

J. SEGONDY & M. RAVOLD.
Improvement in Cooking-Stoves.

No. 114,208.

Fig. 1.

Patented April 25, 1871.

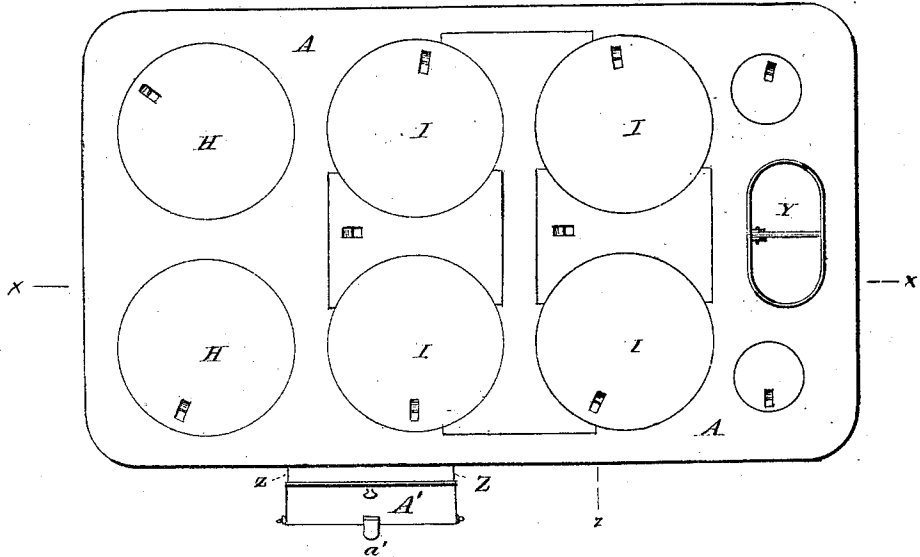
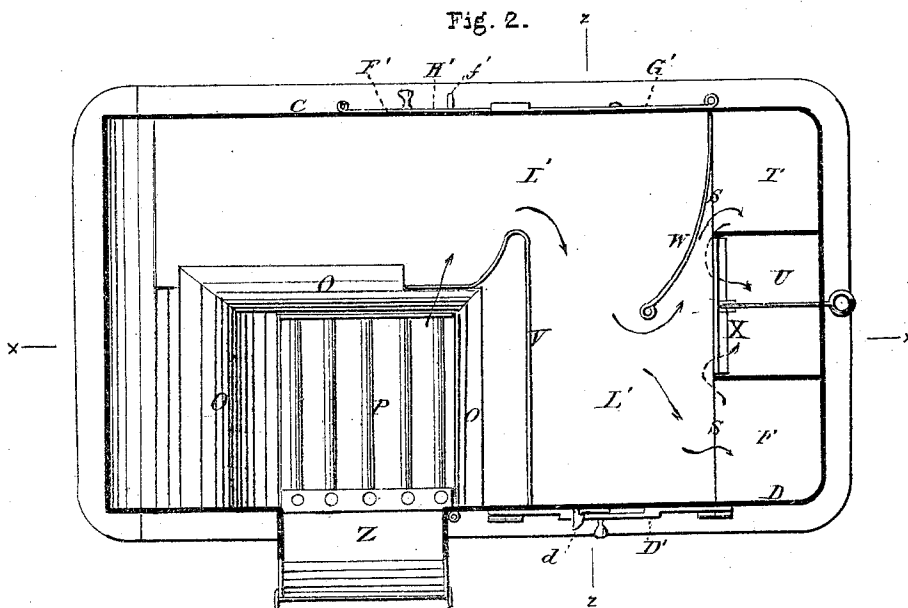


Fig. 2.



Witnesses.

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Fig. 3.

