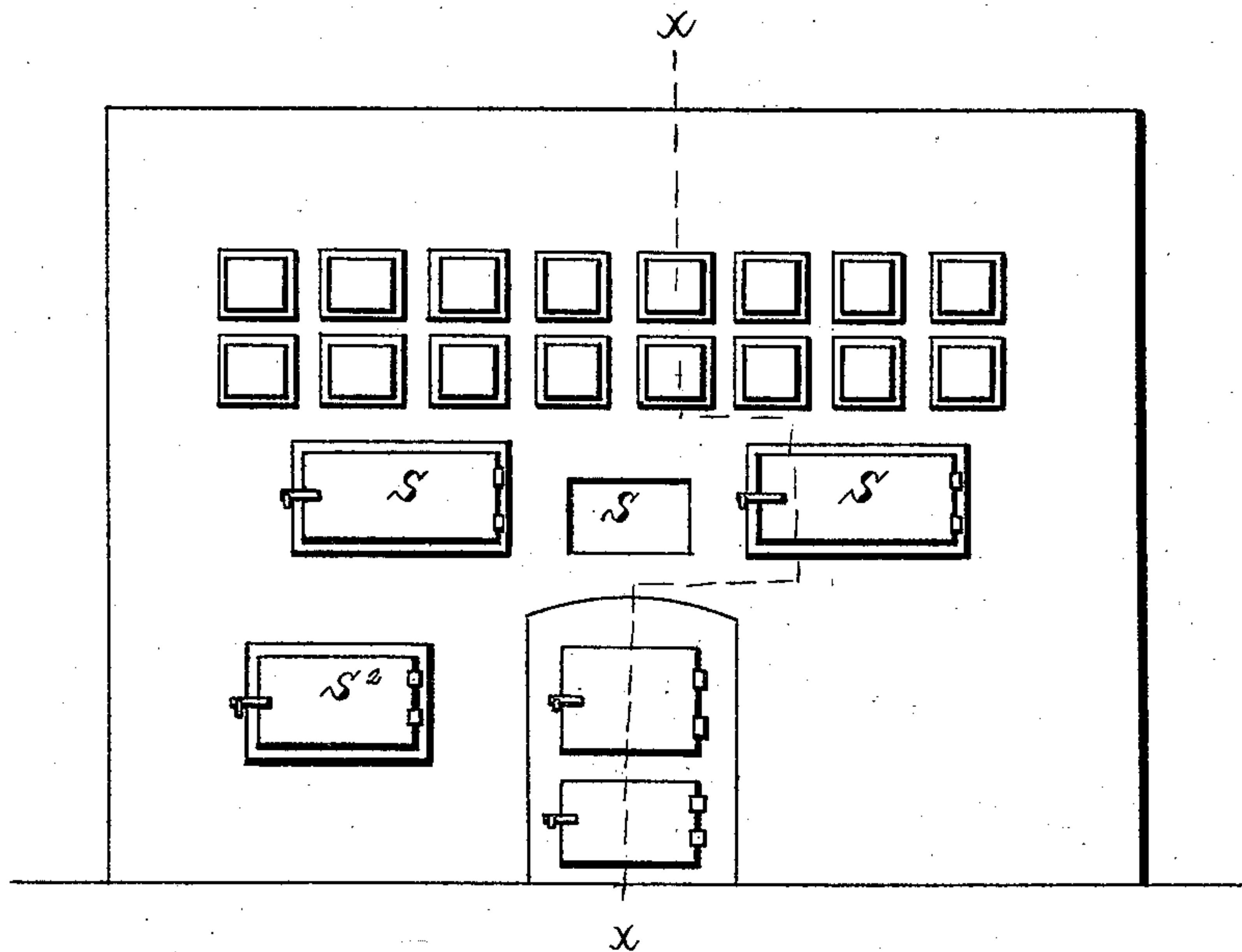
