N. PARISH.

Heating Stove.

No. 107,806. Patented Sept. 27, 1870.

FIG. 1

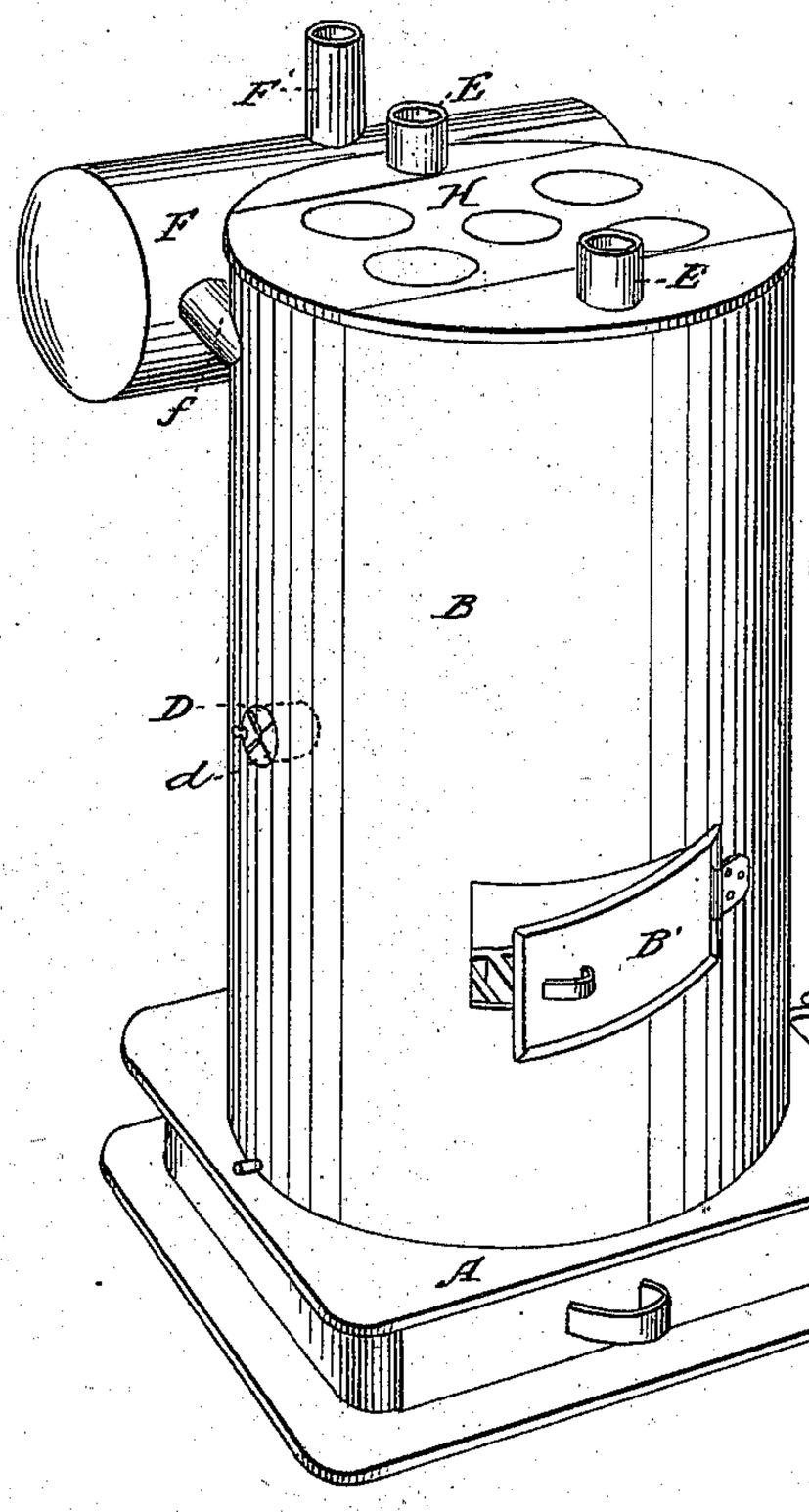
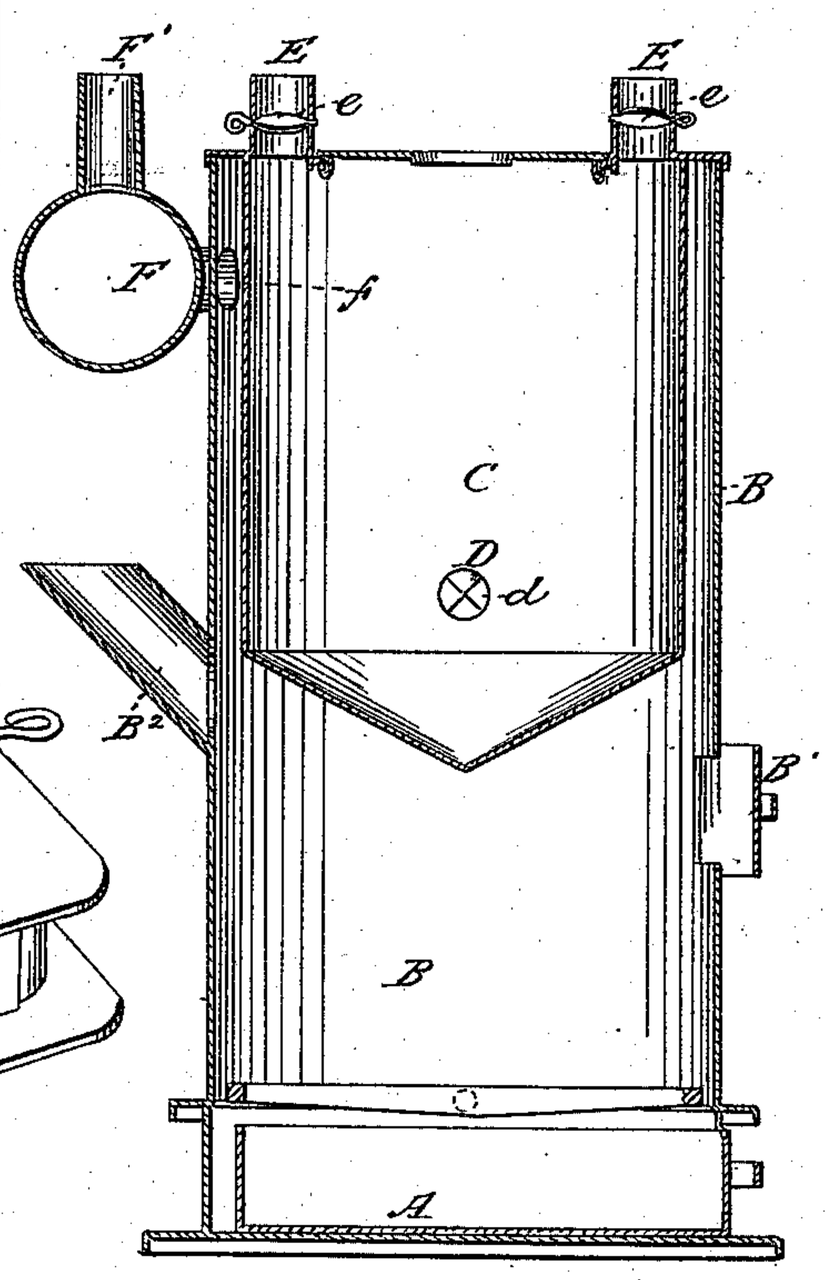


