L. A. & W. G. DUVAL.

Domestic Oven.

No. 85,804. Patented Jan. 12, 1869.

Fig. 2.

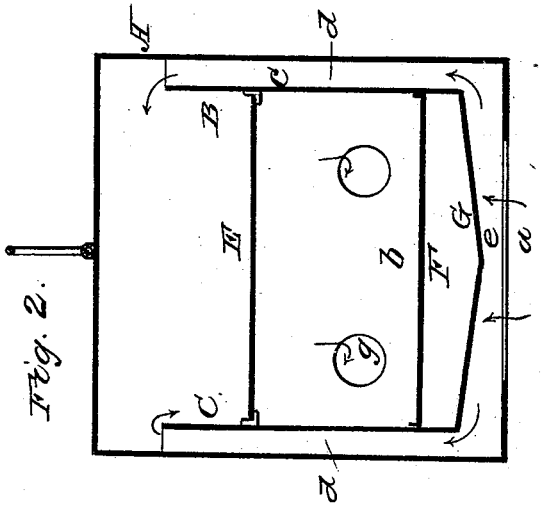
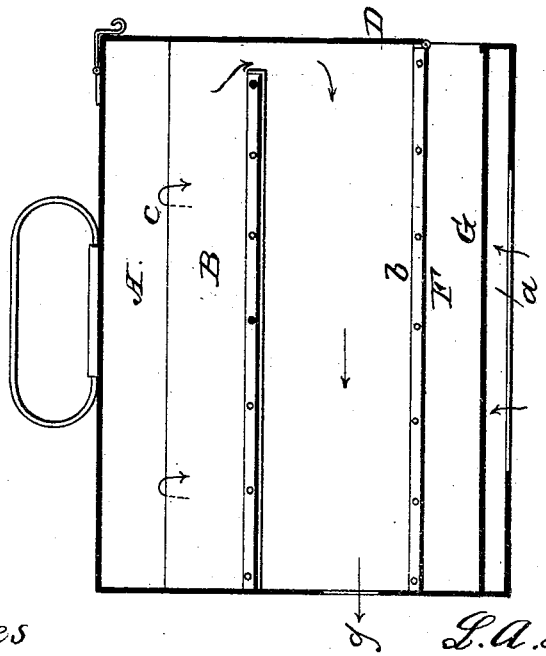


Fig. 1.



Witnesses

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Attys

United States Patent Office.

LAURENCE A. DUVAL AND WILFRID G. DUVAL, OF CHARLESTON, SOUTH CAROLINA.

Letters Patent No. 85,804, *dated January* 12, 1869.

IMPROVEMENT IN GAS-HEATERS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that we, LAURENCE A. DUVAL and WILFRID G. DUVAL, both of the city and district of Charleston, in the State of South Carolina, have invented a new and useful Improvement in Bakers, or Baking-Utensils, of which the following is a full, clear, and exact description, reference being had to the accompanying drawing, forming a part of this specification, and in which—

Figures 1 and 2 represent sectional elevations, at right angles to each other, of a baker, constructed in accordance with our improvement.

Similar letters of reference indicate corresponding parts in both figures.

This improvement relates to a portable baking-utensil, applicable to stoves of various kinds.

In our improvement we use a case, with a smaller case or oven fitted in it, and with sufficient space between the two to allow the heated air and gases to circulate between them. In such connection,

Our invention consists,

First, in the arrangement of a shield below the bottom plate of the oven, the same being so bent or shaped as to form a lower ridge, shelving upwardly to either side, to effect an equable distribution of the heat, and being so disposed as to establish a ventilating or air-space underneath the oven, from front to back of the baker, to allow a certain portion of the heat which passes through the shield to escape, and thereby prevent the bottom of the oven from becoming overheated.

Secondly, the invention consists in constructing the oven, arranged as described, with an open top in communication with the side spaces or passages which separate the oven from the outer case, and in communication with a draught-aperture, or apertures, made in or through the back of the outer case, whereby the heated air or gases is or are drawn up and over the sides of the oven, into and through the interior of the latter, and out through the back, thereby producing a more uniform and economical distribution of the heat.

Referring to the accompanying drawing—

A represents the outer case, made with one or more holes *a* in its bottom for receiving the heated air or gases from a stove.

B is the interior case or oven, constructed to extend from front to back of the outer case, but its bottom, *b*, and sides, *c c*, made to stop short of the top and bottom of said case, and the width of the oven being such as to establish heating-spaces or passages *d d* between the sides of the two cases.

D is a lid or door, for getting at the interior of the oven, and

E, a shelf, with which the oven may be provided, if desired.

Below the bottom, *b*, of the oven is a ventilating-space or air-passage, F, extending through the front and back of the outer case, the same being formed by a shield, G, bent or shaped to present what may be termed a lower ridge, *e*, with sides sloping or running upwardly therefrom.

The ventilating-space or passage F allows of a certain portion of heat, which passes through the shield G, to escape, and so prevents the bottom of the oven from becoming overheated, while the shield G first receives the heat on its lower projecting ridge or surface, and causes the heat to be divided, and to follow the ascending slope on each side of the bottom of the shield, from whence it rises up the passages *d d*, thereby causing a uniform distribution of the heat to the sides of the oven.

Where the stove, to which the baker is applied, is what may be denominated of a smokeless character, such as a gas or certain description of kerosene or petroleum-stove, then we leave the top of the oven open, and make the top of the outer case close, and establish a draught-opening or openings, *g*, in the lower part of the back of the outer case, the same being in communication with the interior of the oven. This causes the heated air or gases to be drawn up the passages *d d*, over the top edges of the sides of the oven, and down into and through the interior of the latter, which produces more equal baking, and economizes the application of the heat.

Applied to stoves that produce smoke, then the oven should be closed in at the top, and the draught-opening established through the top of the outer case, instead of through the lower portion of its back, as described.

What is here claimed, and desired to be secured by Letters Patent, is—

1. The combination, with the oven B, of the shield G, arranged to form a ventilating-space or passage, F, below the oven and through the outer case A, and constructed to establish a gradual ascent of the heated air or gases to the spaces *d d* between the sides of the oven and outer case, substantially as shown and described.

2. The oven B, arranged within the outer case A, essentially as specified, and made with an open top, in combination with the side passages *d d* and lower back-draught opening or openings *g*, substantially as and for the purposes herein set forth.

3. The combination of the oven B, shield G, ventilating-space or passage F, outer case A, side passages *d d*, and draught-opening or openings *g*, in communication with said passages, through the oven at its top, substantially as and for the purposes specified.

LAURENCE A. DUVAL.
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Witnesses:
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