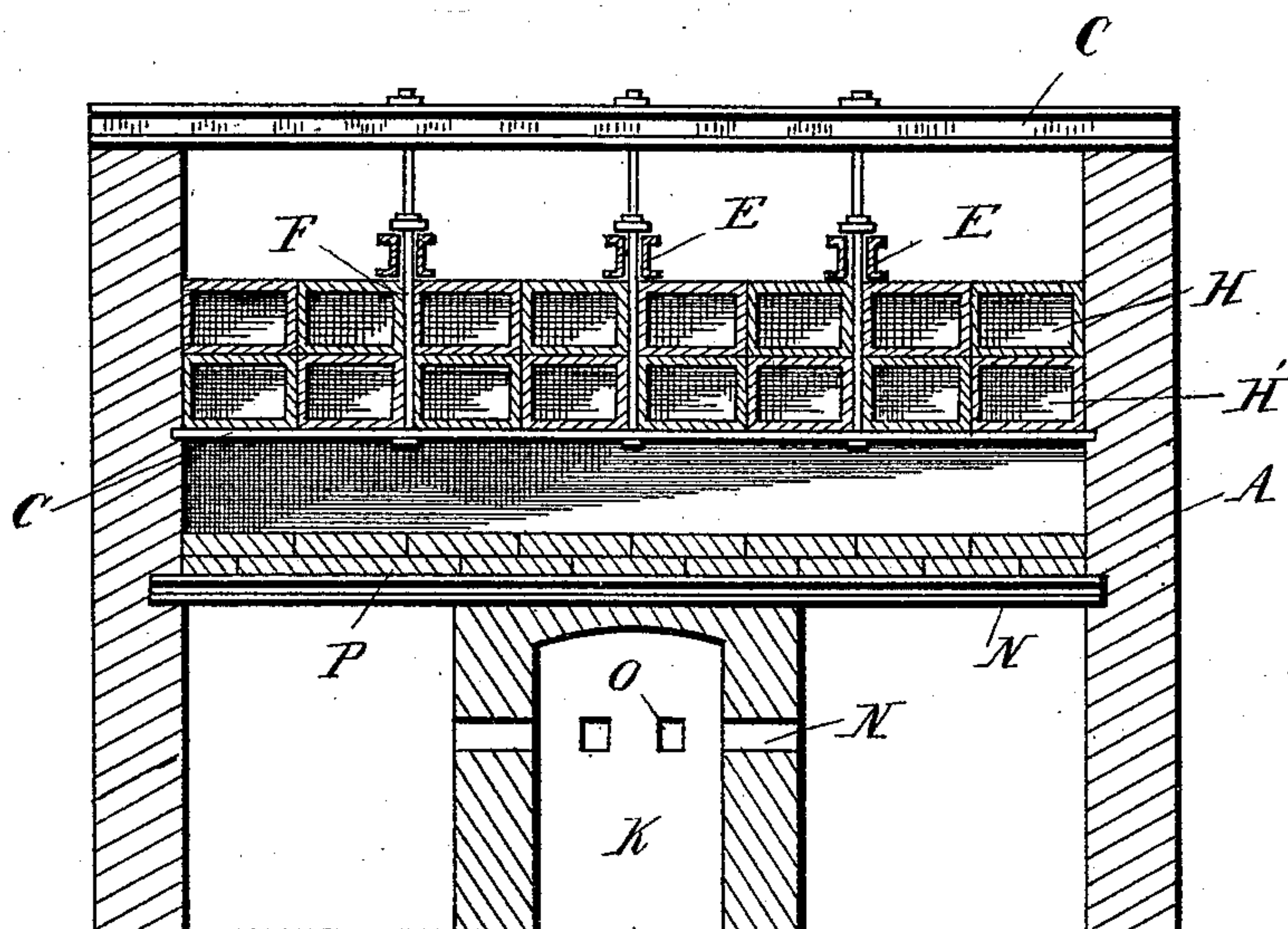


