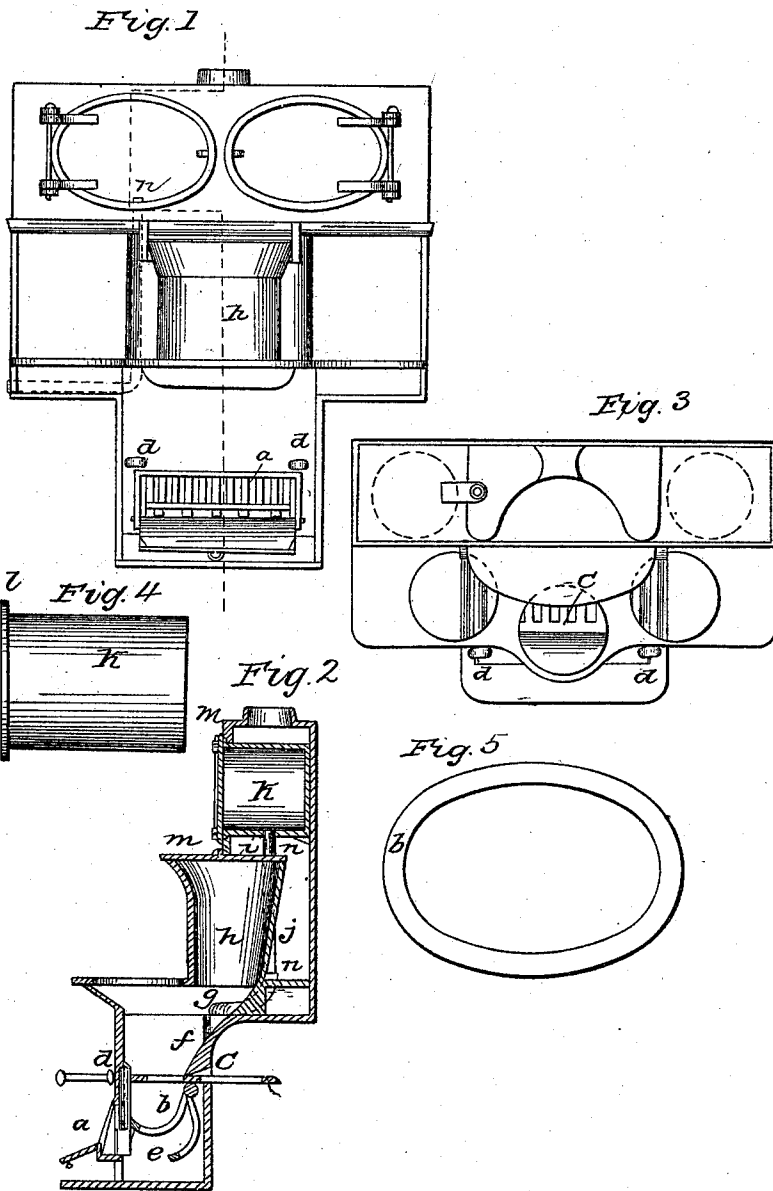


R. D. GRANGER.
Cooking Range.

No. 97,291.

Patented Nov. 30, 1869.



Witnesses
J. Smith
L. C. Jones

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United States Patent Office.

R. D. GRANGER, OF PROVIDENCE, RHODE ISLAND.

Letters Patent No. 97,291, dated November 30, 1869.

COOKING-RANGE.

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, R. D. GRANGER, of Providence, Rhode Island, have invented certain new and useful Improvements on Elevated Oven Cooking-Ranges; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the accompanying drawings, and to the letters and marks thereon, which said drawings form part of this specification, and represent a cooking-range, and parts thereof, with my improvements therein embraced—

Figure 1 being a front view, in elevation, of such range;

Figure 2 being a view, by vertical section, on the red line of fig. 1;

Figure 3, a top view of the main part of the range, without the oven-portion;

Figure 4, a side view of one of the ovens detached; and

Figure 5, a front view of one of the ovens, also detached.

In all of these figures, where like points are shown, like marks and letters are used to indicate the parts.

The range here shown is on the principle of base-burning, with a supply-chamber or magazine.

A great difficulty to be overcome in base-burning in cooking-stoves, to keep a continuous fire, and good condition for boiling, baking, &c., is to get rid of the cinders and slag without dumping out all the fuel, as you cannot grind out the cinders in an oblong or rectangular fire-chamber as you can in a round fire-box. I resort to these means for overcoming this difficulty:

First, I construct the front with a narrow grate, *a*, so fitted in and guided that it can be raised or lowered, and when raised will allow of a poker being introduced to rake the cinders out and permit them to fall into the ash-pit.

The form of the grate *b* curving up at its back, gives full scope to the poker, and of the bringing of the cinders forward.

My second means is a sliding plate or horizontal grate, *c*, with handles *d* in front, dividing the fuel above from the contents of the grate *b*, so that when thus divided the grate *b* may be dumped, and the cinders and ashes fall into the ash-pit *e*.

When the grate *b* is replaced, the plate or grate *c* can be shoved back and fresh coal be supplied to the grate *b*. This will only be required to be done once a day, or after twenty-four hours' use.

The grate or plate *c* only can be used in the summer, if less space for fuel and combustion is desired.

The back *f* of the fire-box is inclined upward and backward, as is also the back *g* of the magazine *h*, to correspond, so that the coal may move toward the front, as the mouth of the magazine cannot well be over the centre of the fire-chamber and give space for the boilers to be over the fire.

The magazine *h* projects in front of the ovens, for allowing sufficient facilities for supplying it with fuel.

Part of the magazine is under the oven-flue *i*, and also forms part of the flues *j* to the ovens.

The ovens *k* are made of sheet-iron, with a cast-iron rim, *l*, to fit into the recess *m* of the oven front, the sheet-iron being riveted to the cast-rim. The ovens can, therefore, be easily taken out to be cleaned or repaired, and being of an oval form can easily be kept in proper shape.

An air-pipe, *n*, passes from the exterior, through the flues, to one or both ovens, to supply heated air to the ovens, to facilitate baking, and for ventilation of the ovens.

The improvements here enumerated may be used in ranges to be set in brick-work, or they may be used in cast-iron ranges complete without such setting.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The magazine, in combination with elevated ovens, substantially as set forth.

2. The location of the magazine between the flues to the elevated ovens.

3. The construction of the front fire-box with the grate *a*, for removing the cinders, ashes, &c., in combination with a magazine, as herein recited.

4. In a range of the general construction herein shown, the arrangement herein set forth of the horizontal sliding plate or grate, between the fuel, below the bottom of the magazine or fuel-reservoir, and the fuel in the dumping-grate, as and for the purposes recited.

5. The air-pipes *n*, and their location and application, substantially as described.

6. The arrangement of the magazine in relation to the ovens herein described, by which the top of the magazine projects beyond the oven front or line of the ovens, for the purposes herein set forth.

This specification signed this 3d day of March, 1869.

R. D. GRANGER.

Witnesses:

J. R. GRAMENT,
W. S. GRANGER.