FIG. 2



WITNESSES:

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INVENTOR:

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NATHAN PARRISH, OF KALAMAZOO, MICHIGAN.

Letters Patent No. 107,806, dated September 27, 1870; antedated September 21, 1870.

IMPROVEMENT IN HEATING-STOVES.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, NATHAN PARRISH, of Kalamazoo, county of Kalamazoo and State of Michigan, have invented certain new and useful Improvements in Stoves and Furnaces, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a perspective view of a stove embodying my improvements, and

Figure 2 is a vertical sectional view of the same.

My invention relates to that class of stoves commonly known as cylinder stoves, in which there is generally a fire-box provided at the bottom with a grate, below which is an ash-pit, and having a combustion-chamber above the fire-box. This chamber is usually surrounded with and inclosed by a sheet-iron shell, from which the heat is given off mainly by radiation, but even where there are return-flues which carry the hot air and smoke down around the base of the stove, thereby increasing largely the heating-surface, there occurs a great waste of heat, as a very large proportion of it escapes into the chimney.

With a view to save and utilize this heretofore wasted heat, I have invented the following improvements, which consist in—

First, the combination of an auxiliary heating-cylinder or chamber, with a top or face-plate provided with boiler-holes adapted to be used for cooking-utensils, and a series of hot and cold-air flues, in such manner that the heat may be used for warming the room, or for cooking, or both, at will;

Second, in such an arrangement of smoke-flues and top-plate as will permit the use of the central portion of the stove for cooking purposes; and

Third, in a novel combination of parts, by which certain advantages in controlling the heated currents are obtained, as will be hereinafter explained.

In the drawings—

A represents the base of the stove, which may be made in any well-known or desired form, and should be provided with a damper, for controlling the amount of air to be admitted to the fire.

B is an outer shell or cylinder, made preferably of sheet-iron, as is customary in the ordinary heating-stoves, and provided with a door, B^1.

The fire-box employed in this stove is furnished with a grate and lining, and need not be described in detail.

Fuel may be supplied to the fire-box either through door B^1 or through a chute, or a series of chutes or pockets, B^2, arranged in convenient positions around the outside of shell B, in which latter case pockets B^2, can be made to take the place of the magazines used in many of the better class of stoves.

C is an auxiliary heating-chamber, of less diameter than cylinder B, and placed concentrically within said cylinder.

Chamber C I make preferably of cast-iron, and form it with a flange around its upper or open end, so as to fit closely the upper end of shell B, as do the cast-iron tops in the present construction of stoves. The lower end of this chamber is closed, and made slightly conical in form.

D is a cold-air flue extending through the annular space between the cylinder and chamber, for the purpose of admitting air into chamber C.

d is a damper in flue D. There is one of these flues upon each side of the stove.

E E are hot-air flues, connecting with the interior of chamber C.

e e are dampers in flues E.

F is a drum, into which the smoke and hot air are conducted from the stove, through pipes or flues *f*, one of which is located at each end of this drum.

F′ is a flue leading from drum F to the chimney.

H is a plate provided with boiler or griddle-holes, and is made preferably separate from the flange cast or formed upon chamber C. When made in two pieces, the parts should fit quite accurately, in order that the air may be confined until a sufficient degree of heat shall be obtained.

In using my improved stove for heating purposes only, the upper part of the chamber may be left entirely open, by the removal of plate H, except in case it is desired to heat an upper room or rooms, by conveying the heat thence, by means of pipes connecting with flues E E, in which case the plate should be kept on, and the flow of heat regulated by means of damper *e e*, and the griddles used for covering the boiler-holes.

Under ordinary circumstances it will be found advisable to keep dampers *d* wide open, as they will admit a current of cold air into the interior of chamber C, where it will become heated and escape from the top of the chamber, thus keeping up a free circulation of air in the room, and preserving it much purer.

When using the stove for cooking purposes, it will sometimes be found necessary to close dampers *e e* entirely, in order to bring the temperature within chamber C up to the required point, and it may be advisable to close dampers *d* for the same reason.

For baking, I remove plate H and set an oven in its place. This oven may project down into the chamber if thought best.

The same principles may be introduced into any other form of stove, such as box-stoves, with merely such modifications in details as shall be required. They can also be applied to many kinds of furnaces,

by which modifications a portion of the heat may be diverted for cooking, and the trouble of an extra fire avoided.

What I claim as new, and desire to secure by Letters Patent, is—

1. The combination of the outer shell or casing B, the inner chamber or cylinder C, top-plate H, provided with boiler-holes, flues E E, and flues D, substantially as and for the purpose set forth.

2. The removable plate H, provided with boiler-holes, in combination with chamber C and shell or casing B, substantially as set forth.

NATHAN PARRISH.

Witnesses:
EDM. F. BROWN,
H. H. DOUBLEDAY.