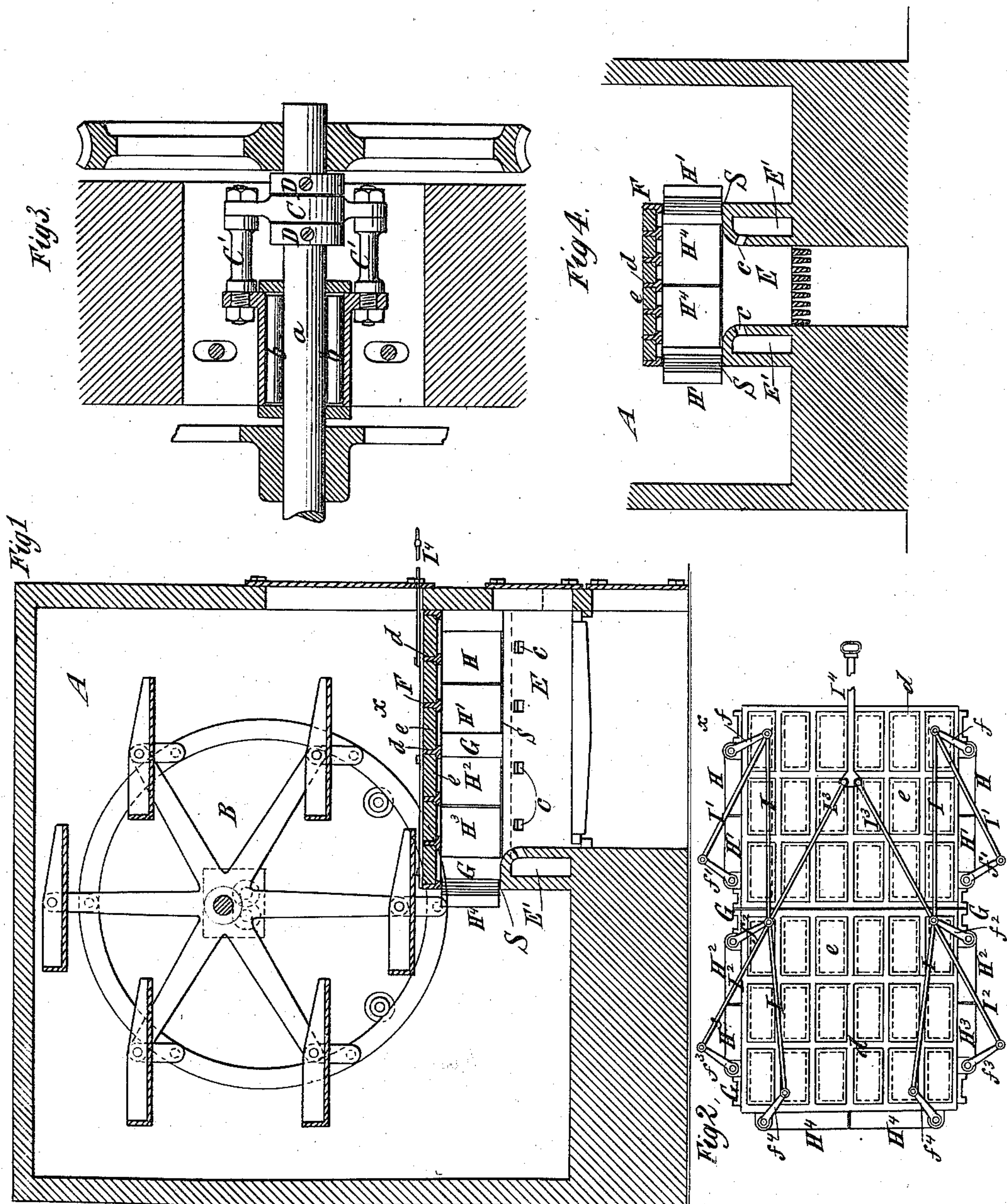


(No Model.)

A. CRUMBIE.  
BAKER'S OVEN.

No. 271,806.

Patented Feb. 6, 1883.



Witnesses:  
Fred Wagner  
O. Sundgren

Inventor:  
Alex Crumbie  
by his Attorney  
R. M. Brown



# UNITED STATES PATENT OFFICE.

ALEXANDER CRUMBIE, OF BROOKLYN, NEW YORK.

## BAKER'S OVEN.

SPECIFICATION forming part of Letters Patent No. 271,806, dated February 6, 1883.

Application filed August 17, 1882. (No model.)

*To all whom it may concern:*

Be it known that I, ALEXANDER CRUMBIE, of Brooklyn, in the county of Kings and State of New York, have invented a new and useful Improvement in Bakers' Ovens, of which the following is a specification.

