N. S. VEDDER.

Cooking Stove.

No. 97,731. Patented Dec. 7, 1869.

FIG. 1

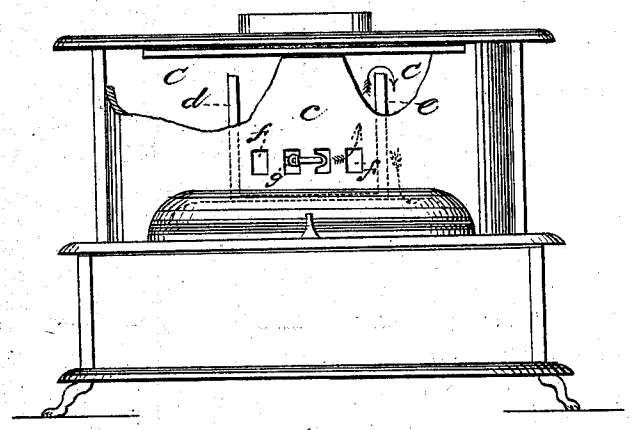


FIG. 2

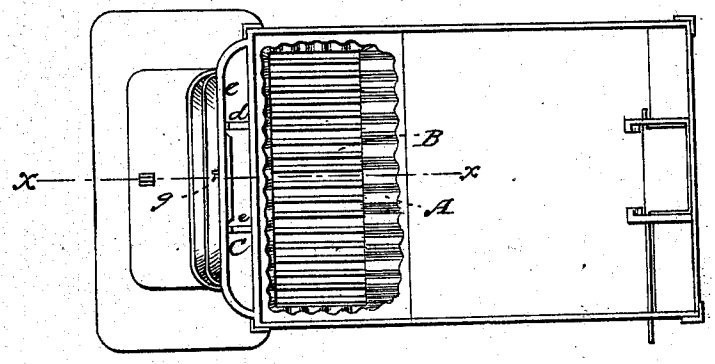
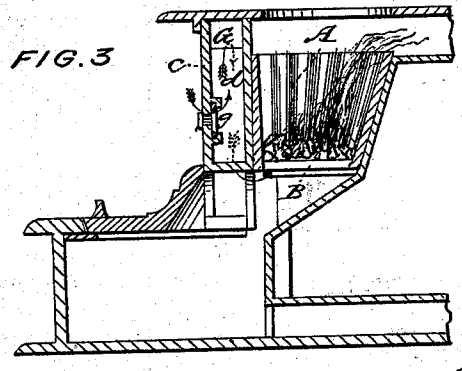


FIG. 3



WITNESSES:

Henry J. Mertz

Wm. C. McIntire

INVENTOR:

Nicholas S. Vedder

by Alex. A. b. Hancke & Co

Attorneys.

N. PETERS, PHOTO-LITHOGRAPHER, WASHINGTON, D. C.

United States Patent Office.

NICHOLAS S. VEDDER, OF TROY, NEW YORK.

Letters Patent No. 97,731, *dated December* 7, 1869; *antedated November* 30, 1869.

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, NICHOLAS S. VEDDER, of Troy, in the county of Rensselaer, and State of New York, have invented a new and useful Improvement in Cooking-Stoves; and I do hereby declare the following to be a full and correct description of the same, sufficient to enable others skilled in the manufacture to which my invention appertains to fully understand and construct the same, reference being had to the accompanying drawings, which make part of this specification, and in which—

Figure 1 is a front view of the stove, showing my improvement;

Figure 2 is a plan of the same, the top plate of the stove being removed; and

Figure 3 is a vertical section in line *x x*, fig. 2.

Like letters of reference indicate like parts in the several figures.

The nature of my invention consists in providing a hot-air chamber in front of the fire-place, in which the cold air entering, is heated before reaching the place of combustion, the said chamber being divided by partitions in such a manner that the current of air entering the chamber is forced upwardly in the centre compartment, which is closed at the bottom, over the partitions, thence downwardly through the compartments at each side of the middle one, and strikes the fire from under the grate at the ends, instead of the centre, thus aiding the process of combustion at the points where it is most feeble.

A, in the drawings, represents the fire-place of a cooking-stove.

B, the grate.

In front of the fire-place, I form a chamber, C, by means of a plate, *c*, which chamber is divided into three compartments, by means of partitions *d* and *e*. These partitions do not reach up to the top plate of the stove entirely, but leave a sufficient space to communicate with the compartments at the top. The middle compartment is larger than the others, and is closed at the bottom, while the end compartments are open at the bottom, communicating with the fire-place.

The plate *c* is provided with openings, *f*, in the space between the partitions *d e*, through which the admission of air is regulated by a slide, *g*.

The entire front of the stove being closed, it will be seen that the draught must come through the openings *f*, and compartments of chamber C, to the fire-place. The object of this chamber is to heat the air while on its way to the place of combustion, as hot air, as is well known, aids combustion a great deal more than cold air. Furthermore, the draught is usually strongest in the centre of the fire, whereby the process of combustion is accelerated in the centre and retarded at the ends of the fire-place.

By my method of admitting the draught at the ends of the fire-place instead of the centre, I obtain an equal result of combustion at the ends as in the centre, the air rushing from and through the ends to the centre.

The openings *g*, being uncovered, the air passes into the middle compartment, and, not being able to pass out at the bottom, it rushes over partitions *d e*, into the end compartments, where it is forced downward to the ends of the fire-place, it being heated during the entire passage through the compartments.

Having thus described my invention,

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

The hot-air chamber C, provided with partitions *d e*, openings *f*, and regulating slide *g*, constructed and arranged as described, whereby the air is first heated, and then passed into the grate at the ends, substantially as and for the purpose set forth.

NICHOLAS S. VEDDER.

Witnesses:

LESLIE SMYTH,

H. CLAY BASCOM.