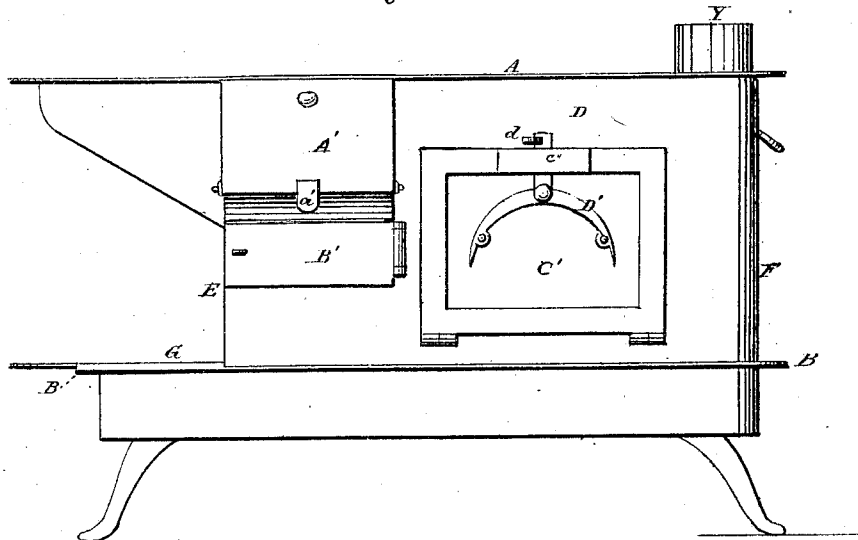
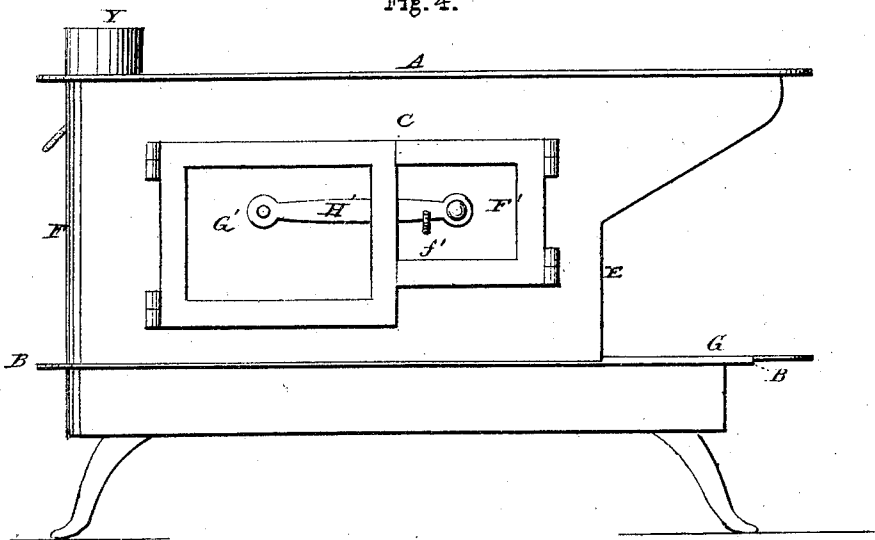


Fig. 4.



Witnesses.

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John Segondy & Michel Ravold
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Patented April 25, 1871.

Fig. 1. A plan view of a mechanical assembly. It shows a lever arm (A) pivoted at point (a'). A chain (E-E') is attached to the lever arm and a vertical rod (B). The assembly is mounted on a base (C) and includes various components labeled V, I, I', M, N, and f.

A. E. Silliman
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United States Patent Office.

JEAN SEGONDY AND MICHEL RAVOLD, OF ST. LOUIS, MISSOURI.

Letters Patent No. 114,208, dated April 25, 1871.

IMPROVEMENT IN COOKING-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 we, JEAN SEGONDY and MICHEL RAVOLD, of St. Louis city, in the county of St. Louis and in the State of Missouri, have invented certain new and useful Improvements in Cooking-Stoves; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing making a part of this specification, in which—

Figure 1 is a plan view of the upper side of our improved stove;

Figure 2 is a like view of the same with the top plate removed;

Figures 3 and 4 are elevations of opposite sides of said stove;

Figure 5 is a vertical longitudinal section on the lines xx of figs. 1 and 2; and

Figure 6 is a vertical cross-section of the lines zz of said figures.

Letters of like name and kind refer to like parts in each of the figures.

Our invention is an improvement in cooking-stoves; and

It consists, principally, in extending the combustion-chamber outward beyond the front end of the stove so as to furnish space for two or more additional boiler-holes upon or within the top plate, substantially as hereinafter shown and described.

It further consists in the arrangement of the fuel-chamber with relation to the boiler-holes and within the oven, substantially as and for the purpose herein-after specified.

It finally consists in the relative arrangement of the oven, fuel-chamber, and flues, substantially as and for the purpose hereinafter shown.

In the annexed drawing—

A represents the top plate and B the bottom plate of the stove, connected together in the usual manner by means of the side plates C and D and the front and rear end plates E and F respectively.

The top plate A is extended forward over the hearth G so as to give room for two extra boiler-holes, H, in addition to those usually provided, I; and the space K beneath said extended portion is inclosed at its sides by a prolongation of the side plates C and D, and beneath and in front by means of the front end plate E, which, from a point midway between said hearth and top plate, extends forward and upward, as seen in figs. 3, 4, and 5.

The space within the external casing of the stove is divided horizontally by means of the top oven-plate L, placed at a suitable distance below the top plate A, so as to leave the necessary space for the top flues

L', and by the bottom oven-plate M placed at a short distance above the bottom plate B, which latter plate is provided with a sink of sufficient depth to contain the lower flues N.

Extending vertically downward through the upper and lower oven-plates K and M, respectively, at the intersection of the front plate E and side plate D, is an opening nearly square horizontally, and having a length equal to about one-half the breadth of the stove, the upper portion of which, by means of suitable fire-plates O and a grate, P, forms the fuel-chamber Q, while the lower portion of said space, together with the space beneath the hearth, forms a receptacle, R, for ashes and other refuse from the coal that pass downward through said grate.

