W. KINCAID & W. A. CLARK.

HEATING AND BAKING STOVE.

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1,189,261.

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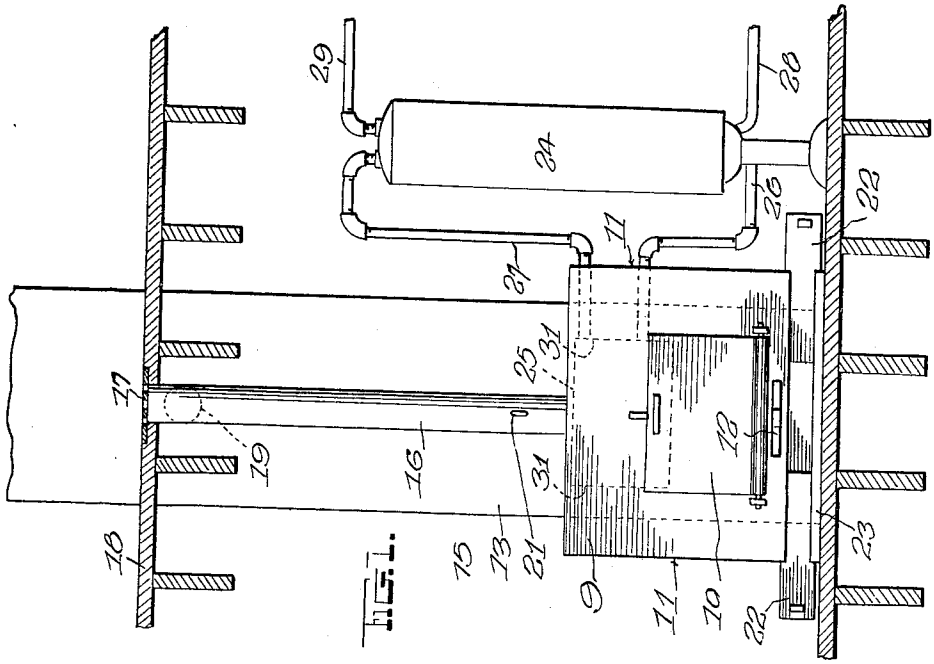


FIG. 1.

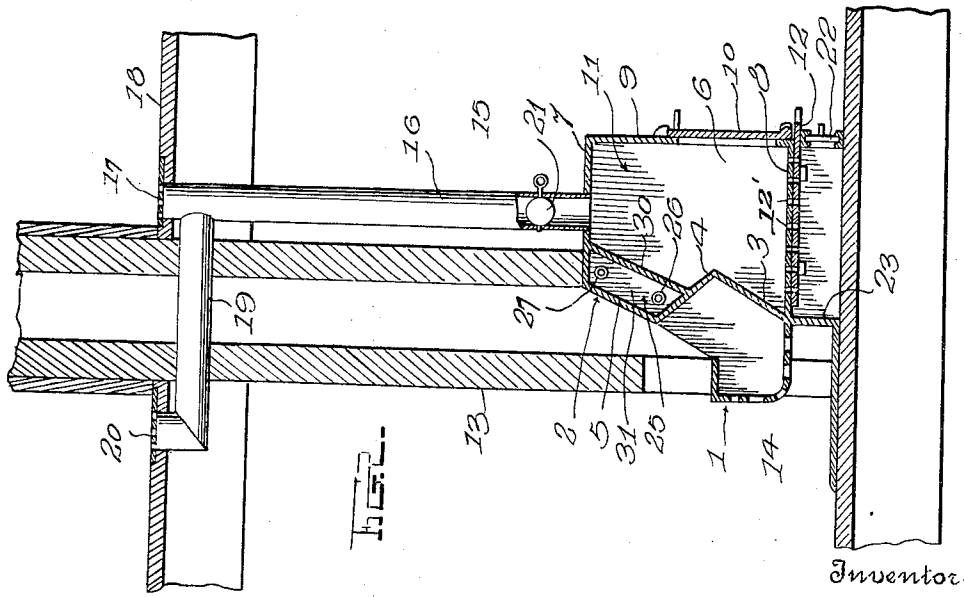


FIG. 2.

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[illegible]

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THE NORRIS-PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

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HEATING AND BAKING STOVE.

1,189,261. Specification of Letters Patent. Patented July 4, 1916.

Application filed August 5, 1915. Serial No. 43,865.

To all whom it may concern:

Be it known that we, WILLIAM KINCAID and WILLIAM A. CLARK, citizens of the United States, residing at Glen Ferris, in the county of Fayette and State of West Virginia, have invented certain new and useful Improvements in Heating and Baking Stoves; and we do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

Our invention relates to specific improvements in combined heating and baking stoves, the object of the invention being to improve upon certain structural features of stoves of this class to the extent hereinafter described and specifically pointed out in the claim.

Figure 1 is a front elevation of a stove constructed in accordance with our invention; Fig. 2 is a vertical section thereof.