Fig. 3.



Inventor

John Wagner

By Thos Sprague Son
Atty.

Witnesses
a. L. Kobbie
M. B. Bogherly.

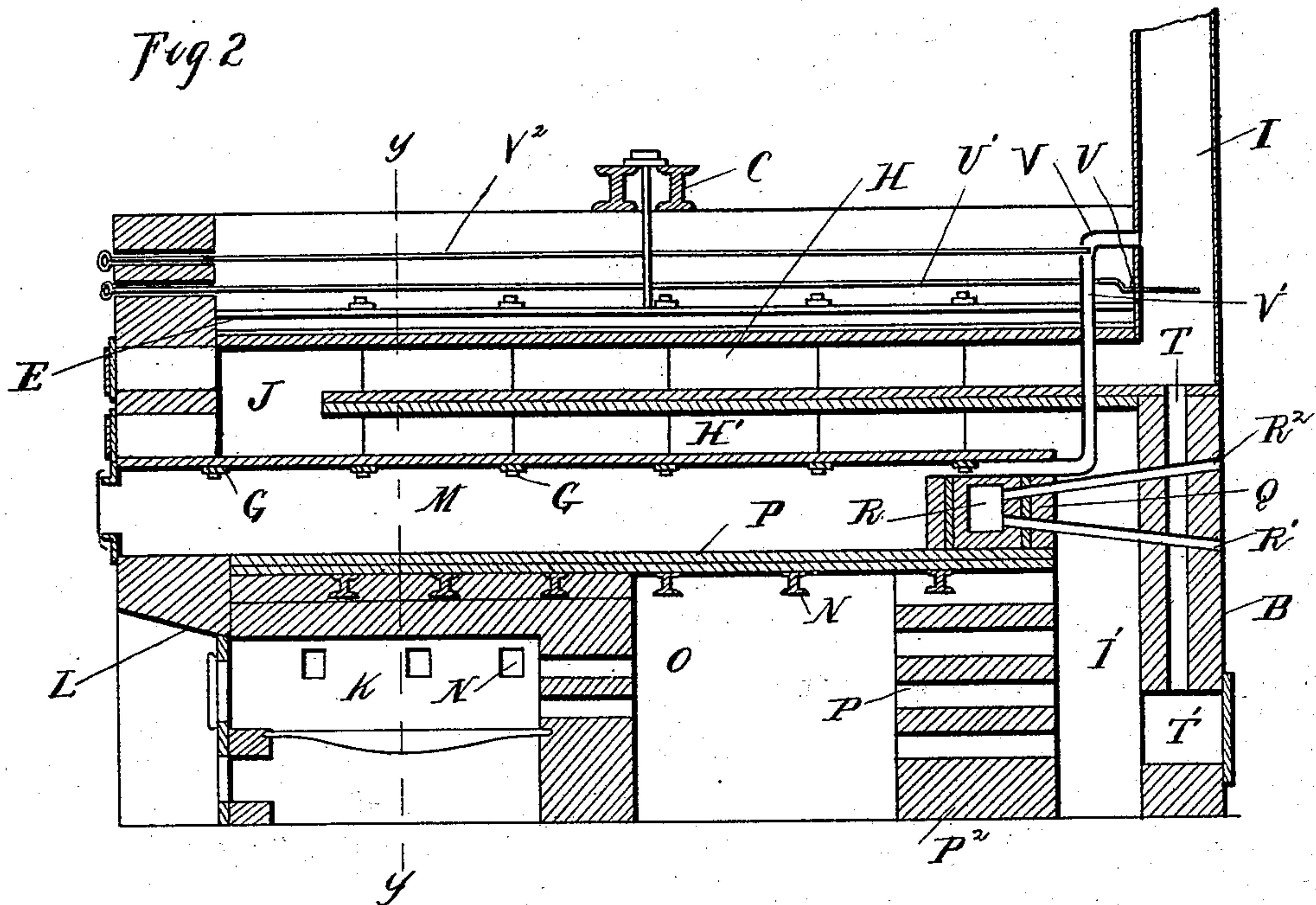
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Inventor:

John Wagner

By Ross Sprague & Son

Atty.

Witnesses
R. L. Kobbie
McDonogherty

UNITED STATES PATENT OFFICE.

JOHN WAGNER, OF DETROIT, MICHIGAN.

BAKER'S OVEN.

SPECIFICATION forming part of Letters Patent No. 455,551, dated July 7, 1891.

Application filed January 28, 1891. Serial No. 379,455. (No model.)

To all whom it may concern:

Be it known that I, JOHN WAGNER, a citizen of the United States, residing at Detroit, in the county of Wayne and State of Michigan, have invented certain new and useful improvements in Bakers' Ovens, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to new and useful improvements in bakers' ovens; and the invention consists in the peculiar construction of the flues in combination with a furnace designed to heat the oven by indirect radiation; and, further, in the peculiar construction of the oven, whereby the oven-heat is maintained at all parts; and, further, in the peculiar construction, arrangement, and combination of the various parts, all as more fully hereinafter described.

In the drawings, Figure 1 is a front elevation of my improved oven. Fig. 2 is a vertical section on line $x x$ in Fig. 1. Fig. 3 is a cross-section on line $y y$ in Fig. 2.