The rear end of the oven is cut off from the interior of the stove by means of a vertical plate, S, between which and the rear end plate F is left a space which is divided into three equal spaces, T and U, the former situated upon the outer side and forming the descending flues, while the latter or center space is used for the ascending column of the heated escaping products of combustion.

The fuel-chamber Q being placed at one side of the stove it becomes necessary to cause the heated gases to pass to the opposite side before passing rearward, in order that the heat may be equally distributed.

This result is accomplished by means of a vertical flue-strip, V, which, filling the space between the top plate A and the top oven-plate L, extends rearward along the inner side of the fuel-chamber near its rear end; from thence curves rearward and outward until nearly one-half the distance from said fuel-chamber to the opposite side of the stove is reached, and then, turning sharply backward, extends in a straight line to the side plate D.

A second flue-strip, W, extending in a curve inward and slightly forward from the side plate C, at the intersection of the rear oven-plate S, and a damper, X, corresponding in length to the transverse size of the ascending-flue U, and so hinged at its lower end to or upon a prolongation, I, of the top oven-plate L as to permit of its being turned forward, as seen in fig. 5, and close the entrance from the front to said flue, completes the system of flues, the operation of which is as follows:

The damper being closed, the heated escaping products of combustion pass laterally outward from the fuel-chamber to or near the opposite side of the stove, from thence backward around the flue-strip V to the center transversely of the top oven-flue L', from whence, dividing, the current passes into and through the diving-flues T and into the bottom oven-flue N, where

said currents unite and pass upward through the ascending-flue U into the exit-pipe Y. When the damper is opened the heated escaping products of combustion pass from the top oven-flue directly into and through the exit-pipe.

Access to the fuel-chamber from the side of the stove is had through a chute, Z, secured upon and extending outward from the side plate D, with its outer end inclining upward and inward.

A door, A', corresponding in size and shape to the end of said chute, is pivoted at its lower corners to or upon the same, so as to be capable of being turned outward and downward, and is provided upon its lower edge with a lug, a', which, extending downward, rests against the lower side of the bottom plate of said chute when said door is turned downward, and holds the latter in a horizontal position.

Immediately beneath the chute Z is a narrow opening inclosed by means of a door, B', hinged at one end to or upon the side plate, through which access may be had to the lower side of the grate.

The oven upon the same side of the stove as the fuel-chamber is inclosed by a door, C', hinged at its lower edge to the side plate D, and held in place, when closed, by means of a gravity-latch, D', which, as seen in fig. 3, has the form of a crescent, with a straight bar extending radially outward from its center, one end of said crescent being pivoted to the face of said door, while said bar passes through a suitable guard, e', upon the edge thereof, and engages with a notched lug, d, projecting outward from said side plate D.

It will be seen that, as the latch is pivoted upon the side of the lug that contains the notch, the weight of said catch will cause it to remain in engagement with said lug unless purposely released therefrom.

It being desirable that the door should not drop below a horizontal line, two chains, E', are attached at one end to its inner face, near each outer corner, and, at their opposite ends, to the front and rear plates of the oven, and, having a suitable length, sustain said door, when opened, in the desired position.

Upon the opposite side of the stove the oven has a different shape by reason of its extension forward over the ash-pit and alongside of the fuel-chamber, and, consequently, is inclosed by means of two doors, F' and G', hinged, respectively, at the front and rear sides of said oven, to or upon the side plate C, and secured together, when closed, by means of an ordinary

latch, H', pivoted upon the face of the rear door G', and engaging with a notched lug, f', projecting outward from the face of the front door F'.

A flue-stop, I', placed at the rear end of the ash-pit, and communicating with the front end of bottom oven-flue N, and a vertically-sliding damper, K', provided within the front end plate E, immediately above the hearth, completes the stove, the operation of which will be readily understood.

The especial advantages obtained by this construction of a stove are—

First, by means of the comparatively small fuel-chamber an equal amount of work can be accomplished with less fuel than would be possible if said chamber extended, as usual, across the entire front of the stove.

Second the extended top plate largely increases the capacity of the combustion-chamber and enables two additional boiler-holes to be used for cooking purposes or for heating water without material increase in the amount of fuel consumed.

Third, the arrangement of the flues above the oven causes the heated escaping products of combustion to pass beneath all of the boiler-holes situated in rear of the fuel-chamber, and thus renders practicable the employment of a small fuel-chamber placed at one side of the stove.

Having thus fully set forth the nature and merits of our invention,

What we claim as new is—

1. In a cooking-stove provided with rear and bottom oven-flues a combustion-chamber, extended outward beyond the front of said stove, substantially as and for the purpose shown.

2. The arrangement of the fuel-chamber Q within the oven and with relation to the boiler-holes, substantially as shown, and for the purpose specified.

3. The relative arrangement of the oven M, the fuel-chamber Q, and the flues L', N, T, and U, substantially as shown, and for the purpose specified.

In testimony that we claim the foregoing we have hereunto set our hands this 21st day of February, 1871.

MICHEL RAVOLD.
JEAN SEGONDY.

Witnesses:

ALEXANDER LOWRY,
HENRY PETERS.