N. M. SIMONDS.

RANGES.

No. 174,865. Patented March 14, 1876.

FIG. 1.

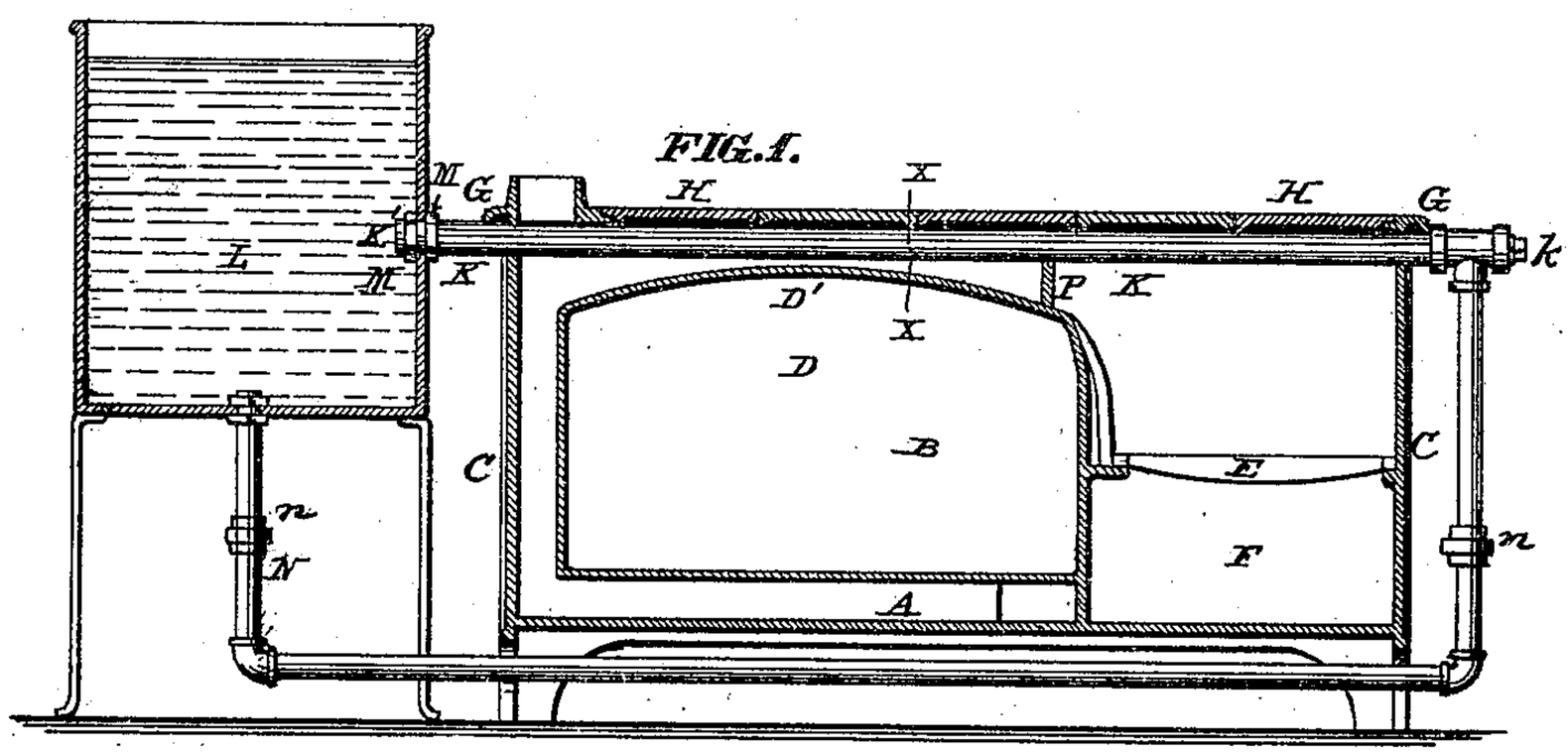


FIG. 2.

