

F. O. GETCHELL.
COOKING AND HEATING APPARATUS.
APPLICATION FILED JUNE 13, 1907.

961,437.

Patented June 14, 1910.

2 SHEETS—SHEET 1.

Fig. 2

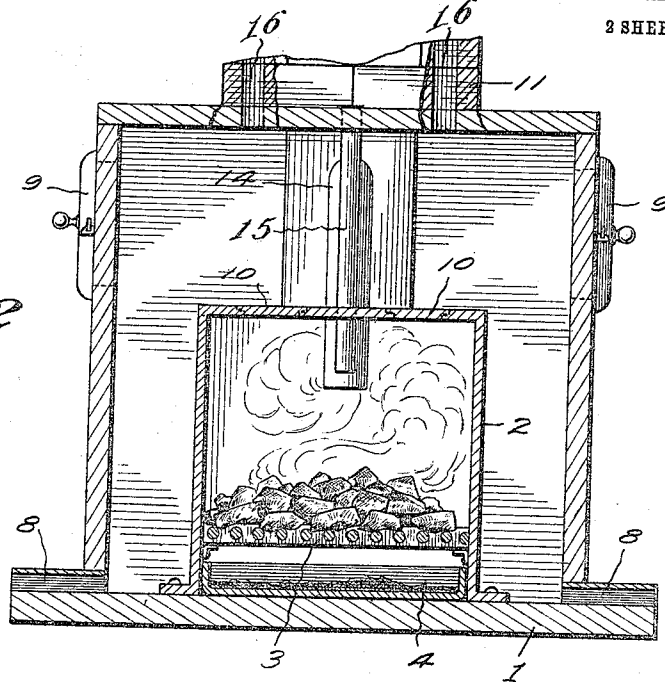
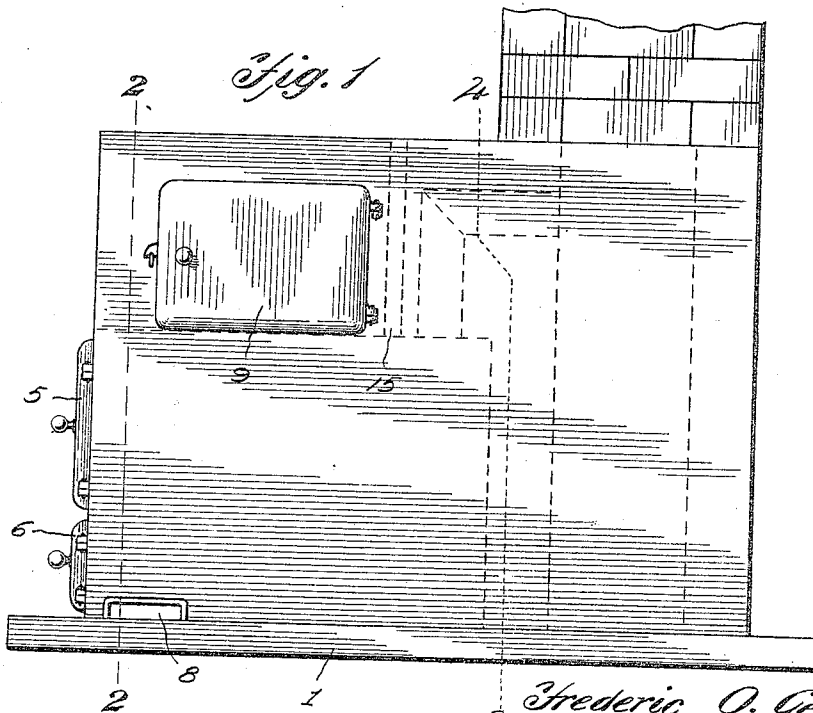


