W. B. MACKENZIE.

Cooking Stove.

No. 106,946. Patented Aug. 30, 1870.

Fig.1.

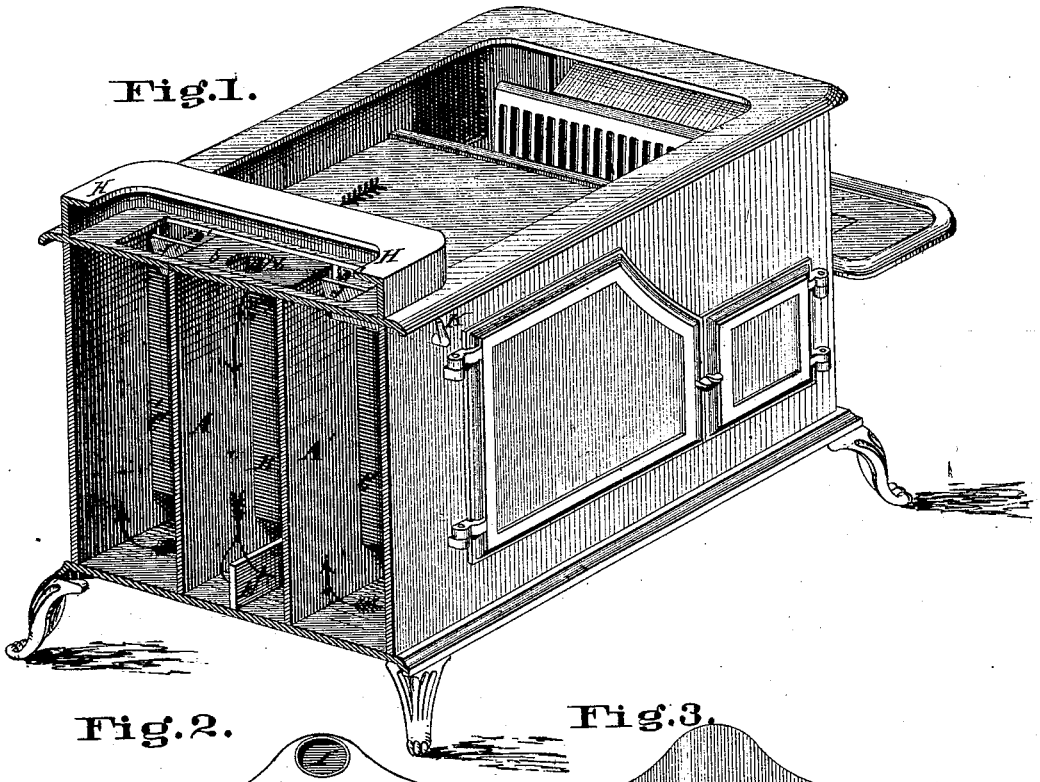


Fig.2.

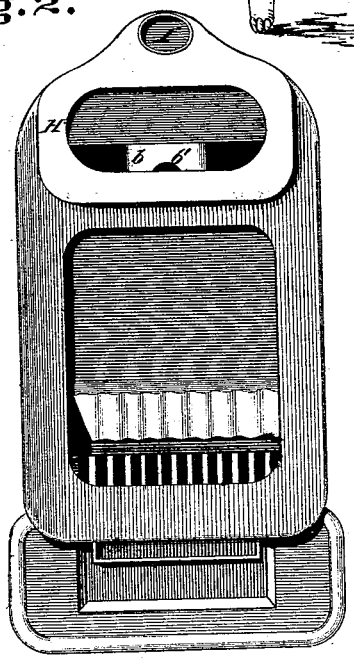
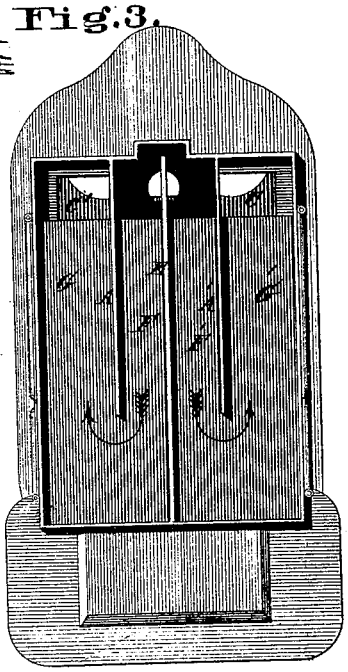


Fig.3.



