No. 759,188. PATENTED MAY 3, 1904.

G. OTT.

RANGE OVEN.

APPLICATION FILED NOV. 20, 1903.

NO MODEL.

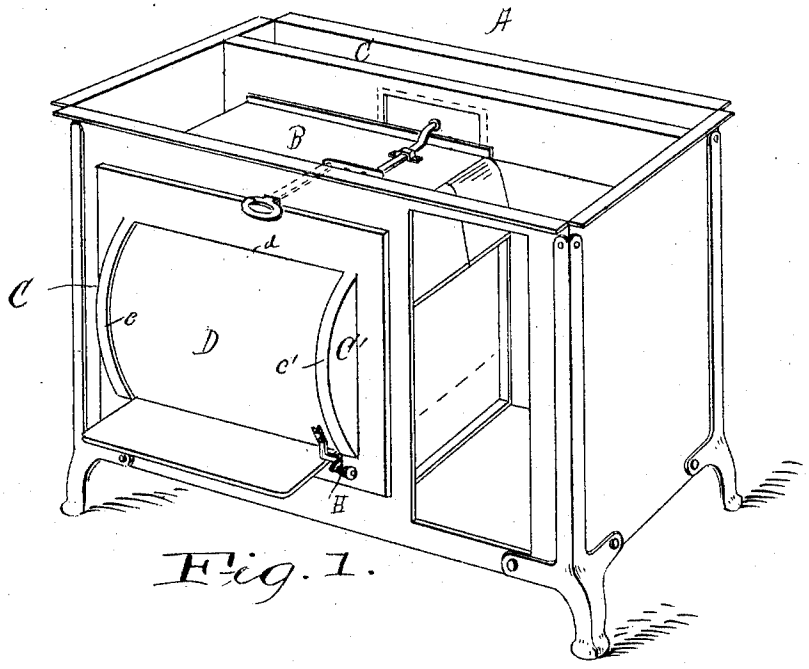


Fig. 1.

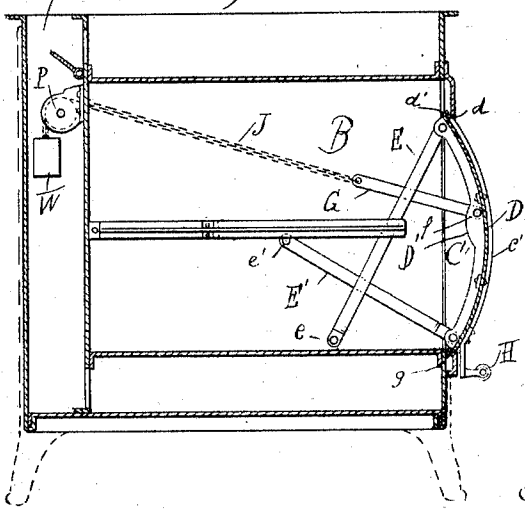


Fig. 2.

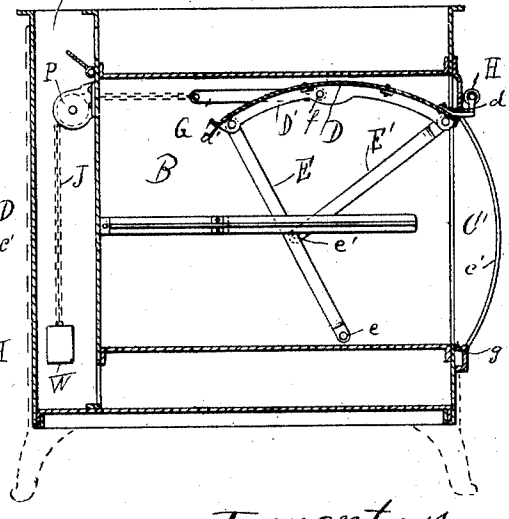


Fig. 3.

Witnesses.
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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

No. 759,188. Patented May 3, 1904.

UNITED STATES PATENT OFFICE.

GUSTAV OTT, OF CLEVELAND, OHIO, ASSIGNOR OF ONE-HALF TO WILLIAM C. P. OTT, OF ASHLAND, OHIO.

RANGE-OVEN.

SPECIFICATION forming part of Letters Patent No. 759,188, dated May 3, 1904.

Application filed November 20, 1903. Serial No. 181,993. (No model.)

To all whom it may concern:

Be it known that I, GUSTAV OTT, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Range-Ovens; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use the same.

