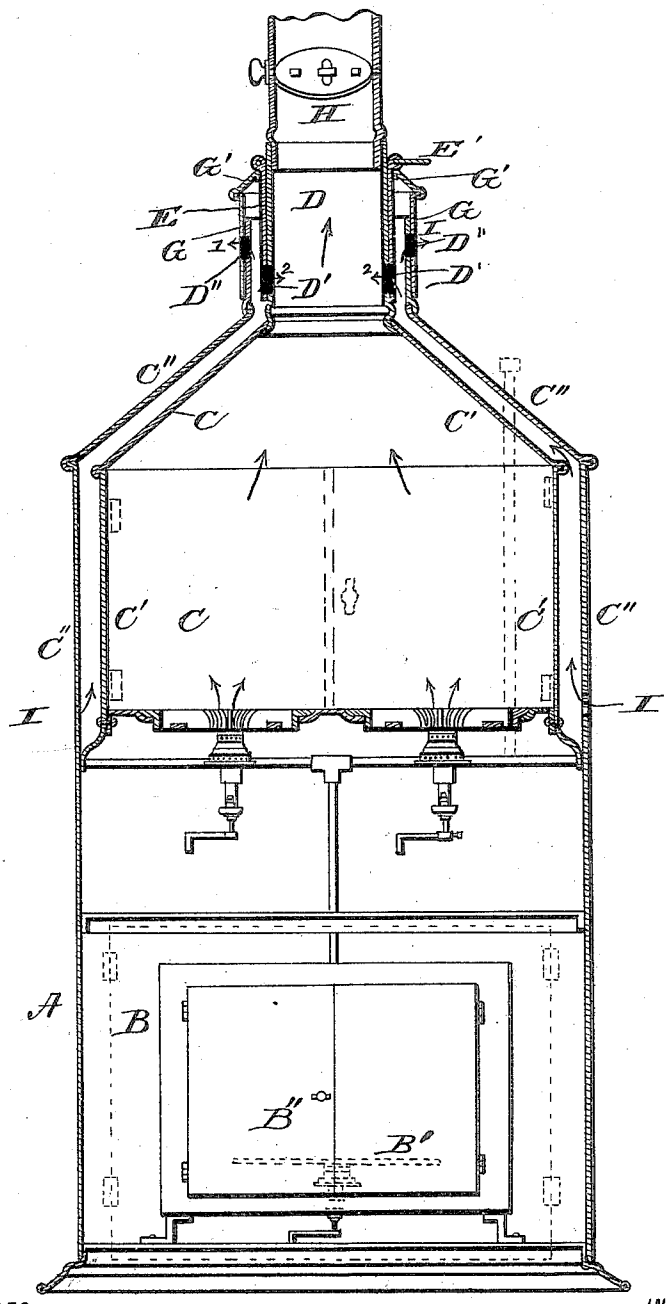
(No Model.)

# J. BAKER.

## COOKING AND HEATING STOVE.

No. 446,413. Patented Feb. 17, 1891.




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# UNITED STATES PATENT OFFICE.

JAMES BAKER, OF ST. LOUIS, MISSOURI.

## COOKING AND HEATING STOVE.

SPECIFICATION forming part of Letters Patent No. 446,413, dated February 17, 1891.

Application filed May 27, 1890. Serial No. 353,350. (No model.)

*To all whom it may concern:*

Be it known that I, JAMES BAKER, a citizen of the United States, residing at St. Louis, State of Missouri, have invented new and useful Improvements in Cooking and Heating Stoves; and I do hereby declare the following to be a full, clear, and exact description of said invention, reference being had to the accompanying drawing, and to the letters or figures of reference marked thereon, which form a part of this specification.

My invention relates to that class of stoves for both cooking and heating, and in which a hydrocarbon oil or gas of any kind is employed to generate the heat.

My invention consists in a novel construction of double-walled chamber, in which the articles to be cooked or heated are placed, having a portion of the escape-flue also provided with double walls forming an air-space with openings in each wall of the flue provided with a register, and with openings in the outer wall near the lower end, whereby the deleterious or objectionable fumes may be directed and carried out through the flue, and also the air entering the air-space, or said air heated in the space and directed into the apartment.

