

No. 664,489.

Patented Dec. 25, 1900.

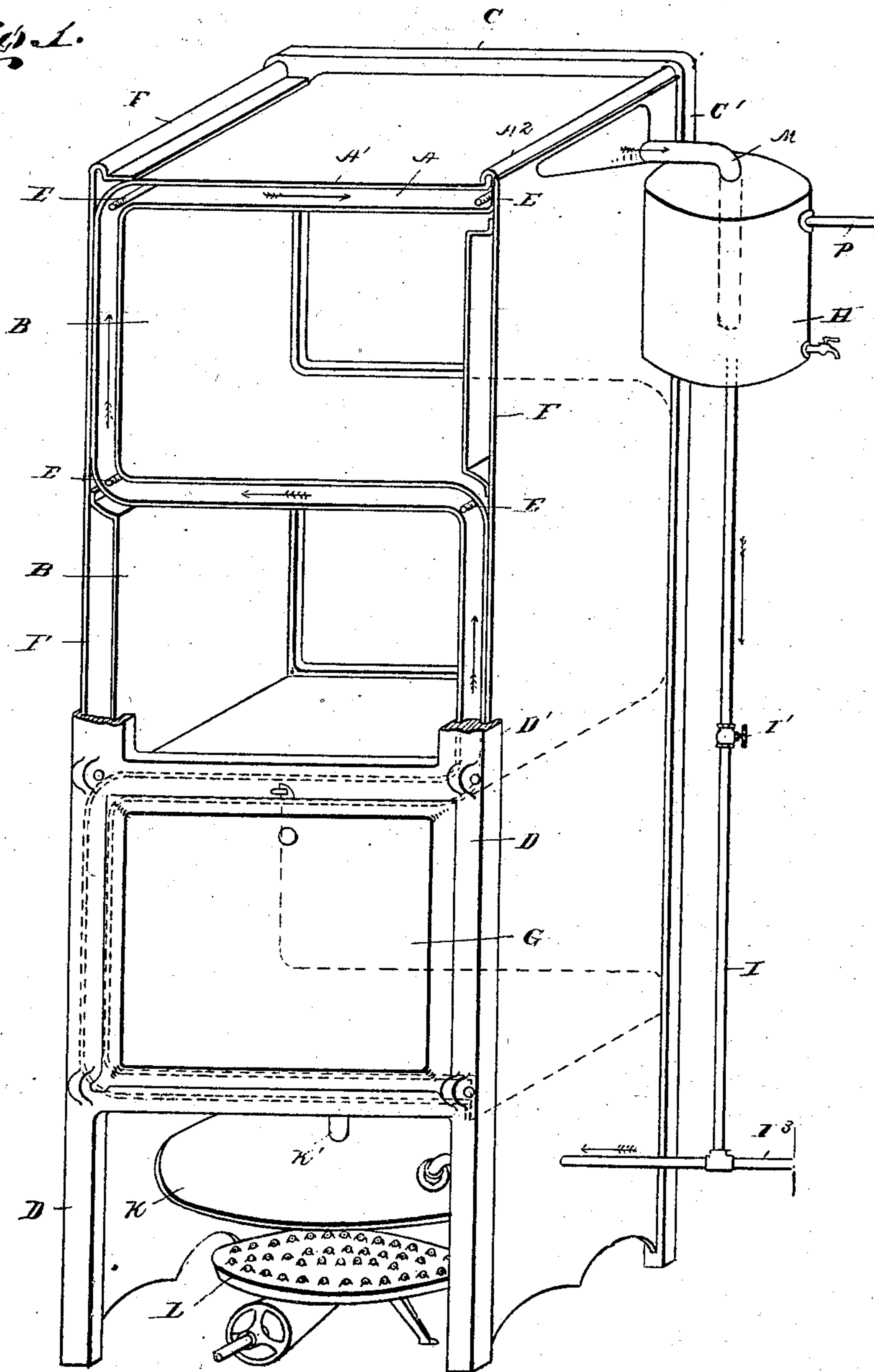
J. McCARTNEY.
COOKING STOVE.

