W. F. ROSS.

Heating Stove.

No. 99,954. Patented Feb. 15, 1870.

Fig. 1.

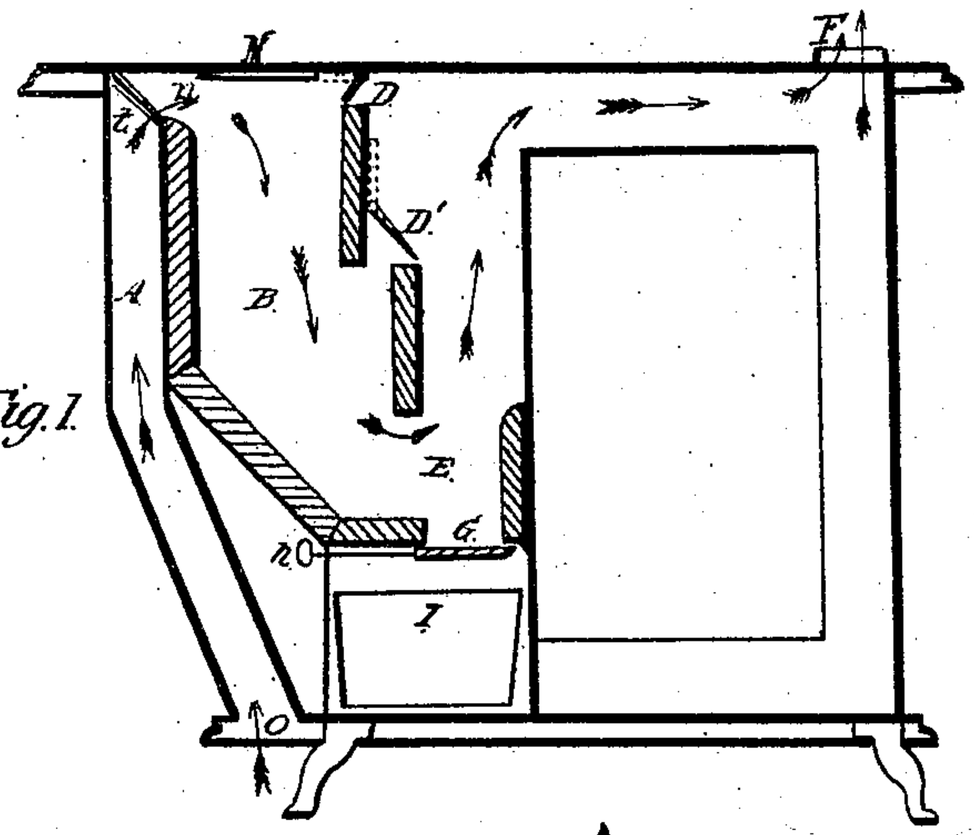


Fig. 2.