My invention relates to certain new and useful improvements for hanging of oven-doors.

The object of my invention is to counterbalance the door at all points and to provide a door which when closed is practically air-tight and one which when partly open will receive the cold air at the bottom, heat the same, and cause it to pass out at the upper end, thus utilizing the heat of the oven for heating the air in a room.

My invention consists in the peculiar method of hanging the door, whereby the above objects are attained, all of which will be hereinafter fully set forth and claimed.

In the drawings, Figure I is a view in perspective of a range provided with a door embodying the present invention. Fig. II is a central vertical transverse section of the same, the door in this view being shown in closed position. Fig. III illustrates the door in open position, the view being taken in vertical transverse section.

A represents the body of the range, having the oven-box B and smoke-chamber C. Projecting at the front end or face of the oven B is a curved inwardly-flanged projection, one on both sides of the oven-opening, and the flanges projecting toward each other. These projections are designated by the letters C C′ and their respective flanges by the letters *c c′*. The flanges of the ledges C C′ provide on their inner face a seat against which the curved door D rests when in a closed position, the hot air in the oven projecting the material of the door against the inner surfaces of the flanges, forming a practically air-tight joint. The curved portion D of the door is formed of sheet metal and is riveted or bolted or otherwise fastened to a curved segment D′, preferably of cast metal. This, however, may be replaced by flanging the sheet metal at the sides. To the curved segments D′ (one being provided at each side of the curved door D) is pivotally secured at each end an arm E E′, the arm E being secured to the upper end of the segment D′, and the arm E′ being secured to the lower end of the segment D′. The arms E are pivotally secured to the side plates of the oven-box B at the lower portion thereof, so as to form a lever-hinge which will support the door D at its upper end when in a closed position against the upper ledge *d* of the door-frame and when the door is open will support the upper end of the door at the upper portion of the oven-box, substantially as illustrated in Fig. III. The arms E′ are pivotally secured to the sides of the oven-box above and to the rear of the lower pivotal portion of the arm E and are of such a length that when the door B is closed the lower end of the door will fit snugly to the frame and within the flanges *c c′* at this portion; but when the door is open the arm E′ will support the door at the upper end of the oven-box. These two levers E E′, in connection with the opposing levers on the other side of the oven, (it being understood that they are duplicated on the opposite side of the oven-box,) form a combination-hinge which will support the oven at the upper portion of the oven-box when open and cause it to hug the flanges *c c′* when closed. A handle H is secured to the door for operating it, and this may be of any suitable construction, although I prefer to form it as illustrated, whereby it forms a stop for the door when it is open, and hence is located at the lower end thereof.

In order to counterbalance the oven-door D with its levers, I have provided a weight W, which is secured to the door one at each side thereof, as at *e*, preferably through means of a pivoted arm G, from whence extends a chain J, which passes over a pulley P, the pulley P extending rearwardly into the smoke-chamber C. This weight W and its pulley C and attaching mechanism is duplicated at each side

of the door, although this is not absolutely essential, but is a preferable construction. The weights W are just sufficient to counterbalance the door, and it will thus be seen that no matter what position the door is in it is just counterbalanced and will retain that position until manually operated.

At the lower ledge of the oven-opening I provide a seat or recess *g*, into which fits or rests the lower portion of the door, forming it air-tight at this part. The upper edge of the door is turned in, as at *c*, which ledge when the door is closed rests upon an inturned flange *d'* at the top of the door-opening.

It will be seen that the door will be easily operated, is perfectly counterbalanced, and when open is removed entirely out of the way by my construction, and that when the same is closed it is practically air-tight.

In setting forth my invention I have shown and described certain assemblages and features of construction; but I do not hence wish to be limited to the same, as they may be modified without departing from my invention.

What I claim is—

1. A range comprising an oven-box, open at one side, a door for closing said opening said door being hinged to two bars pivoted at both ends respectively of the door, and a counterbalancing-weight secured to said door substantially as set forth.

2. A range comprising an oven-box open at one side, a door for closing said opening, said door being pivoted at each side to two radial bars pivoted to the side of the oven and each end respectively of the door, the whole being arranged and constructed so as to form the pivotal portions of the door in relation to the oven-box and to support the door approximately parallel with the top of the oven-box.

Signed at Cleveland, in the county of Cuyahoga and State of Ohio, this 31st day of October, 1903.

GUSTAV OTT.

Witnesses:
E. B. DONNELLY,
K. C. BRADLEY.