(Application filed Jan. 25, 1900.)

(No Model.)

2 Sheets—Sheet 1.

Fig. 1.



WITNESSES:

G. W. Marsh.
H. A. Goodall.

INVENTOR.

James M. McCartney
BY *E. M. Muddock & Co.*
ATTORNEYS.

No. 664,489.

Patented Dec. 25, 1900.

J. McCARTNEY.
COOKING STOVE.

(Application filed Jan. 25, 1900.)

(No Model.)

2 Sheets—Sheet 2.

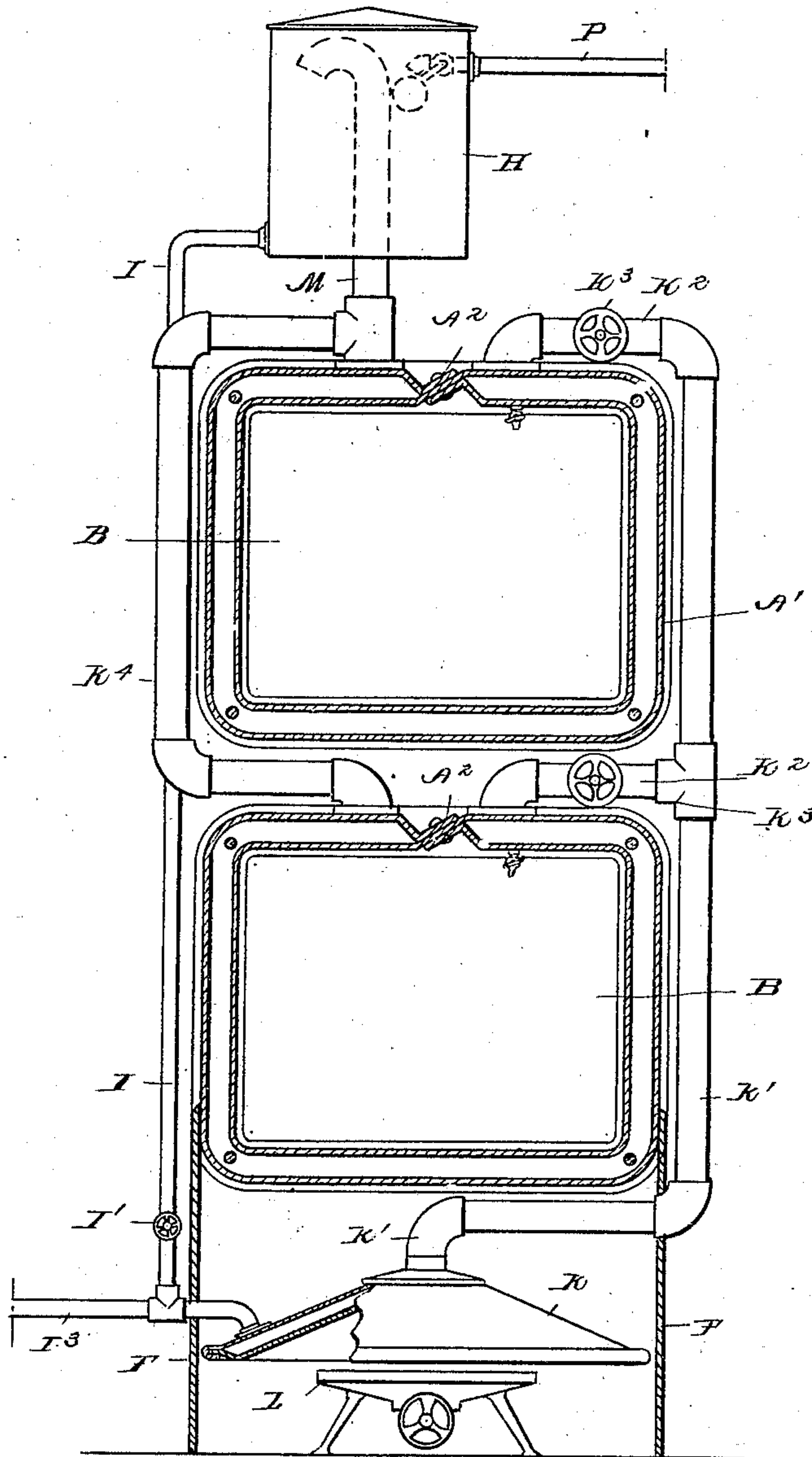


Fig. 2.

WITNESSES:

G. H. Marsh
H. A. Goodall

INVENTOR.

James M. McCartney
BY *C. A. Muecke & Co.*
ATTORNEYS.

UNITED STATES PATENT OFFICE.

JAMES MCCARTNEY, OF SAN FRANCISCO, CALIFORNIA.

COOKING-STOVE.

SPECIFICATION forming part of Letters Patent No. 664,489, dated December 25, 1900.

Application filed January 25, 1900. Serial No. 2,792. (No model.)

To all whom it may concern:

Be it known that I, JAMES MCCARTNEY, a citizen of the United States, residing at 4030 Seventeenth street, in the city and county of San Francisco, in the State of California, have invented certain new and useful Improvements in Cooking-Stoves; and I do hereby declare the following to be a full, clear, and exact description of said invention, such as will enable others skilled in the art to which it most nearly appertains to make, use, and practice the same.

This invention relates to improvements in cooking-stoves.

In the drawings, Figure 1 is a perspective view of a stove constructed in accordance with this invention. Fig. 2 is an elevation, partly in section, of a modified form of the invention, the front being removed to show the construction of the heating-walls.

The objects which the invention has in view are to produce a simple construction in which heated steam may be employed in the cooking in lieu of heated air; further, to minimize the necessary quantity of water required from which to generate steam, and, further, to conserve the heat in the water and steam employed.

With these objects in view the invention consists in constructing the walls of the ovens of double walls to form a space for the circulation of the steam and in connecting these spaces with a steam-generator. The steam-circulation space A is formed by bending thin sheet metal on itself to leave a space, between which extends about