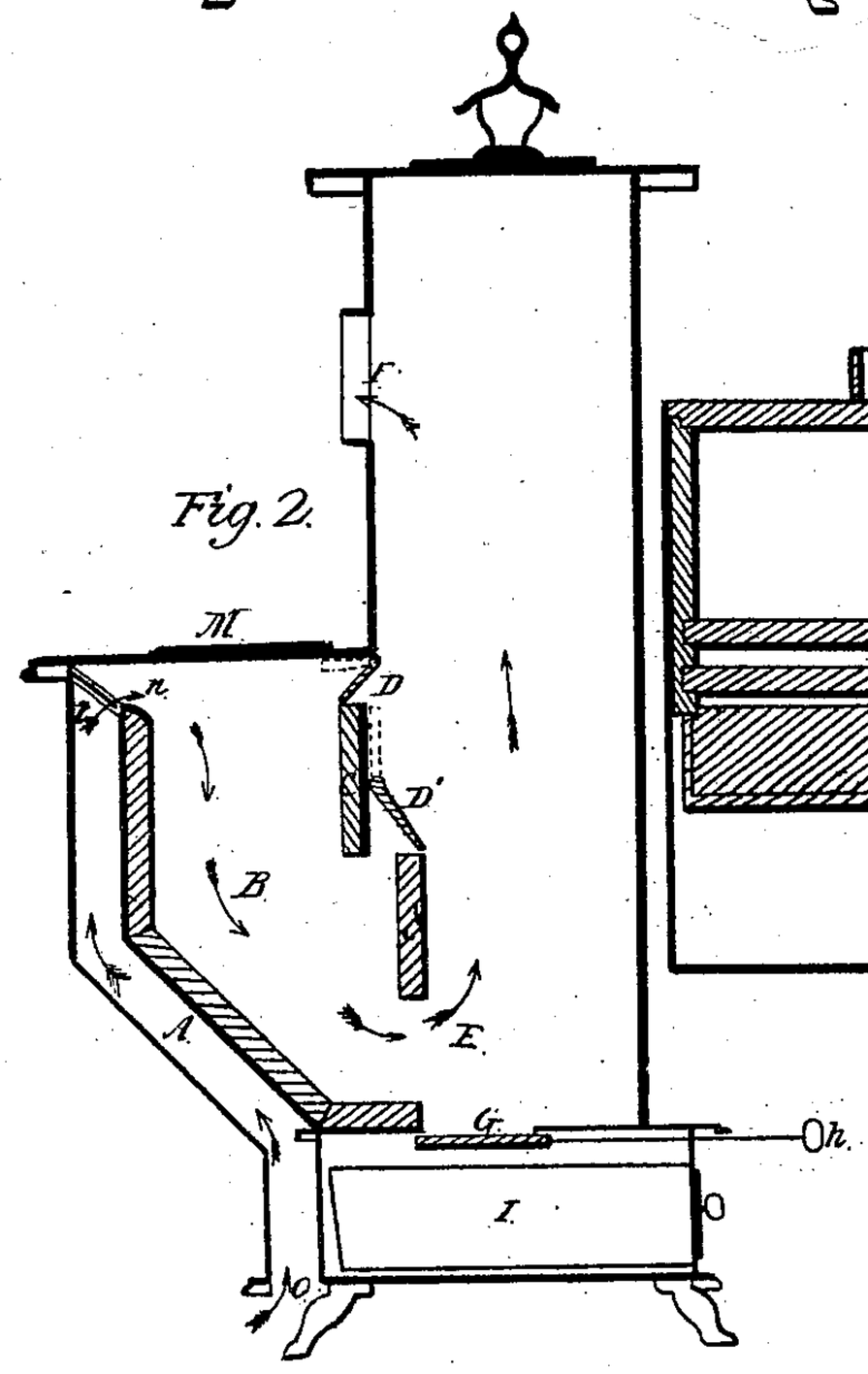
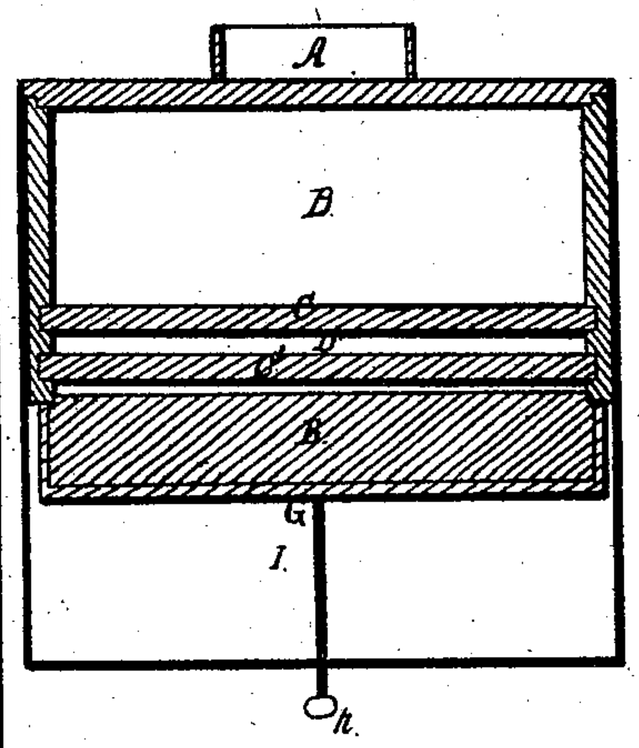


Fig. 3.



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WILLIAM FRAZIER ROSS, OF DAVENPORT, IOWA.

Letters Patent No. 99,954, *dated February* 15, 1870.

HEATING STOVE.