In these drawings which constitute a part of the application, and in which like reference characters designate corresponding parts throughout the several views in so far as advisable, Figs. 1 and 2 disclose one type of the invention in which the numeral 1 indicates broadly an open grate whose rear side is formed by the lower portion of a zigzag wall 2 which comprises three obliquely disposed portions. The lower third of the wall inclines upwardly and rearwardly as shown at 3, the central third 4 inclines upwardly and forwardly from the upper edge of the lower third, and the upper third 5 inclines upwardly and rearwardly from the central third 4. The two thirds 3 and 4 constitute a pocket for the reception of burning coals in the open grate 1, whereby such portions of the wall 2 will be intensely heated, this being advantageous for a reason to become obvious as the description proceeds. In rear of the wall 2 and having its front side constituted by said wall, is a heating chamber 6, such chamber including a top plate 7 which extends rearwardly from the upper edge of the wall 2, a bottom plate 8 extending rearwardly from the lower edge of such wall, a rear wall 9 having therein a door 10, and a pair of solid side walls 11. The bottom 8 of the oven 6 is provided therein with a plurality of air inlet openings 12′ which may be closed or opened at will by a perforated damper plate 12 slidably mounted beneath said bottom and operable from a point beneath the door 10. In applying the invention to use, the same is positioned in the lower end of a chimney 13 as shown in Figs. 1 and 2, the open grate 1 being accessible from one room 14 on one side of said chimney while the heating chamber or oven 6 opens into an additional room 15 on the opposite side of such chimney. Thus it will be evident that the two rooms may be effectively heated at the same time, and that baking or other cooking may well be carried on in one room, while the other is used for entertaining.

In order to heat the upstairs rooms, a heat conducting pipe 16 may rise from the heating chamber 6 to an appropriate register 17 in the upper floor 18, such register being adapted to heat one room, while branching from the pipe 16 and leading to a register 20 in another room, is a pipe 19. But one pipe 19 is here shown, but it is obvious that any number may well be provided. Normally, when the upstairs rooms are to be heated, a damper 21 in the pipe 16 will remain open, whereas if the chamber 6 is to be used for baking purposes, such damper may be closed, as is also the damper plate 12, as well as a pair of sliding air controlling plates 22 which are disposed beneath the rear edge of the bottom 8, such bottom being supported above the floor by a depending flange or the like 23. When all of the air inlets and outlets are closed, the chamber 6 is practically air tight and due to the specific formation of the front wall 2, said chamber will be quickly heated and may then be used for baking or for other cooking purposes.

In addition to the parts above described, it is highly desirable to provide means whereby heated water may be supplied to a tank 24 for use at various points in the dwelling, and it is expedient to so locate the means for heating the water as to cause the same to moisten the air in the chamber 6. To this end, a suitably shaped water heating chamber 25 is positioned in the chamber 6, and the front side of said chamber 25 is constituted by the upper third 5 of the wall 2 and a portion of the central third 4 thereof. By disposing the chamber 25 at this precise point, the contents thereof will be more effectively heated than otherwise, and during this heating operation, the rear and end walls of the chamber in question will sweat, thus dampening the air in

the oven 6 to such an extent as to produce the best results therein. Leading to the lower side of the water heating chamber 25, from the lower end of the tank 24, is an inlet pipe 26, while leading from the upper side thereof into the tank 24, is a discharge pipe 27, where a constant circulation of water may be had, thus raising the temperature of the water contained in the tank. Such water is fed to the tank 24 by a supply pipe 28 and may be discharged therefrom by an additional pipe 29.

Preferably the water heating chamber 25 is formed of an inclined rear wall 30 extending from the central third of the wall 2 to the top plate 7, and a pair of end walls 31 which are spaced from the walls 11 and lead from the opposite ends of plate 30 to the front wall 2, (see more particularly the dotted lines in Fig. 1).

From the foregoing description, taken in connection with the accompanying drawings, it will be evident that although very simple construction has been provided for carrying out the object of the invention, the stove will be highly efficient and durable and will possess a number of desirable characteristics.

In the drawings, certain specific details of construction have been shown for accomplishing probably the best results, and in the preceding such details have been described, but obviously we need not be restricted thereto otherwise than to the extent to which the appended claim limits us.

We claim:

In a stove of the kind described, the combination with a fire box and a heating chamber in rear thereof; of a zigzag plate between the two and formed of upper and lower flat sections inclining downwardly and forwardly, and an intermediate flat section inclining downwardly and rearwardly and joined integrally at its edges with the adjacent edges of the other sections, the lower half of the intermediate section and the entire lower section constituting the rear wall of the fire box and being uninsulated to allow the free radiation of heat into the heating chamber, a flat plate disposed parallel to the upper section of the aforesaid zigzag plate and confined in the heating chamber, said plate extending from the vertical center of the intermediate section to the top of said heating chamber to form therewith a water heating reservoir between itself and the upper flat section of the zigzag plate with the upper half of the intermediate section of said plate serving as the bottom of said reservoir, whereby the contents thereof will be subjected to the intense heat within the fire box, means for supplying water to the reservoir, and additional means for withdrawing such water.

In testimony whereof we have hereunto set our hands in presence of two subscribing witnesses.

WILLIAM KINCAID.
WILLIAM AVIS CLARK.

Witnesses:
WM. W. JENNINGS,
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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."