Fig. 1



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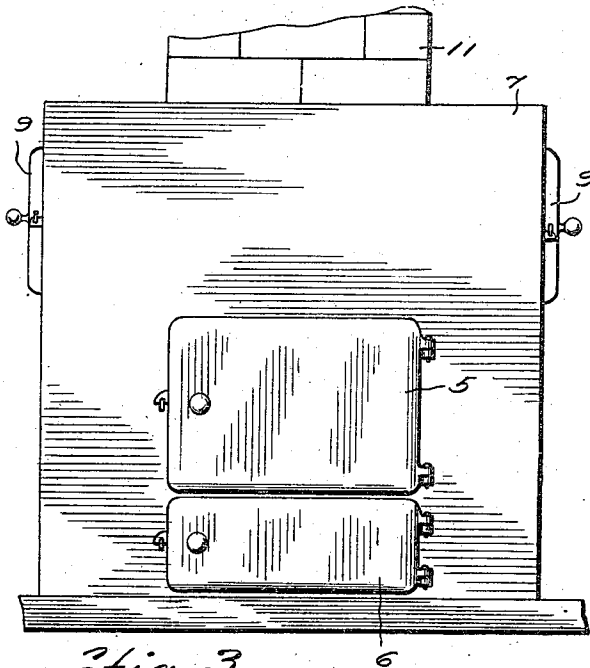


Fig. 3

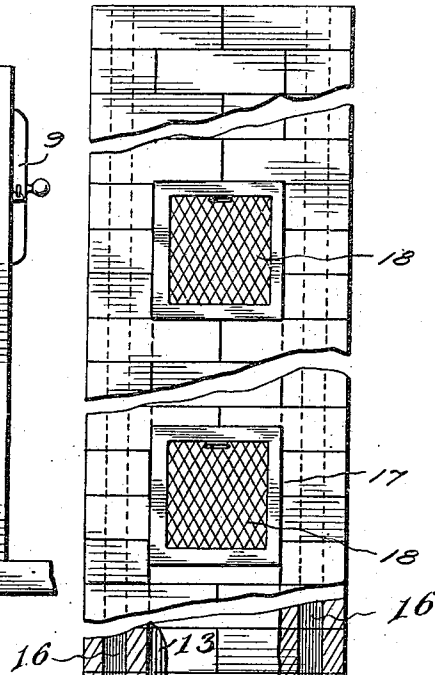


Fig. 4

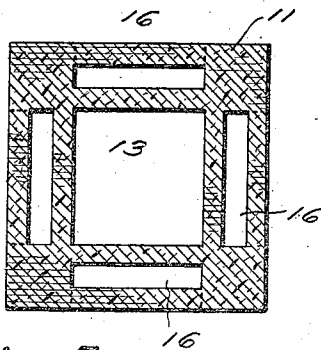
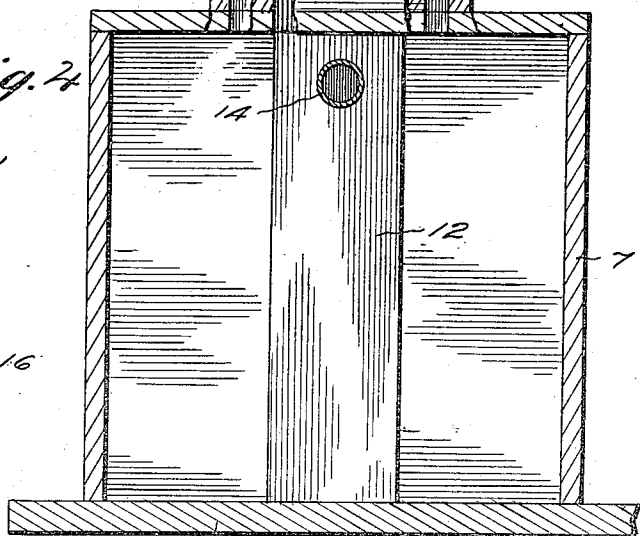


Fig. 5



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UNITED STATES PATENT OFFICE.

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COOKING AND HEATING APPARATUS.

961,437.

Specification of Letters Patent. Patented June 14, 1910.

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To all whom it may concern:

Be it known that I, FREDERIC O. GETCHELL, a citizen of the United States, residing at New Rockford, in the county of Eddy and State of North Dakota, have invented new and useful Improvements in Cooking and Heating Apparatus, of which the following is a specification.

This invention relates to furnaces especially adapted for house heating and, if desired, for cooking purposes.

The invention has for one of its objects to improve and simplify the construction and operation of devices of this character so as to be comparatively easy to manufacture and install, highly efficient in service and convenient to manage.

