(No Model.)

A. C. MASON.

STOVE AND RANGE DOOR.

No. 334,258. Patented Jan. 12, 1886.

Fig. 1.

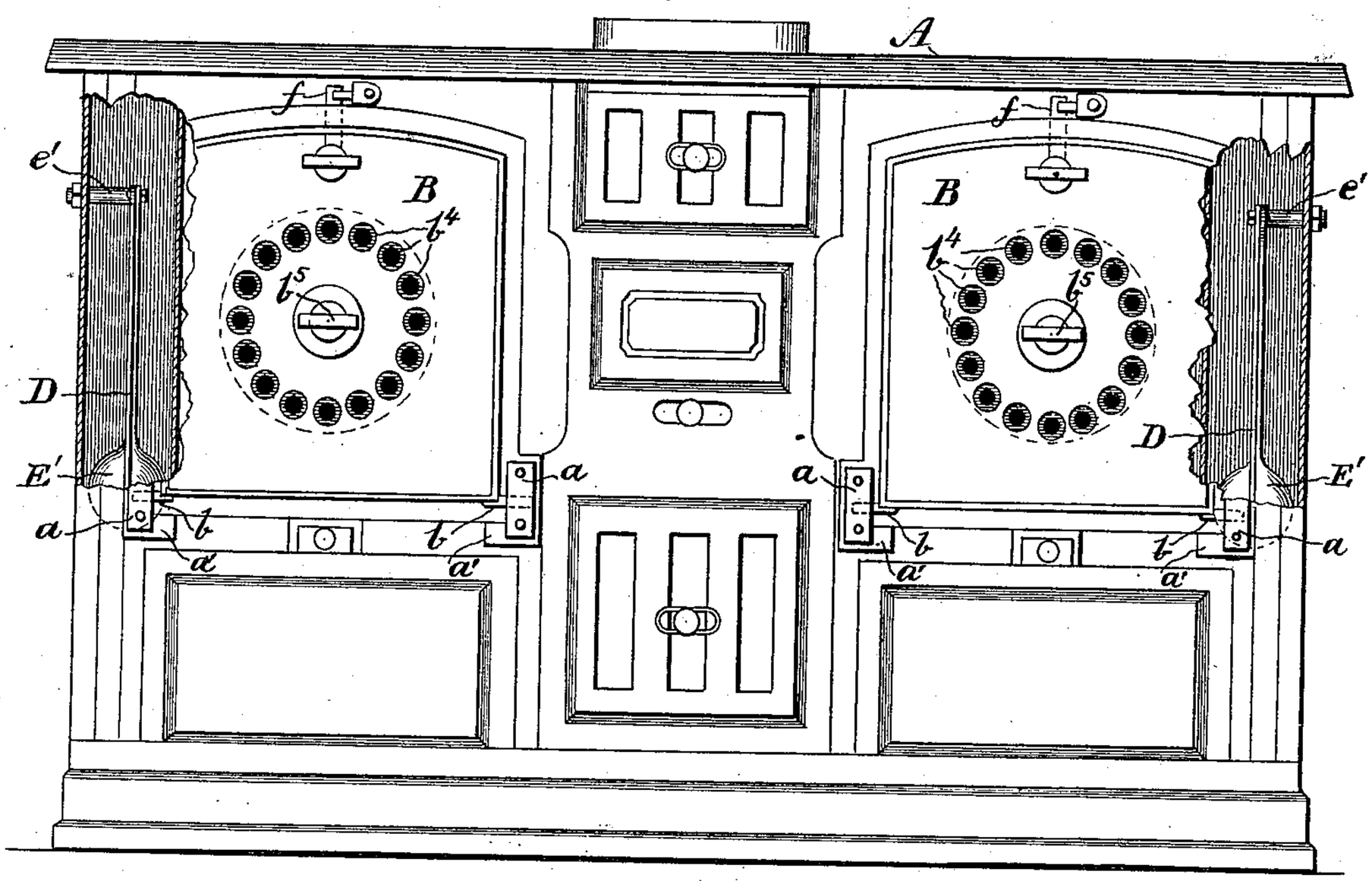

Fig. 3.

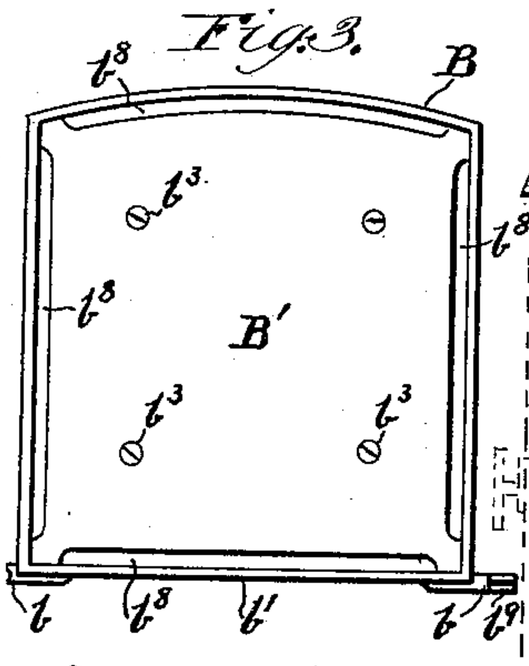

Fig. 2.

