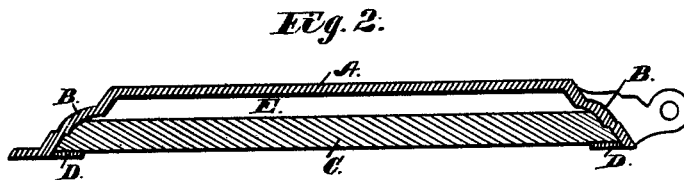
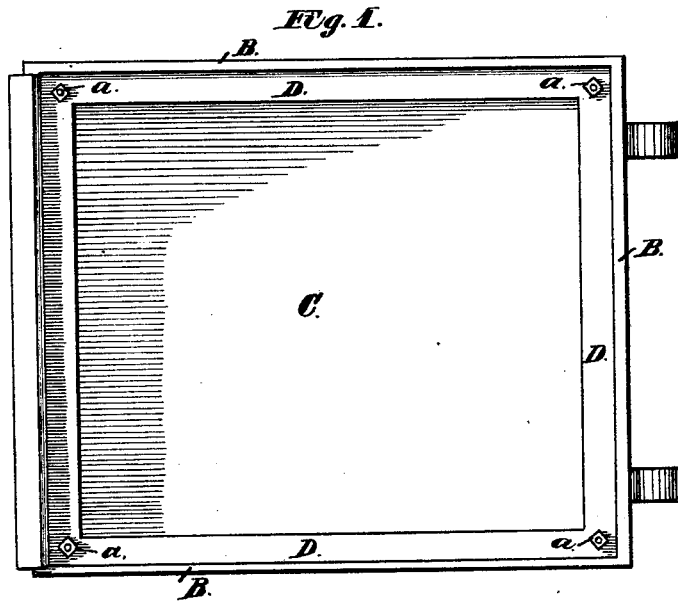


R. J. KING.
Oven-Door.

No. 206,180.

Patented July 23, 1878.



Witnesses;
Chas. M. Peck
P. H. Juncel

Inventor;
Rufus J. King
by his Atty's
Peck & Ritchie

UNITED STATES PATENT OFFICE.

RUFUS J. KING, OF DAYTON, OHIO.

IMPROVEMENT IN OVEN-DOORS.

Specification forming part of Letters Patent No. 206,180, dated July 23, 1878; application filed March 12, 1878.

To all whom it may concern:

Be it known that I, RUFUS J. KING, of Dayton, in the county of Montgomery and State of Ohio, have invented certain new and useful Improvements in Oven-Doors for Stoves and Ranges; and I do hereby declare the following to be a full, clear, and exact description of the same.

This invention has for its object the improved construction of oven-doors for cooking stoves and ranges, whereby the heat is retained as nearly as possible, and prevented from passing through the door, which is usually the most vulnerable point.

The novelty consists in lining or facing the inner side of the door with fire-tile, soap-stone, or other opaque non-conducting solid substance with glazed inner surface, and in the construction of the device, as will be herewith set forth and specifically claimed.

In the accompanying drawing, Figure 1 is an inside front elevation of my improved door. Fig. 2 is a plan view of the same in central section.

The frame of the door is an iron or other metal plate, A, having the desirable conformation and ornamentation. The edges of this plate are formed into flanges B, of from one to two inches in length. These flanges are formed flaring, as shown in Fig. 2, and form supports whereon to rest the non-conducting lining or facing C, which may be a slab of soap-stone, fire-tile, or other opaque non-conducting solid substance, having its inner face glazed or enameled in any suitable manner. This lining fits into the shell formed by the plate A and flanges B, and is held from displacement by a metallic frame, D, through which and the shell bolts *a* are secured. By this means the non-conducting lining is held securely in position, while at the same time its surface is exposed to the oven, except such part as is covered by the frame D. To aid it in repelling the heat its surface is glazed, which will also prevent its absorbing grease or other dirt, and permit of its being washed clean. While a very good non-conducting door would be obtained by entirely filling the shell with this non-conducting plate exposed directly to the

heat of the oven, yet it would greatly improve it to leave a space or cavity, E, between the plate A and the non-conducting lining, which will form a dead-air chamber, which is the best non-conductor of heat known. This, in connection with the non-conducting plate C, will make the door almost if not quite impervious to heat.

I am aware that it is not new to construct an oven-door consisting of a metallic casing filled with plaster-of-paris or other non-conducting substance, entirely inclosed on all sides by the metal casing, and therefore do not broadly claim a non-conducting or refractory lining.

I am also aware that glass plates have been used in combination with oven-doors for the purpose of enabling the cook to view the interior of the oven without opening the doors; and as glass is a non-conductor of heat, I consequently do not broadly claim any solid non-conductor applied to an oven-door, but limit myself to fire-tile, soap-stone, porcelain, or other opaque glazed substances, which are the best non-conductors, for it is well known that transparent substances are comparatively poor conductors, and permit heat as well as light to pass through them.

I am also aware that a dead-air chamber has been employed in connection with transparent linings, and that fire-tile has been used on the inner side of doors opening into the fire-chamber. In the former case the dead-air chamber simply performed its usual function. In the latter case the fire-tile was only used to protect the iron and prevent its burning out, not for the purpose of retaining radiant heat, as in my case, nor was it provided with a dead-air space.

Having thus fully described my invention, I claim—

1. The combination, with the oven or cooking-chamber, of a stove-door having an interior facing or lining of fire-tile, soap-stone, or other opaque solid non-conducting substance, having a glazed or enameled surface directly exposed to the heat of the oven, as and for the purpose specified.

2. An oven-door having an interior opaque

glazed non-conducting facing, and a dead-air chamber between the outer metallic shell and the non-conducting facing, as and for the purpose set forth.

3. The combination, in an oven-door, of the shell A B, opaque glazed non-conducting lining C, retaining-frame D, and dead-air chamber E, the whole constructed and arranged in the manner and for the purpose specified.

Witness my hand this 5th day of March, A. D. 1878.

RUFUS J. KING.

Witnesses:

P. H. GUNCKEL,
CHAS. M. PECK.