My invention further consists in certain novel features in the construction and arrangement of parts, all as hereinafter explained.

In the accompanying drawing the figure represents a front elevation of my improved cooker and heater, with the upper portion or double-walled chamber in section, with an ordinary form of hydrocarbon-burner for generating the heat.

The main body A may be of any desired form, and may consist of a lower compartment B, with a single wall, having a burner B′ located therein and adapted to be closed by doors B″. Arranged above the compartment B is a second compartment C, having double walls C′ C″, with an inclined top also formed with double walls to form an air-space between them. The inner portion of the compartment C communicates with an outlet flue or chimney D, which can be connected with the flue of a house in the usual manner. The outer wall C″ extends up in cylindrical form for a short distance, surrounding the chimney D, forming a continuation of the air-space. The outer wall and flue or chimney are provided with a series of openings D″ D′, respectively, those in the outer wall being located near the top of the cylindrical extension, while those in the flue or chimney are located near the point of junction of the same with the compartment. Surrounding the flue is a cylindrical register-plate E, with its upper edge extending up beyond the top of the wall C″, and having secured thereto a handle E′ for moving the register to open or close the openings D′ in the chimney. A similar register-plate G is arranged around the cylindrical extension, extending up slightly beyond the top thereof, and which is provided with an inwardly-projecting flange G′, with its inner edge to abut against the register-plate E to close the annular opening between the two registers, and by means of which register-plate to open or close the openings D″ in the cylindrical extension of the wall C″. A damper H is arranged in the flue at a suitable point therein, for a purpose hereinafter explained. The outer wall C″, near the lower part of the air-space, is provided with a series of openings I for admitting air to the space.

The burners, as shown in the present instance, are of the approved form for burning hydrocarbon oil, and are located at such point as to bring the flame on a line with the lower edge of the air-space to produce the best results, and the compartment is closed by suitable doors. (Shown by dotted lines.)

The operation of the cooker and heater is as follows: The burner being ignited, if it is desired to both heat and cook, the openings in the chimney communicating with the air-space are closed and those in the cylindrical extension are opened, and as a consequence all the offensive odors will be carried out of the chimney and the air entering the perforations at the lower edge of the compartment will pass up through the air-space and be heated and thence pass into the room, as shown by arrows 1. When, however, it is only desired to cook and to create a strong draft to carry off the offensive odors arising from the articles being cooked, the openings leading from the air-space into the chimney are opened and those leading from the space into the room

closed. Then the air will pass quickly through the air-space and out into the chimney, as shown by arrows 2, tending to keep the outer wall cool and prevent the heating of the apartment. When it is desired to increase the heat of the apartment, or when the burners are used for boiling water, or closed vessels are being used, or where no offensive odors arise, the openings leading from the space into the chimney may be closed and those into the apartment opened and the damper in the flue closed, which will retain the heat in the compartment and cause the inner walls to become very hot and consequently cause the air passing through the space to be heated to high temperature, as will be readily understood.

Having now described my invention, I claim—

1. In a heating and cooking stove, a double-walled chamber in which the articles to be cooked or heated are adapted to be placed to form an air-space between the walls, an escape-flue leading therefrom having an air-space surrounding the same and forming a continuation of the main air-space opening near the bottom of the chamber, and register-openings in the escape-flue and the outer wall surrounding the same, substantially as described, whereby the air from the space may be directed either into the chimney or to the apartment, as set forth.

2. In a heating and cooking stove, a double-walled chamber forming an air-space, a flue leading from the chamber surrounded by an air-space forming a continuation of the air-space surrounding the chamber, register-openings in the flue and in the surrounding wall thereof, a damper located in the flue above the openings, and openings connecting with the air-space surrounding the chamber located near the lower edge thereof, substantially as and for the purpose set forth.

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

JAMES BAKER.

Witnesses:
JOSÉ M. YZNAGA,
ALEX MAHON.