A further object of the invention is the provision of a fire box having a jacket around the same into which fresh air is admitted so as to be heated and in connection therewith is provided a chimney having air passages independent from the smoke passage for further heating the air and directing it into the rooms of the house or building in which the apparatus is installed.

With these objects in view and others, as will appear as the description proceeds, the invention comprises the various novel features of construction and arrangement of parts, which will be more fully described hereinafter and set forth with particularity in the appended claim.

In the accompanying drawings, which illustrate one of the embodiments of the invention:—Figure 1 is a side elevation of the combined heating and cooking furnace with the upper portion of the chimney broken away. Fig. 2 is a vertical transverse section on the line 2—2 of Fig. 1. Fig. 3 is a front view of the apparatus. Fig. 4 is a section on line 4—4 of Fig. 2, showing the chimney in elevation with intermediate portions broken away. Fig. 5 is a horizontal section of the chimney.

Similar reference numerals are employed to designate similar parts in the several views.

Referring to the drawing, 1 designates a base plate or suitable foundation on which rests a metal box-like fire chamber 2, which, as shown in Fig. 2, is provided with a grate 3, under which is an ash pan 4. The front of the fire box 2 is provided with a main door 5 for permitting access to the fuel compartment and below the door 5 is an ash pit

door 6. Around the fire box is a casing 7, preferably of metal that rests on the foundation 1 and constitutes an air heating chamber, there being air inlet ducts 8 at the sides of the jacket 7 at the lower front corners. The sides of the casing 7 have openings, closed by doors 9, the openings being arranged above the fire box so that the top of the latter can be used for receiving cooking vessels. There may be provided removable plates 10 on the top of the fire box 2, similar to ordinary stove plates. As the casing 7 completely incloses the fire box the cooking vessels will be surrounded by hot air on all sides, thus insuring economical and efficient cooking.

Built on top of the casing 7 is a chimney 11 that is preferably made of concrete or other heat resisting material either in block or molded form. In the casing 7 is a duct 12 communicating with the smoke passage 13 of the chimney and leading from the fire box to the duct 12 is an elbow 14, whereby the smoke and particles of combustion are conducted off from the fire box. Leading into the fire box is a vertical flue 15 extending upwardly through the top of the casing 7, whereby fresh air can be drawn into the fire box for supporting combustion. The walls of the chimney are provided with vertical air passages 16, as shown in Fig. 5 that communicate at their lower ends with the casing 7 so as to receive heated air therefrom. These air passages are provided with openings 17 at various points, in which registers 18 are fitted whereby heated air can be supplied to a number of rooms in the building equipped with the apparatus. The fresh air supply is drawn in through the inlet ducts 8 and circulates around the fire box and then rises through the passages 16 to pass out through the register. The hot gases passing up through the chimney transmit their heat through the walls of the chimney so that the fresh air conducted through the passages 16 may be further heated.

It will thus be seen that an apparatus constructed along the principles set forth is advantageous, since it admits of a simple furnace being used for heating or cooking purposes. Moreover, the apparatus is of simple, durable and comparatively inexpensive construction.

From the foregoing description, taken in connection with the accompanying drawings, the advantages of the construction and

method of operation will be readily understood by those skilled in the art to which the invention appertains and while I have described the principle of operation of the invention together with the device, which I now consider to be the best embodiment thereof, I desire to have it understood that the device shown is merely illustrative and that such changes may be made when desired as are within the scope of the claim.

Having thus described the invention, what is claimed as new, is:—

A furnace for heating and cooking comprising a base plate, a box-like fire chamber mounted upon the base, a casing inclosing the fire chamber and mounted upon the base and forming a space at the top, in the rear and at the sides of the fire chamber and having air inlet ducts at the lower forward corners and door openings in the sides above

the fire chamber, a vertical flue connecting the top of the fire chamber with the top of the casing, a chimney erected upon the rear portion of the casing and having a central smoke passage and air passages in its walls leading into the space inclosed by said casing, and a duct within the rear of the casing extending to the base plate and supporting the chimney and in communication with the smoke passage thereof, a pipe connecting the fire chamber with said duct and registers set into the chimney at intervals in its length and controlling the outflow of hot air therefrom.

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

FREDERIC O. GETCHELL.

Witnesses:

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OLIVE COUCH.