Attest.

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WILLIAM B. MACKENZIE, OF CINCINNATI, OHIO.

Letters Patent No. 106,946, *dated August* 30, 1870.

COOKING-STOVE.

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, WILLIAM B. MACKENZIE, of Cincinnati, Hamilton county, State of Ohio, have invented certain new and useful Improvements in Cooking-Stoves; and I do hereby declare the following to be a sufficiently full, clear, and exact description thereof to enable one skilled in the art to which my invention appertains to make and use it, reference being had to the accompanying drawing making part of this specification.

Nature and Objects of Invention.

My invention consists in a peculiar arrangement of the flues and dampers of the stove, by which the central flue, usually the ascending flue in stoves of this class, is made the "diving" flue, and, by a certain disposition and arrangement of the flue partitions under the oven, the side flues are used as the ascending flues, the object of my invention being to separate the heated currents on the exit from the stove, so that two currents will impinge upon the bottom of the water-boiler, one at each end, and also to effect a more equable distribution of the heat under the oven.

Description of Accompanying Drawing.

Figure 1 is a perspective view of the stove from the rear, the rear plate being removed, in order to clearly exhibit the interior of the end flues.

Figure 2 is a plan of the top.

Figure 3 is a plan of the bottom, with the bottom plate removed, showing the arrangement of partitions.

General Description.

The space between the oven and back plate of the stove is divided by partition plates, A A′, into three flues, B, C, C′, the central flue communicating directly with the fire through opening D.

Other openings, D′ C′, one upon each side of the central opening D, communicate directly with the ends of the opening H, through which the gases pass to the exit-pipe, and are controlled by double-winged dampers, J J′.

The space between the bottom of the oven and bottom plate of the stove is divided by partition plates A A′ and plate E into four flues, F F′, and G G′.

The plate E serves to divide the current from flue B into two parts, and conducts it in the divided state to the forward end of the stove, where it is conducted to the flues G G′. This plate E may extend the full length of the bottom plate, as shown in fig. 3, or part of the full length only, if preferred.

The top of the flue B is inclosed by cap *b*, which may have an opening, *b′*. This opening should be closed by a suitable cover when the current of heated gases is passing under the oven.

The customary water-boiler is fitted to the opening H, and, it will be seen that, when the current of heat emerges from the stove, after passing under the oven, it is divided into two parts, and it therefore impinges upon the two ends of the boiler, and, being brought together again by having to escape at a single stove-pipe, I, the heat is distributed equally over the entire surface of the boiler.

In order that the flame may be permitted to escape directly up the stove-pipe when the oven is not needed, I provide the two damper plates J J′, which are hinged near the back plate of the oven, and operated simultaneously by handle K. When these dampers are open, the flame can pass directly up the chimney, being compelled, however, to impinge upon both ends of the boiler in the same manner as when the flame passes under the oven.

When the dampers are open, the cap or cover over the hole *b′* can be removed, to afford a still freer exit for the flame, and enable it to impinge directly upon the center of the bottom of the boiler.

The peculiar arrangement of flues under the oven causes the heat to be more equally radiated over the surface to be heated, than when the central flues are used for the ascent of the current.

Claim.

The combination and arrangement of the central opening D, side openings D′ D′, double-winged dampers J J′, with reference to the opening H, and central diving-flue B, divided flue F F′ E, flues G G′, and ascending side flues C C′, substantially as set forth.

In testimony of which invention I hereunto set my hand.

WM. B. MACKENZIE.

Witnesses:

FRANK MILLWARD,

J. L. WARTMANN.