

(No Model.)

2 Sheets—Sheet 1.

G. G. KNIFFIN.

STOVE OR RANGE.

No. 398,515.

Patented Feb. 26, 1889.

Fig. 1

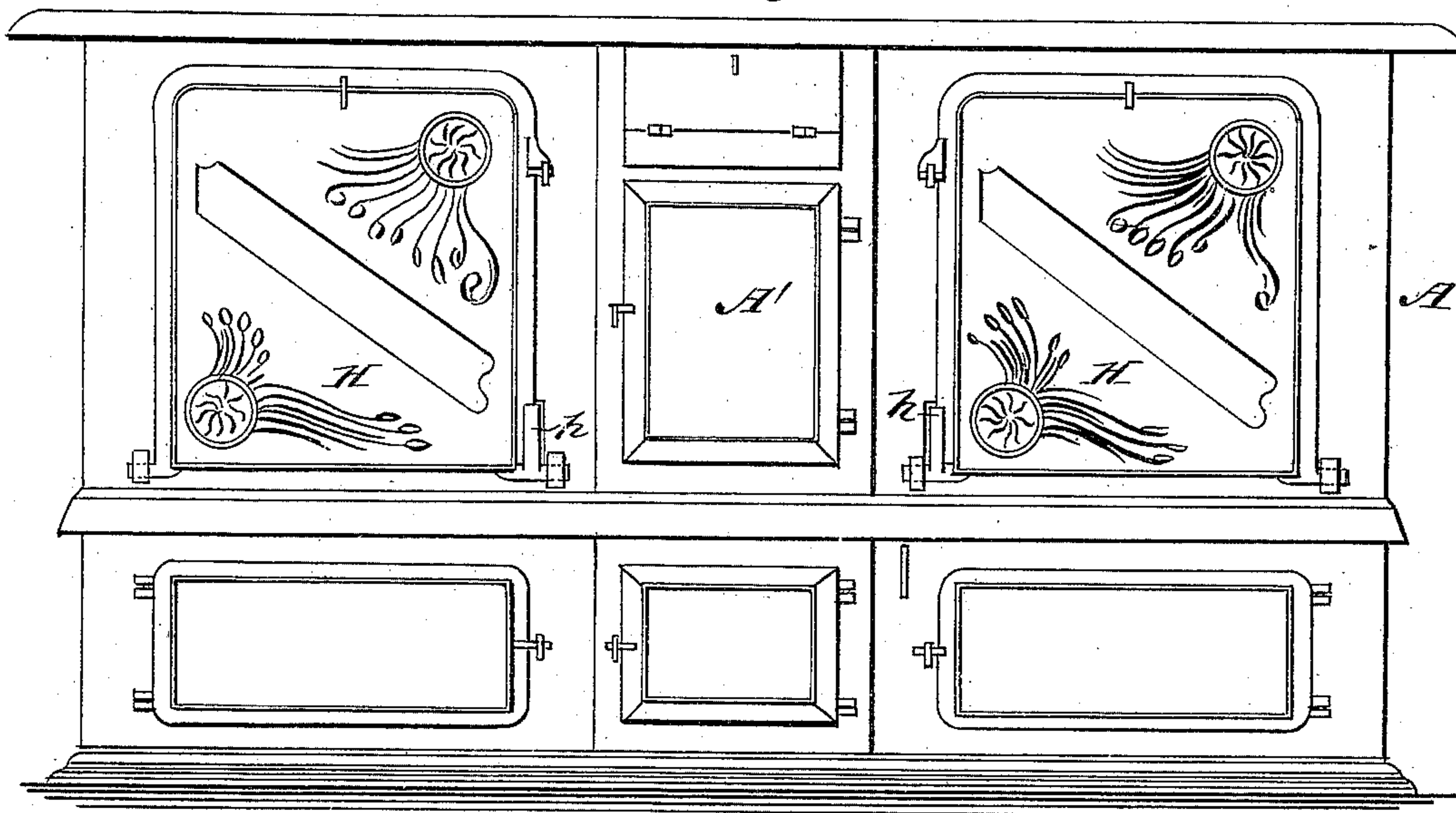
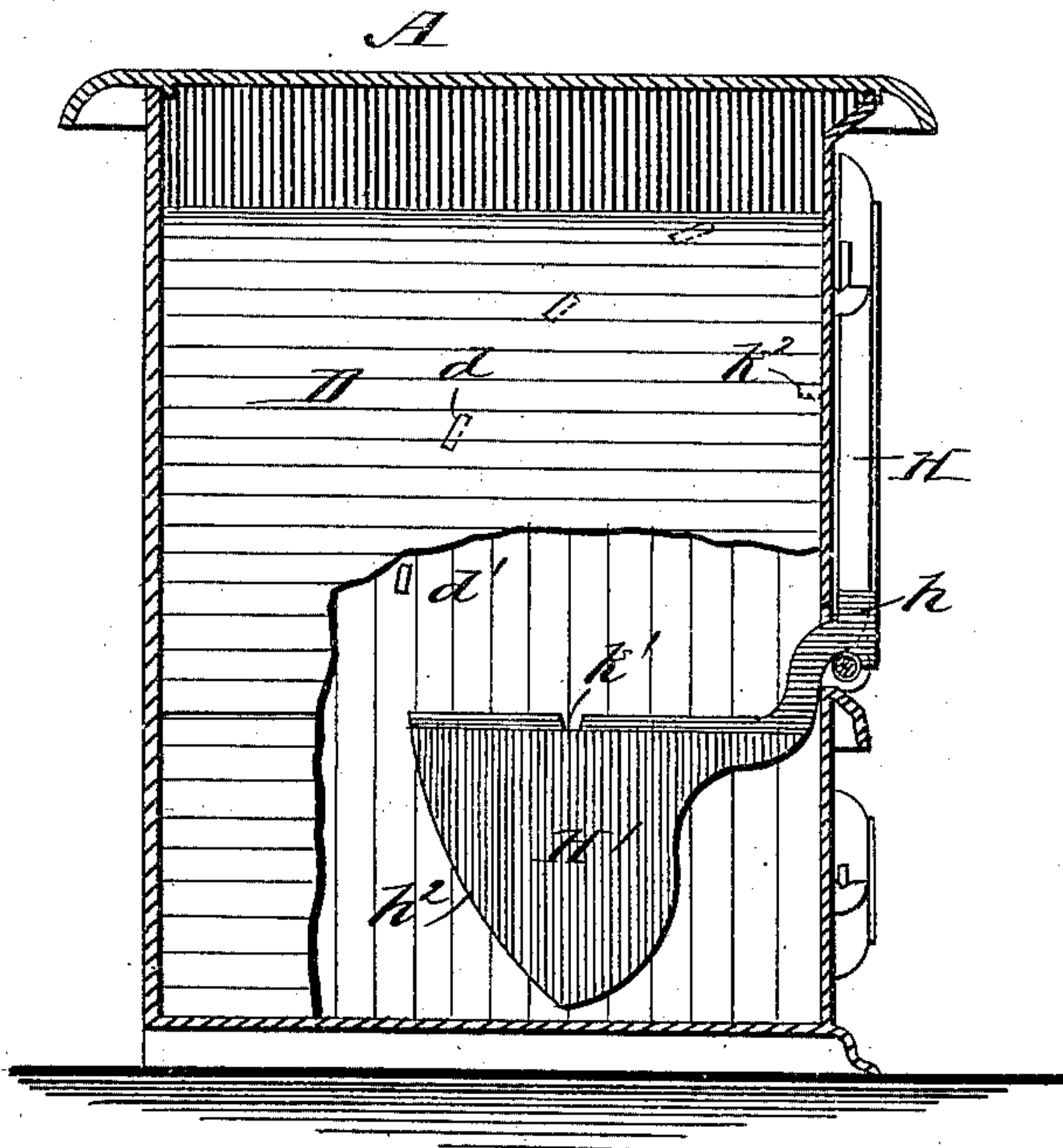