at least three sides of the oven. In order to simplify the construction and avoid joints of the metal on itself, these spaces are preferably constructed as shown in Fig. 1 of the drawings, in which the metal A' is bent on itself back and forth to form the three of the adjoining ovens B B and is joined at A² at the top of the structure. The sheet A' is joined between metal plates C and D, which constitute the back and front of the stove. These plates are connected by bolts or tie-rods E, which may be drawn taut by suitable nuts, as in similar constructions. These plates are provided with channels formed by the flanges C' and D' to hold the edges of the sheet metal in position and serve to support the weight

placed on the bottom of the ovens. The side plates F F are also of plate metal and are held in like manner by the front and back plates C and D. The front plate D forms openings which are closed by the doors G, which are hinged at the bottom to swing down out of the way or to serve as shelves on which to rest the utensil containing the article being or to be cooked.

The heating medium, as stated, is steam. This is produced from water contained in the tank H, from which the water is led by the pipe I to a disk K, which is suspended over a heater L. The disk K is constructed of sheet-metal sides which are cone-shaped and separated to form a wide-spread shallow chamber in which the water is distributed in an attenuated sheet directly exposed to the heat-rays from the heater L. In this condition the water is rapidly heated. By regulating the supply of water by the valve I' it may be converted into steam while passing through the disk. From the top of the highest point on the disk is carried the outlet-pipe K', which opens into the lowermost steam-space or hollow walls of the ovens. From this point the steam rises, as indicated by the arrows in the drawings, through the steam-space to the top, where it escapes through the condenser-pipe M into the tank H, which is partly filled with water. The steam which is admitted in the tank H gradually heats the water contained therein, rendering it more easily converted to steam when it reaches the disk K.

