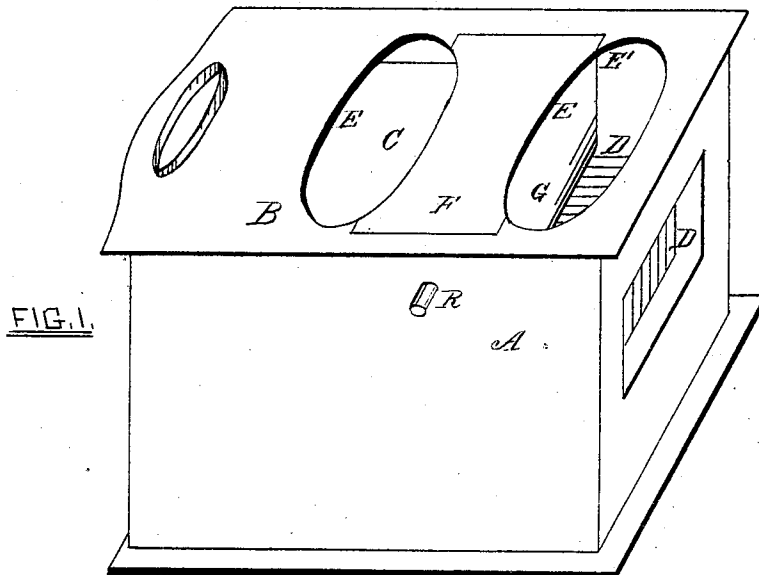


GEORGE RYDER.

Improvement in Cooking Stoves.

No. 123,842.

Patented Feb. 20, 1872.



1 2 3 4 5 6

Scale of one foot for Fig. 2.

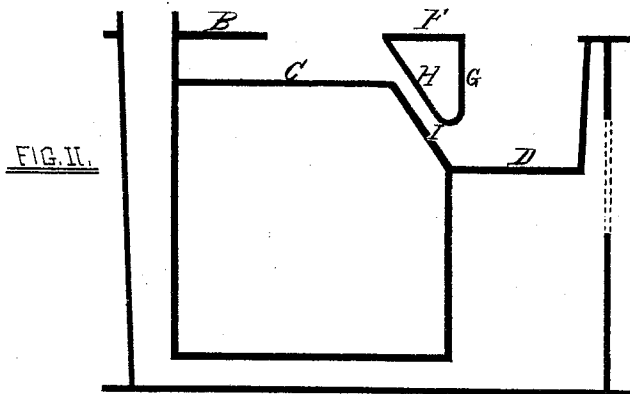
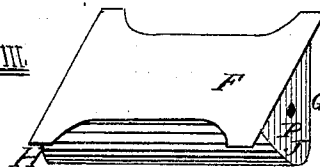


FIG. III.



WITNESSES

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GEORGE RYDER, OF CHICAGO, ILLINOIS.

IMPROVEMENT IN COOKING-STOVES.

Specification forming part of Letters Patent No. 123,842, dated February 20, 1872.

SPECIFICATION.

I, GEORGE RYDER, of Chicago, in the county of Cook and State of Illinois, have invented an Improved Stove, of which the following is a specification.

The present invention relates to an improvement in cooking-stove furnaces, &c., whereby a constant supply of hot-water may be had, while, at the same time and by the same device, gas, smoke, and soot of soft coal is mostly consumed directly in front of the oven, as the whole is hereinafter fully described and shown.

In the drawing, Figure 1 is a perspective representation of a cooking-stove provided with my improvement; Fig. 2, a longitudinal section of the same; Fig. 3, a perspective representation of my improvement detached from the stove.

A represents the body, B the top, C the oven, and E' the fire-box and D the grate of an ordinary cooking-stove, which is suitable to receive my improvement without alteration. E E represent the furniture-holes in the top B, between which my improvement is placed. F represents what is known as the center-plate of the stove, the edges of which form a part of the boundary of the holes E E, while the ends of the plate rest in seats formed in the top B in the usual manner. This said plate F, as now cast, is a separate part of the top of the stove and used only for the convenience of placing furniture in different positions on the stove, or as a part of the stove-top; consequently, a single thickness of iron-plate is all that is now used for the purpose designed. In my improvement the plate F also forms a part of the stove-top, but it also serves the purpose

of forming a part of a water-tank or chamber, H G F. The parts H G, with suitable ends J, are cast in a single mold with the plate F; consequently the device shown at Fig. 3 is one single piece of iron of suitable thickness to withstand the ordinary heat of a fire-box. The front side of the chamber G has a position nearly perpendicular to the top B of the stove, but the back side H has an inclination nearly corresponding to the pitch of the oven C at I, the bottom or lower part of H G being rounded over so as not to obstruct the draught. The device is removable, as shown at Fig. 3, and the parts H G are long enough to reach across the fire-box E', and the ends J are provided with suitable openings P, by means of which water-pipes R, Fig. 1, may communicate with the interior of the chamber G H J.

When water is heated in the said chamber a steam-escape pipe should be used to prevent explosion, but when cold air is used to keep the chamber cool, a simple communication through the chamber is all that is required. As a gas, smoke, and soot-burning device, the improvement is found to be very complete, inasmuch as the heat between I and G is very intense. Hence, by using the device, fuel to a large extent is economised.

I claim—

The removable water or air chamber, consisting of the parts F G H J, when combined and arranged with reference to the oven C and fire-box E' of the stove, substantially as and for the purpose set forth.

Witnesses:

GEORGE RYDER.

J. A. SHAFFER,
G. L. CHAPIN.