

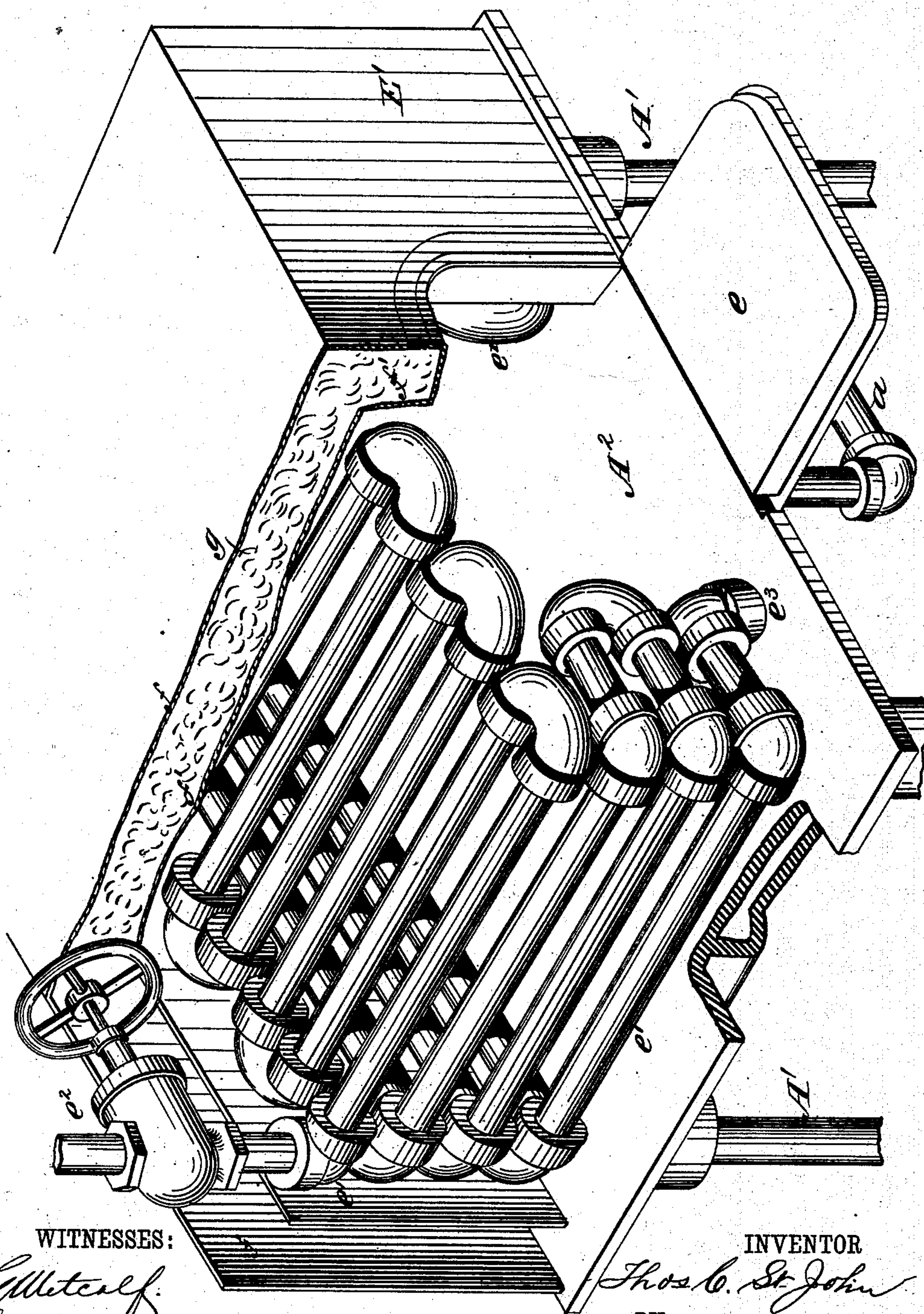
(No Model.)

