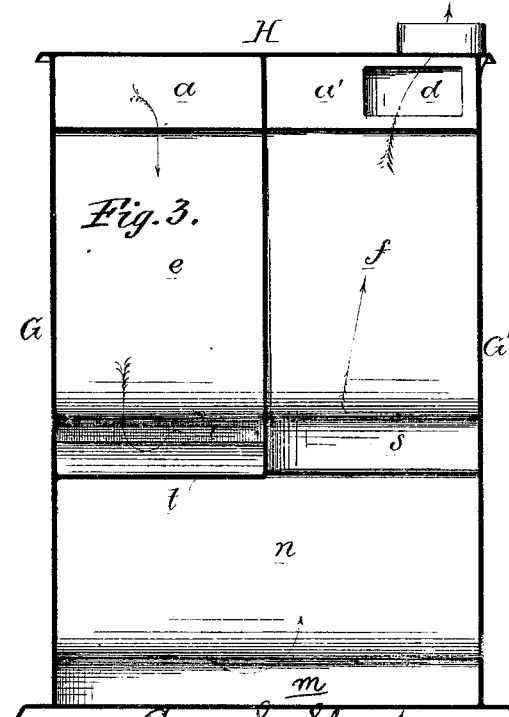
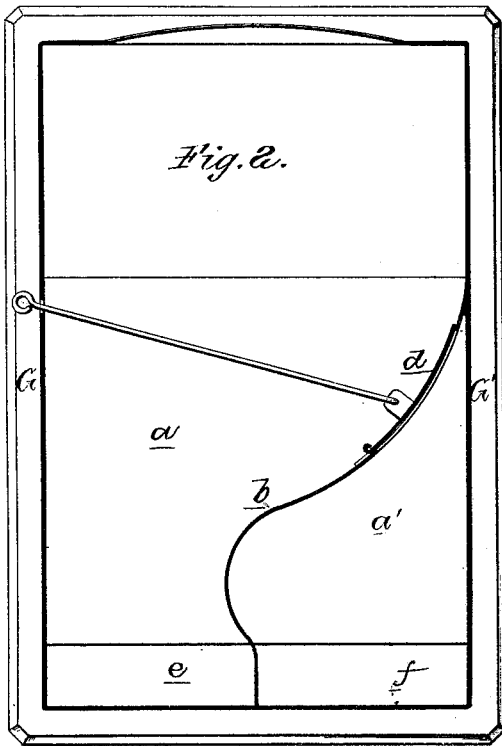


E. S. SHANTZ.
COOKING STOVE.

No. 188,966.

Patented March 27, 1877.



Witnesses
Richard L. Gardiner
Harris Smith

Enos S. Shantz
by his Attorneys
Howson and Son

UNITED STATES PATENT OFFICE.

ENOS S. SHANTZ, OF PHILADELPHIA, ASSIGNOR TO HIMSELF AND OLIVER B. KEELEY, OF SPRING CITY, PENNSYLVANIA.

IMPROVEMENT IN COOKING-STOVES.

Specification forming part of Letters Patent No. **188,966**, dated March 27, 1877; application filed March 7, 1877.

To all whom it may concern:

Be it known that I, ENOS S. SHANTZ, of Philadelphia, Pennsylvania, have invented a new and useful Improvement in Cooking Stoves or Ranges, of which the following is a specification:

The object of my invention is to construct a double oven cooking stove or range, in which the lower oven is subjected to the action of the products of combustion over a much larger surface than in ordinary cooking stoves or ranges of this class.

In the accompanying drawing, Figure 1 is a vertical section of my improved cooking-stove or range; Fig. 2, a sectional plan on the line 1 2, Fig. 1, and Fig. 3 a transverse section on the line 3 4, Fig. 1.

A is the fire-place, B the ash-pit, D the upper oven, E the lower oven, F and F' the front and back plates, G and G' the side plates, and H the top plate, of the stove or range, the said top plate having the usual boiler-holes.

Between the top of the upper oven and the top plate H intervenes the usual upper flue, which is divided into two portions, *a* and *a'*, by a partition, *b*, provided with a damper, *d*, the flue *a* communicating with the combustion-chamber of the stove, and the flue *a'* with the chimney.

At the rear of the oven D are two flues, *e* and *f*, and surrounding the lower oven, and intervening between it and the bottom of the upper oven and the casing of the stove, are four flues, *i*, *j*, *m*, and *n*, which extend across from side to side of the casing.

The flues *i*, *j*, *m*, and *n* communicate freely with each other, the flue *i* communicates with

the flue *e*, and the flue *n* with the flue *f*, communication between the flues *i* and *f* being prevented by a plate or a partition, *s*, and between the flues *e* and *n* by a plate, *t*.

The bottom of the flue *i* is inclined upward toward the front end, so that its area at the said front end shall be contracted, the products of combustion from the flue *e* being thereby compelled to spread themselves laterally over the whole width of the flue *i* before passing into the flue *j*.

When a fire is first started, the damper *d* is opened, so that a direct communication between the fire-place and chimney shall be established; but when the fire has been kindled the damper is closed, the products of combustion then passing down the flue *e*, through the flues *i*, *j*, *m*, and *n*, up the flue *f*, and through the flue *a'* to the chimney.

It will thus be seen that the products of combustion pass entirely around the lower oven, to which such a degree of heat is imparted that it is made as available for baking purposes as the upper oven, whereas in ordinary stoves of this class the lower oven is generally restricted to warming purposes only.

I claim as my invention—

The combination of the upper and lower ovens D and E with the descending and ascending flues *e* and *f* and the flues *i*, *j*, *m*, and *n*, as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

ENOS S. SHANTZ.

Witnesses:

JOHN K. RUPERTUS,
HARRY SMITH.