It happens in many cases that ovens are desired to be placed in comparatively low rooms, and in order to so place them an oven of comparatively small area is built on account of the arch required at the top of the oven to support the flues. In case the flues are self-supporting, they are necessarily built of such height and strength as to sustain themselves and the superimposed material.

My construction is designed to give full room to the oven by providing a horizontal support for the flues and top of the oven.

A are the side walls of my oven. B is the back wall thereof. Centrally of these walls I support two transverse beams C, preferably of iron, and of I-shape in cross-section, as plainly shown in Fig. 2. Suspended from these beams by means of bolts or rods are a series of longitudinal beams or I-beams E, secured together, as plainly shown in Fig. 3, in such a manner as to allow of fastening thereto the depending bolts F, which at their lower ends carry transverse beams G. Upon these transverse beams are secured two series of flues H H', preferably formed of square tiling of suitable length, their ends abutting and secured together by cement, or in any other

suitable manner. This tiling extends from side to side the entire space between the side walls. The upper row of flues H connect at their rear ends with a chimney I, while the lower tier of flues connect at their rear ends with a vertical flue I'. At the front end these flues connect together at J by cutting away the upper and lower walls, respectively, of the tiling at that point.

K is the furnace arranged at any suitable point between the walls, and having a wall L between it and the oven M, which is located beneath the lower tier of flues extending the entire width between the walls, being supported by transverse girders N, extending into the walls A. The furnace is provided with lateral exits N' and longitudinal exits O, so that the heat is evenly distributed beneath the oven upon the under side of the hearth P. At the rear of the furnace the products of combustion pass through suitable apertures P' in the wall P², entering the flues I' at the rear of the oven.

Q is an insulating-wall arranged at the rear of the oven to prevent too great heat at that point. This wall I preferably provide with an air-chamber R, connected with the outside of the furnace by means of an ingoing flue R' and an outgoing flue R², so arranged that a continual circulation of air will take place from the outside through the air-chamber R.

S are the oven-doors.

S' is a sight-hole.

S² is a suitable man-hole to allow of entering the heating-chamber beneath the oven.

In the rear of the return-flue H, I form a suitable soot-passage T, which connects at the lower end with a chamber T', having a suitable door, by means of which the passage may be cleaned.

U is a damper controlled by a suitable rod U', extending to the front of the oven.

V is a suitable damper controlling an air-escape V', which extends from the oven to the chimney. This damper is controlled by a suitable rod V², extending to the front of the oven.

It will be seen by this construction the flues may be made of very thin material, as they

are entirely suspended from above and bear no weight, except that the lower flue sustains the weight of the upper ones, the whole being suspended from the transverse girders C. I also provide effectually against the burning of the material in the end of the oven where the heat is upon three sides thereof, and also prevent damage to the contents of the oven by the direct heat of the furnace impinging upon it at any point.

I obtain great simplicity in construction, together with cheapness, and the best possible results in baking with an oven of this construction.

15 What I claim as my invention is—

1. In a baking-oven, the combination, with the furnace and the side walls, of transverse beams supported thereon, rods supported by the beams, and the heating-flues suspended by the rods, substantially as described.

2. In a baking-oven, the combination, with the furnace, of the side walls, transverse beams supported thereon, depending rods on the beams, heating-flues suspended by the rods forming exit and return flues, and the oven below said flues, substantially as described.

3. In a baking-oven, the combination, with the furnace and side walls, of transverse beams supported thereon, bolts D, longitudinal

beams E, rods F, transverse beams G, and the flues H H', substantially as described.

4. In a baking-oven, the combination, with the furnace and side walls, of transverse beams supported thereon, supporting-beams suspended from said transverse beams, and heating-flues supported by the supporting-beams, substantially as described.

5. The combination of the walls A, girders C, bolts D, longitudinal beams E, bolts F, beams G, flues H H', the beams G being arranged at the point of intersection of the tiles, substantially as described.

6. In a baking-oven, the combination, with the furnace, the oven, and the flues, of the wall Q, the air-space therein, and the connecting-flues R' R², substantially as described.

7. In a baking-oven of the kind described, the combination of the wall Q, having an air-space formed therein, and inlet and outlet flues connecting therewith extending to the outside, substantially as described.

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

JOHN WAGNER.

Witnesses:

M. B. O'DOHERTY,
P. M. HULBURT.