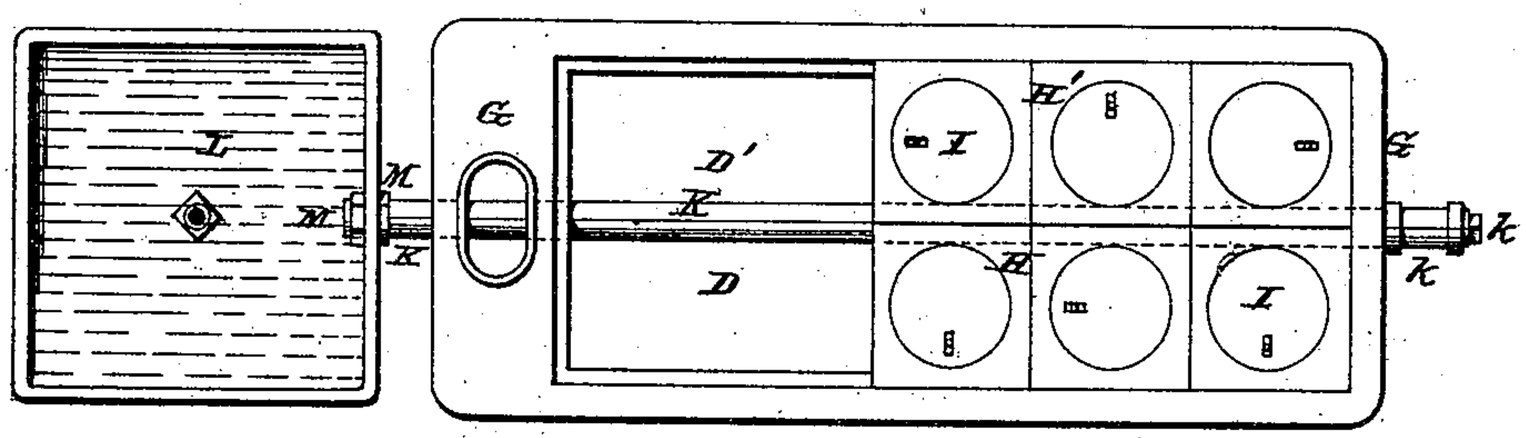


FIG. 3.

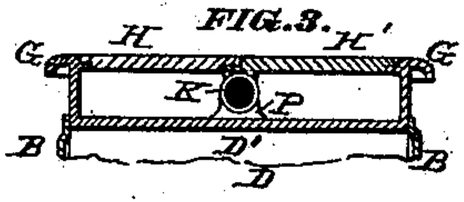
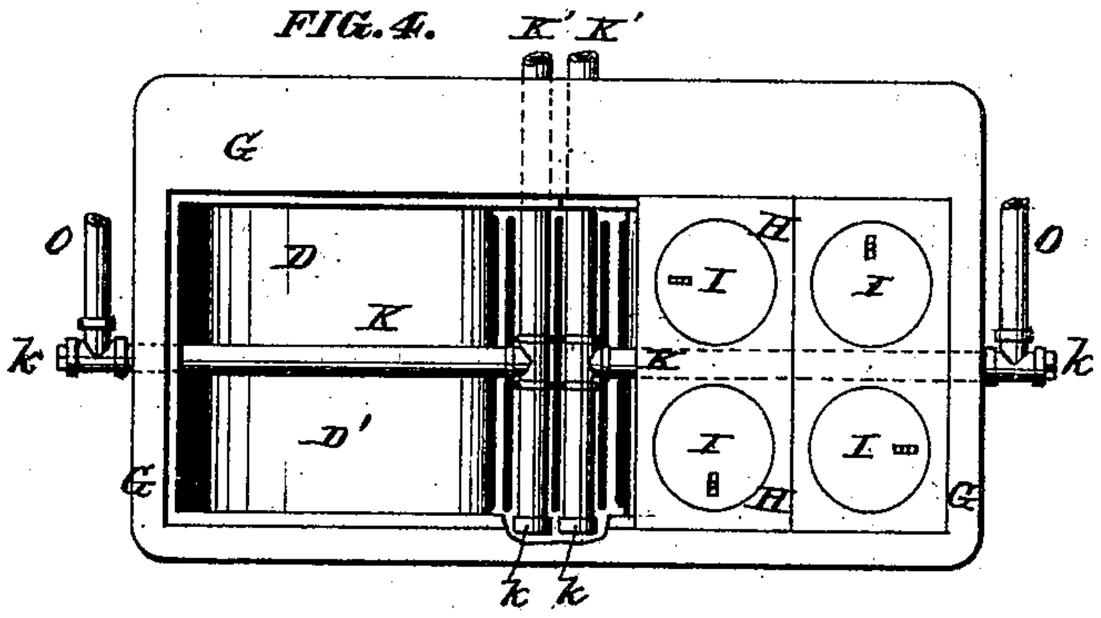