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

I, WILLIAM FRAZIER ROSS, of Davenport, in the county of Scott, and State of Iowa, have invented certain Improvements in Stoves and Fire-Places generally, of which the following is a specification.

Nature and Objects of the Invention.

The first part of my invention relates to the combination with a stove or other fire-place, of a siphonic air-duct, in such a manner that the air for the support of combustion may be taken from the room near the floor and discharged over the fire, so that the gas and smoke may not be released more rapidly than they are consumed, and so that they may not escape through the same channel into the room; the objects of this part of my invention being to equalize the temperature of and ventilate the room, and to thoroughly consume the gas, smoke, and fuel.

The second part of my invention relates to the combination with the inside leg of the siphonic air-duct, of a fuel-box, one side of which is open at the bottom, in such manner that the cold air may be drawn down through the fuel and retard its combustion above the opening at the bottom, driving the heat through said opening; and to the combination of dampers with apertures, in the same side of the fuel-box, in such manner that an increased quantity of fuel may be ignited by opening one or more of the dampers and allowing a portion of the draft to pass through one or more of the apertures, and so that the apertures and dampers may not be obstructed by the fuel.

The third part of my invention relates to the combination with the fire-box and an air-tight ash-box under it, of an air-tight sliding bottom to the fire-box, which may be opened sufficiently to allow the ashes and clinker to drop into the ash-box, and which may be closed when the ash-box is open, and so prevent air from passing up through the fire and fuel and releasing gas and smoke more rapidly than they can be consumed.

Description of the Accompanying Drawings.

Figure 7 is a vertical transverse section of a cooking stove embodying my invention.

Figure 2 is a like section of a warming stove embodying the same.

Figure 3 is a horizontal section of that part of a stove which embodies my invention.

General Description.

A is the outside leg of the siphonic air-duct, which receives the cold air at the bottom, *o*, and discharges it into the fuel-box or inside leg at the top *n*.

B is the inside leg of the siphonic air-duct, and is also the fuel-box, which receives the cold air at the top *n*, and through which it passes downward to the fire and through the apertures under or through the side C C′.

C C′ is the side of the fuel-box B, which regulates the "feed" of the fuel, and prevents its ignition, until, by the consumption at the bottom, it is allowed to drop into the fire below the level of the aperture where the upward draft is allowed to have vent.

The aperture D′ is made by setting the under part of the side of the fuel-box C′ farther out than the upper C, so that the aperture and the damper over it may not be obstructed by the fuel.

E is the fire-place.

F is the vent for the draft.

G is an air-tight sliding bottom under the fire-box E, which may, by the rod *h*, be opened sufficiently to allow the ashes and clinkers drop into the ash-box I, and which is to be kept closed when the ash-box I is open.

I is an ash-box with a drawer, closing air-tight, for receiving and holding the ashes and clinkers as they are precipitated from the fire.

M is a door at the top of the fuel-box B, where the fire and fuel are introduced.

Mode of Operation.

Place the fire at the bottom of the fuel-box B and under the side C C′. The fuel-box may be filled with bituminous coal or other fuel, which will, when the dampers D and D′ and the sliding bottom G are closed, burn only below the level of the bottom of the side C C′ or where it is started. The door M should be kept closed except when opened for the introduction of fire or fuel.

The sliding bottom G may be opened as required, to let the ashes and clinkers drop into the ash-box I, which must meanwhile be kept closed. Before removing the drawer I, the sliding bottom G of the fire-box, must be closed by means of the rod *h*.

More fuel may be ignited by opening the damper D′, and all in the fuel-box by opening the damper D.

The draft may be regulated by a damper, *t*, in the outside leg of the siphonic air-duct A.

Claims.

I claim as my invention—

1. The combination of the siphonic air-duct A B with a stove or other fire-place, substantially as and for the purposes herein before set forth.

2. The combination with the inside leg of the siphonic air-duct, of the fuel-box B, with the side C C′, and the combination of dampers D D′, with apertures, in the side of the fuel-box, substantially as and for the purposes herein before set forth.

3. The combination with the fire-box E and air-tight ash-box I, of the air-tight sliding bottom G, substantially as and for the purposes herein before set forth.

WM. FRAZIER ROSS.

Witnesses:

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