Fig. 2



WITNESSES:

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Fig. 3

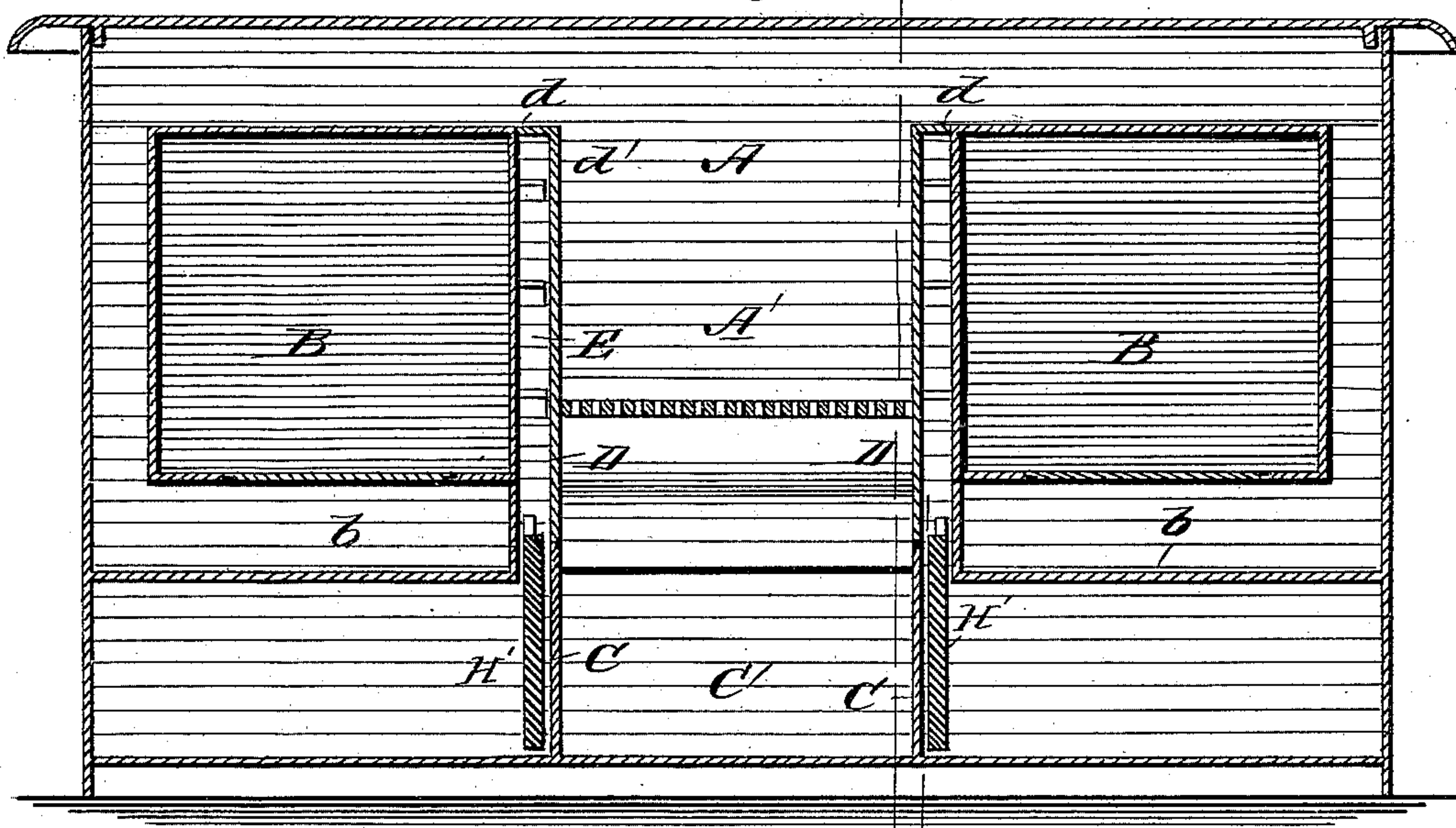
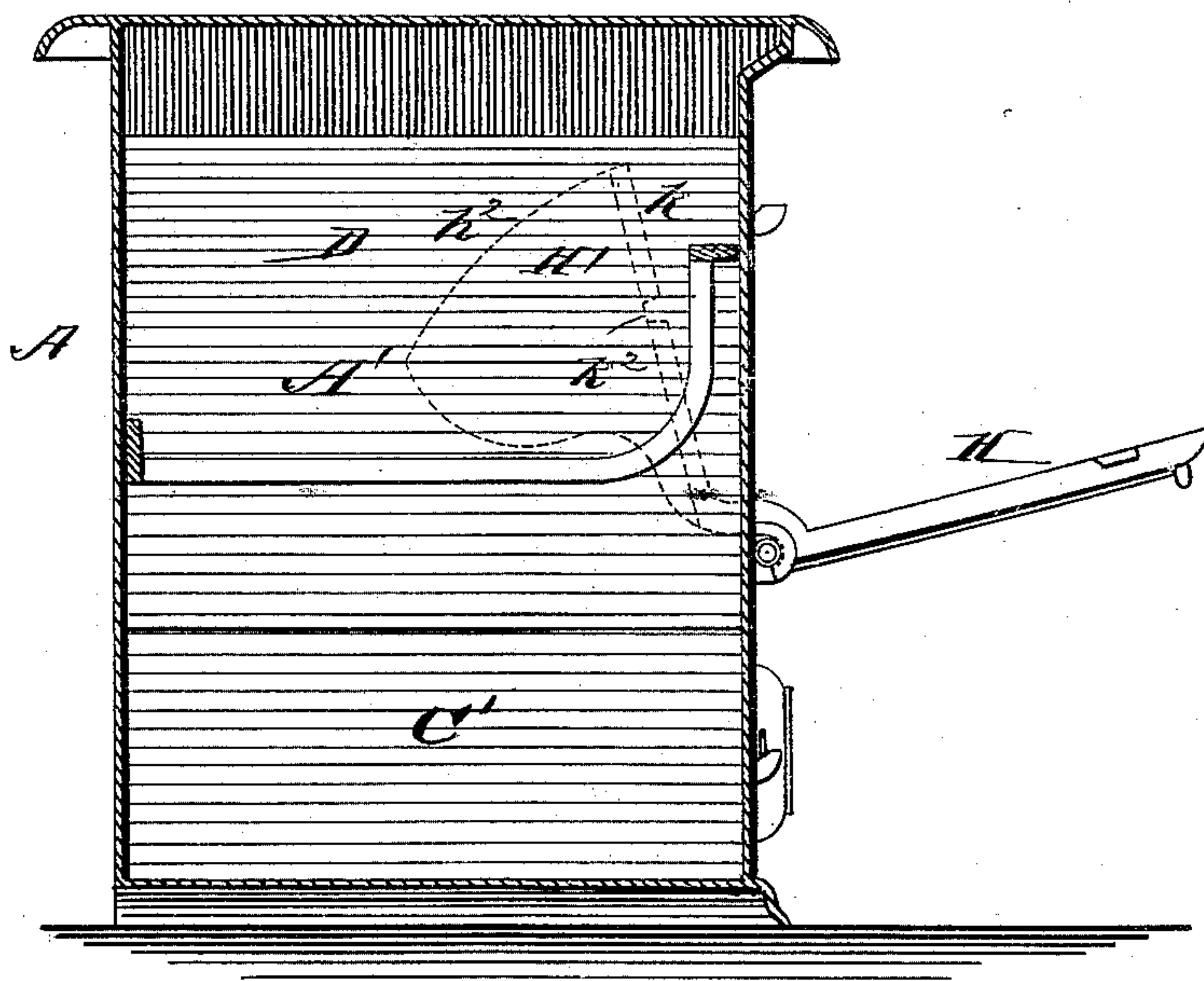