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UNITED STATES PATENT OFFICE.

ALVIN C. MASON, OF HYDE PARK, ILLINOIS.

STOVE AND RANGE DOOR.

SPECIFICATION forming part of Letters Patent No. 334,258, dated January 12, 1886.

Application filed May 29, 1885. Serial No. 167,018. (No model.)

To all whom it may concern:

Be it known that I, ALVIN C. MASON, of Hyde Park, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Stove and Range Doors, of which the following is a description, reference being had to the accompanying drawings, in which—

Figure 1 is a front view of a range to which said invention is applied, portions being broken away at the ends to show the interior. Fig. 2 is an end view of said range, with a portion broken away to show the counterpoise mechanism within, while the door is shown in section. Fig. 3 is a view of the inside of said door.

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

The object of my invention is, primarily, to provide a door for the ovens of stoves and ranges, by which said ovens may be ventilated, while at the same time the heated air within the oven is prevented from escaping too rapidly, and thus causing the oven to cool. A further object is to so construct said door that it may open from the top and form a horizontal shelf when open, a suitable counter-balance being provided to prevent a sudden fall thereof, with the resulting undue strain upon the hinges, all of which is hereinafter more particularly described, and definitely pointed out in the claim.

In the drawings, A represents the usual cooking-range, provided with lugs or bearings *a a* cast thereon or bolted thereto at the bottom and upon either side of the oven, to which is secured, by means of the usual trunnions, *b b*, my improved door B. Said door consists of an outer plate, *b'*, Fig. 2, provided with a suitable number of projecting studs, b^2, upon the inside thereof, to which is attached, by means of screws b^3, Figs. 2 and 3, an inner plate, B', leaving an air space or cavity between the plates. The outer plate, *b'*, is provided with a series of perforations, b^4, Figs. 1 and 2, preferably arranged in a circular form and upon the inside of said plate, and loosely attached thereto by a bolt having a thumb-piece, b^5, is a circular plate, b^6, Fig. 2, which is likewise provided with perforations b^7, corresponding in number and position to those in the outer plate. Said bolt, with thumb-piece b^5, is rigidly attached to the plate b^6, so that the latter may be rotated thereby, thus opening or closing the perforations b^4 at will. The inner plate, B', is cut away around its outer edges, as at b^8, Figs. 2 and 3, thereby leaving air-passages around the entire periphery of said plate. This arrangement enables the heat to be retained within the oven, and keeps the outer plate, *b'*, cool, while at the same time a sufficient quantity of fresh air may be admitted to ventilate the oven, said air being thereby so uniformly and evenly distributed as not to interfere with the process of baking. It is obvious that by adjusting the thumb-piece b^5 a proper amount of air may be admitted at all times to secure the best results.

As the hinges or trunnions of doors, when constructed in the manner shown, are liable to become broken from the falling of said doors, I have provided a device whereby a sudden jar from said cause may be prevented and the door protected from injury. The trunnion *b* next to the end of the stove or range is squared, as shown at b^9, Figs. 2 and 3, and a crank, C, fitted thereto. To the opposite end of said crank is loosely attached a link, D, which in turn is loosely connected by means of a bolt or screw, *d*, Fig. 2, to the end of the arm *e* of an elbow, E, the lower end, E', of which is enlarged to form a weight. The elbow E is loosely suspended upon a stud, *e'*, which is rigidly attached to the wall or end plate of the stove, so that the weight is free to swing within the space between the oven and the end plate of the stove, as clearly shown in Fig. 1. When the door B is closed, said crank, link, and elbow assume the respective positions shown in dotted lines in Fig. 2; but as the door is opened, and the free end of the crank C moved in the arc described thereby, the elbow E is caused to swing upon its axis, which raises the weight E' to counterpoise that of said door. Two or more ledges, *a' a'*, attached to the outer stove-plate, are preferably used as additional supports for said door when open, and the latter may be closed and secured by means of the usual latch, *f*, as clearly shown in Fig. 1.

I do not claim, broadly, a weighted lever or counterpoise in combination with a stove or range door; but

What I do claim is—

The combination, with a stove or range, of a door having a horizontal axis, and the suspended weighted elbow E, link D, and arm C, said elbow, link, and arm being arranged within the vertical flue of said stove, and constructed substantially in the manner and for the purposes specified.

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Witnesses:
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