FIG. 4.



ATTEST:

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UNITED STATES PATENT OFFICE.

NATHANIEL M. SIMONDS, OF ST. LOUIS, MISSOURI.

IMPROVEMENT IN RANGES.

Specification forming part of Letters Patent No. **174,865**, dated March 14, 1876; application filed January 14, 1876.

To all whom it may concern:

Be it known that I, NATHANIEL M. SIMONDS, of the city and county of St. Louis, and State of Missouri, have invented a new and useful Improvement in Cooking Stoves and Ranges, which improvement is fully set forth in the following specification, reference being had to the accompanying drawings.

My improvement consists in a hollow bar containing water, which circulates through a steam-table, for cooking by steam or water-tank, or both, and which forms also the inner support of the top plate of the stove or range.

Figure 1 is a vertical longitudinal section, showing my improvement as applied to a single-oven range. Fig. 2 is a top view of the same with some of the top plates removed. Fig. 3 is a transverse section at *x x*, Fig. 1. Fig. 4 shows the bearing pipe or bar, modified in form.

A is the bottom plate of the range; B B, the front and back plates, and C C the end plates. D is the oven, having a crown-plate, D′. E is the grate, and F the fire-space. The range-top consists of the usual fixed marginal plate or rim G, supporting the outer edges of the removable top plates H H′, in which the round covers I are supported. The inner sides of the plates H′ are supported directly upon the water bar or pipe K, and the inner edges of the plates H are supported upon the edges of the plates H′, the plates H and H′ fitting together at that place with a ratchet-joint, as shown in Fig. 3, and in my Patent No. 140,550, dated 1st July, 1873.

In Figs. 1, 2, and 3, a single water pipe or bar, K, is shown, extending from end to end of the range, and one end stopped by screw-plug, *k*, which may be taken out to allow the removal of scale from the inside of the pipe by an instrument introduced at the end. This provision is more particularly necessary where hard or muddy water is used.

It will be seen that one end, K′, of the water bar or pipe K passes through the side of the water-tank L, and is secured therein by lock-nut M M. The hot water flows into the tank from the water bar or pipe K, and the cool water at the bottom of the tank flows down through the pipe N, which, as shown, extends beneath the stove or range, and up to the end of the water bar or pipe K, opposite to the tank L. *n n* are union-couplings on the vertical portions of the pipe N, to allow the pipe to be disconnected at those parts. The water bar or pipe K need not necessarily extend the whole length of the stove or range, but it may extend some distance, and may serve as a support for more or less of the top plates.

In the modification shown in Fig. 4 there are two water bars or pipes, K K, which have transverse portions K′, that extend through the sides of the range or stove, and are, like the ends of the portions K, supplied with screw-plugs *k*, which may be removed to allow a scaling-instrument to be run through the water bars or pipes for the specified purpose.

Where two bearing water bars or pipes, K, are used, one may be connected to a tank and one to a steam table or boiler, or they may be connected to different water-tanks, or both to the same tank or other apparatus to be heated, by the extensions O.

The bearing water bar or pipe K may have a central support, P, on the oven-plate or on the fire-plates.

I do not claim, broadly, a bar forming a support for the top plates of a range, because such a support is not new, as shown in my patent hereinbefore referred to.

I claim—

The combination of the top plates H H′ and bearing water bar or pipe K, substantially as and for the purpose set forth.

NATHANIEL M. SIMONDS.

Witnesses:

SAML. KNIGHT,

ROBERT BURNS.