T. C. ST. JOHN.

STEAM OVEN.

No. 326,170.

Patented Sept. 15, 1885.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

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## STEAM-OVEN.

SPECIFICATION forming part of Letters Patent No. 326,170, dated September 15, 1885.

Application filed September 27, 1884. (No model.)

*To all whom it may concern:*

Be it known that I, THOMAS C. ST. JOHN, a citizen of the United States, residing at Willoughby, in the county of Lake and State of Ohio, have invented a new and useful Steam-Oven, of which the following is a specification.

My invention is of that class of apparatus in which articles are cooked by dry heat; and it consists of the combination of a chambered steam-table, steam-pipes, and an inclosing jacket of non-conducting material, all of which are hereinafter fully described.

In the accompanying drawing, which forms part of this specification, similar letters of reference indicate corresponding parts.

The drawing is an isometric perspective view of my steam-oven, portions of the jacket being represented as broken away for the purpose of exposing to view the steam-pipes.

The upper and lower plates of the chambered steam-table  $A^2$  are held together with stays and ribs, or are connected in any customary manner, so as to fully resist the pressure of the contained steam. The table is supported by the legs  $A'$ , formed, preferably, of pipe. The steam-pipe  $e'$  forms a continuous coil or series of pipes connected together, and is connected with the table  $A^2$  at  $e^3$ .

Steam is admitted by the valve  $e^2$ , and traverses the continuous pipe  $e'$ , passing first through those sections which compose the top, and then through the sections which compose the sides of the oven. It then passes into the interior of the table  $A^2$  at the opening  $e^3$ , and thence, with the water of condensation, through the escape-pipe  $a$ .

The jacket  $E'$  is composed of an outer case,  $f$ , and of an inner case,  $f'$ , which are made of thin sheets of metal, and of a filling between the cases  $f$  and  $f'$  of "mineral wool" or other suitable non-conducting material. The jacket is secured to the outer edges or flange of the table  $A^2$ , and fully incloses and surrounds the pipes  $e'$ , together with the spaces around the pipes, and the space inclosed by

the pipes and the table, which latter is the interior of the oven.

The door  $e$  closes the opening through the jacket  $E'$ , by which access is had to the interior of the oven. It is composed of sheets of metal, which inclose a filling of mineral wool or other suitable non-conducting material, and is hung or attached to the table  $A^2$  in such manner that, when open, it will lie in a horizontal position on a plane continuous with the bottom of the oven, and will afford a support to articles when they are being placed in or removed from the oven.

Steam-cooking apparatus of various kinds has heretofore been made with a cylindrical or rectangular cooking-vessel within an outer shell of similar shape, steam being admitted between the two to form a steam-jacket. Pipes have also been carried through and around the chambers of the heating apparatus of various kinds. My invention is distinctive, from the fact that I construct the oven with a flat bottom heated by steam, as in an ordinary steam-table, and inclose a space in the upper part of the oven with steam-pipes arranged in coils, one above the other, as described, with an inlet for the steam at the top and an outlet for the water of condensation at the bottom, so that all air contained in the pipes is immediately driven out by the current circulating in one direction, and the full quantity of heat can be applied promptly and maintained continuously.

The operation is obviously as follows: Steam is admitted to the pipes  $e'$  and to the table  $A^2$ . The articles to be baked are then placed within the oven in suitable vessels, and the door is closed.

When the articles are sufficiently cooked by the heat imparted from the steam, the door is opened and the articles are removed.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

In the construction of ovens, a flat steam-

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jacketed bottom, A<sup>2</sup>, and a series of horizontal coils arranged to inclose the top and sides, with the steam introduced through the valve e<sup>2</sup> at the highest point in the coils, and  
5 the water of condensation carried with the steam throughout the length of the coils to the steam-jacketed bottom, and thence to the waste-pipe, in combination with an inclos-

ing-jacket, E', packed with non-conducting material g, substantially as and for the purposes described.

THOMAS C. ST. JOHN.

Witnesses:

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