The heater L is of any suitable construction. That shown in the drawings is a perforated wide-spread chamber for mixing atmospheric air and gas and burning the mixture at the apertures.

In the form of the invention shown at Fig. 2 the ovens B are separated, and the four walls are formed from the single sheet of metal A' by being bent and crossed on itself and the ends joined to the crossing section, as shown at A². This construction produces a hollow wall extending all about the four sides of the oven except at the point of junction. This forms a passage leading around the oven from one side of the junction A² to the opposite side of the same.

In the modified construction the steam is

conveyed in pipes and so arranged as to be cut out from one or more ovens and turned on about any designated oven at will. From the disk K the steam is conveyed by the main outlet-pipe K' up beside the ovens. Side extensions K² lead from this pipe and into the steam-space of the oven at one side of the junction A². These extensions are provided with cut-off valves K³ K³, by which the steam may be admitted to the steam-space of each oven. Upon the opposite side of the ovens is mounted a pipe K⁴, which serves as the outlet-pipe for the steam after it has passed around the ovens. This pipe leads up to the condenser-tank H, where the steam is condensed and returned by the down-pipe I to the heating-disk K, as in the construction shown in Fig. 1.

The front and back of the ovens B shown in Fig. 2 are constructed substantially as described as to that shown in Fig. 1. In Fig. 2 is also shown a small stop-cock which when opened will admit steam directly into the body of the oven. This in many instances is very beneficial, particularly in the baking of what is termed "steam-bread."

While I have herein shown and described the use of an independent steam-generator and a water-supply system connected therewith, it is, however, not essential, as the pipe I³ may be connected with an independent steam-generator and the pipe M be arranged to lead into the same.

The pipe P may be used to connect the tank H to a water-supply.

While the invention has been shown and described as a stove for cooking purposes, it may be used with great advantage as a plate-warmer.

Having thus described the invention, what is claimed is—

1. In a stove or the like, a single sheet of material bent upon itself to leave a space between the contiguous sheet-faces, said sheet forming a double wall of an oven; substantially as described.

2. In a stove or the like, a back plate having sets of vertical flanges at its sides and sets of horizontal flanges extending between said vertical flanges, a front plate having flanges

corresponding to those upon the said back plate, a double wall extending between the front and back plates and alternately extending across between the sides thereof and upwardly, said double wall fitting between the said sets of flanges, whereby a plurality of ovens are produced, and means for closing the sides of the said ovens not closed by the said double walls, there being provided means for obtaining access to the interior of the ovens; substantially as described.

3. In a stove or the like, a back plate having sets of vertical flanges at its sides and sets of horizontal flanges extending between said vertical flanges, a front plate having flanges corresponding to those upon the said back plate, side plates fitting against the outer side flanges of the said front and back plates and between the flanges of a given vertical set, a double wall extending between the front and back plates and alternately extending across between the side plates and upwardly, said double wall fitting between the said sets of flanges, whereby a plurality of ovens are produced, there being provided means for obtaining access to the interior of said ovens; substantially as described.

4. In a stove or the like, a back plate having sets of vertical flanges at its sides and sets of horizontal flanges extending between said vertical flanges, a front plate having flanges corresponding to those upon the said back plate, said front plate being cut away in the spaces bounded by said sets of flanges, side plates fitting against the outer side flanges of the said front and back plates and between the flanges of a given vertical set, and a double wall extending between the front and back plates and alternately extending across between the side plates and upwardly, said double wall fitting between the said sets of flanges, whereby a plurality of ovens are produced; substantially as described.

In testimony whereof I have hereunto set my hand this 22d day of November, 1899.

JAMES MCCARTNEY.

Witnesses:

E. F. MURDOCK,

G. W. MARSH.