The invention consists in the combination, with a baking-chamber and a reel-shaft extending through the wall of the chamber and provided outside the chamber with collars, of a fixed bar arranged between the collars, and supports for said bar, whereby it serves to prevent longitudinal movement of said shaft. I provide a bearing for the reel-shaft in the wall of the baking-chamber; and the supports for the fixed bar above described may consist of two arms or bars projecting outward from said bearing.

The invention also consists in the combination, with a baking-chamber and a furnace arranged therein, of a deflector arranged some distance above the walls of the furnace, whereby openings are formed below the deflector at the sides and ends of the furnace for the passage of heat from the furnace directly into the baking-chamber, hinged doors controlling said openings, arms fixed to the hinge-pins of said doors, a hand-rod, and other rods so connected with the arms and the hand-rod that the doors may be opened and closed simultaneously to control the passage of heat from the furnace to the baking-chamber.

In the accompanying drawings, Figure 1 is a central vertical section of a baker's oven embodying my improvement. Fig. 2 is a plan of a portion of the same on a larger scale. Fig. 3 is a transverse section of a portion of the same, also on a larger scale, illustrative of the bearings for the reel; and Fig. 4 represents a vertical section of the lower part of the baking-chamber and the furnace on the dotted line *x*, Fig. 1.

Similar letters of reference designate corresponding parts in all the figures.

A designates the body or baking-chamber of the oven, which may be made of masonry in the usual manner. It is provided with a rotary reel, B, which may be of any ordinary construction. The journals *a* of the reel-shaft are supported on anti-friction rollers *b*, and one journal extends through a bar, C, which is de-

tachably connected with arms or bars C', projecting outward from one of the bearings for the anti-friction rollers *b*. On opposite sides of the bar C collars D are secured to the journal of the reel-shaft to resist endwise movement of the shaft. The collars are more accessible here than in their ordinary position, and are less affected by the heat of the baking-chamber.

E designates the furnace. It may be of any approved construction. Above the grate-bars is an air duct or passage, E', which extends around the fire. Its ends extend to the front wall of the oven, and the passage of air to them may be controlled by means of doors or valves. The inner sides of the air-duct are provided with apertures *c*, through which the air escapes immediately over the fire.

Above the furnace is a deflector, F, which is supported on posts or standards G. This deflector is made of sections of cast-iron, comprising recesses *d*, in which are laid and supported fire-bricks or tiles *e*. It stands the heat well, and is very easily and cheaply constructed. Between the deflector F and the top of the walls of the furnace E, at the rear end and sides of the furnace, are openings S, (best shown in Figs. 1 and 4,) for the passage of heat directly from the furnace to the baking-chamber A.

To the posts or standards G are hinged doors H H' H<sup>2</sup> H<sup>3</sup> H<sup>4</sup>, which may be opened more or less to control the escape of the products of combustion and heated air from the furnace into the baking-chamber. The hinge-pins of these doors are rigidly connected to the doors, and are provided with arms *f f' f<sup>2</sup> f<sup>3</sup> f<sup>4</sup>*, respectively. Rods I are pivotally connected with the arms *f f<sup>2</sup> f<sup>4</sup>* of the doors H H<sup>2</sup> H<sup>4</sup>. Rods I' are pivotally connected to the arms *f f'* of the doors H H', and rods I<sup>2</sup> are pivotally connected to the arms *f<sup>2</sup> f<sup>3</sup>* of the doors H<sup>2</sup> H<sup>3</sup>. Rods I<sup>3</sup> are pivotally connected to the arms *f<sup>2</sup>* of the doors H<sup>2</sup> and to the inner end of a sliding hand-rod, I<sup>4</sup>. By pulling this hand-rod I<sup>4</sup> outward the doors may be closed, and by pushing the said rod the doors may be opened more or less.

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

1. The combination, with a baking-chamber and a reel-shaft extending through the wall of



the chamber and provided outside the chamber with collars D, of the fixed bar C, arranged between said collars, and supports for said bar, whereby it serves to prevent longitudinal movement of said shaft, substantially as described.

5 2. The combination, with a baking-chamber and a reel-shaft extending through the wall of the chamber and provided outside the chamber with collars D, of a bearing for the shaft  
10 supported in said wall, bars or arms C', projecting outward from said bearing, and the bar C, fixed to the bars or arms C' and fitting between said collars for preventing longitudinal movement of said shaft, substantially as described.

15 3. The combination, with a baking-chamber and a furnace arranged therein, of a deflector

arranged some distance above the walls of the furnace, whereby openings are formed at the sides and end of the furnace below the deflector for the passage of heat from the furnace directly into the baking-chamber, hinged doors controlling said openings, arms affixed to the hinge-pins of said doors, a hand-rod, and other rods so connected with the arms and the hand-rod that the doors may be opened and closed simultaneously to control the passage of heat from the furnace to the baking-chamber, substantially as described.

ALEX. CRUMBIE.

Witnesses:

FREDK. HAYNES,  
ED. L. MORAN.