Fig. 4



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UNITED STATES PATENT OFFICE.

GEORGE G. KNIFFIN, OF BROOKLYN, ASSIGNOR TO HENRY E. JANES AND
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STOVE OR RANGE.

SPECIFICATION forming part of Letters Patent No. 398,515, dated February 26, 1889.

Application filed October 10, 1888. Serial No. 287,758. (No model.)

To all whom it may concern:

Be it known that I, GEORGE G. KNIFFIN, of Brooklyn, in the county of Kings and State of New York, have invented new and useful Improvements in Stoves or Ranges, of which the following is a full, clear, and exact description.

My invention relates to an improvement in stoves or ranges, and has for its object to provide the said ranges or stoves with a counterbalance drop-door specially adapted for use at the oven; and the further object of the invention is to attach the doors in a simple and durable manner, and provide a means whereby the said doors will be easy of access in the event repairs are needed.

The invention consists in the construction and combination of the several parts, as will be hereinafter fully set forth, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a front elevation of a range having double ovens. Fig. 2 is a central transverse section on line xx of Fig. 1, illustrating the invention, the inner partition-wall being partly broken away. Fig. 3 is an essentially longitudinal section, and Fig. 4 is a transverse section on line yy of Fig. 1.

In carry out the invention, A represents a range containing a central fire-pot, A', and an oven, B, at each side of the latter, which ovens at the bottom are separated from the bottom of the range by the usual horizontal partitions, b , the inner end of the said partitions being connected with the inner side of the ovens, as best shown in Fig. 3. Perpendicular partitions C are cast integral with the bottom of the range or attached thereto, which partitions constitute the side walls of the ash-pit C'.

Upon the upper edge of the said perpendicular partitions a second perpendicular partition D is detachably fitted, and the said latter partition D is carried upward parallel with the inner side of the ovens to the top of the same, at which point an integral projection, d , is formed extending at a right angle

outward to a detachable connection with the oven, as best illustrated in Fig. 3.

A space, E, is made to intervene the detachable partition D and the inner oven-side, and a series of lugs, d' , are preferably projected from the oven-side to support and brace the partition D, the lugs being arranged upon an arc of a circle, as best shown in Fig. 2.

The oven-doors H, which are adapted to swing downward, are provided upon the side contiguous to the fire, at the bottom, with an attached or integral counterpoise-weight, H', extending through an aperture, h , in the front of the stove into the space E. The weight H' is made to just balance the door, and preferably provided with a cylindrical outer edge, h^2 , whereby as the door is lowered and the weight ascends the cylindrical surface of the latter will travel in contact with and be guided by the lugs d' .

The upper face, k , of the weight is usually made straight and provided with a notch, k' , and a post, k^2 , purposed to enter the notch k' when the weight is fully elevated, is secured to the inner face of the range-front at a suitable point.

In operation as the weight effectually balances the door the latter may be raised or lowered and retained at any angle intervening a horizontal and a perpendicular position. Again by the use of a counterpoise-weight the door if opened suddenly and dropped will not break at the hinge, as the force of the fall is broken by the weight. When the door is closed, the weight is below the bottom line of the oven, as shown in Fig. 3, with the top horizontal, as illustrated in Fig. 2. When the oven-door is fully opened, the straight sides of the weight are brought in close contact with the inner face of the front of the range, and are held in such position by the post k^2 entering the slot in the weight.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination, with the stove or range having a vertical space at the side of the oven, of the vertically-swinging oven-door having a weight the upper face of which is at right angles to the inner face of the door to rest

against the inner side of the front when the door is swung down to a horizontal position, substantially as set forth.

2. The combination, with the range having
5 the two partitions C C, the side ovens, and the detachable partitions D D, resting on the upper edges of partitions C C, parallel with the ovens and having horizontal projections *d*
10 along their upper edges engaging the upper ends of the ovens, of the downwardly-swinging doors hinged at their lower ends to the range-front and having integral weights working in the spaces between the ovens and partitions D, the upper faces of the weights be-
15 ing at right angles to the inner faces of the doors, substantially as set forth.

3. The combination, with the oven of a stove or range, a spaced detachable partition parallel with one side of the oven, and horizontal guide-lugs attached to said oven, arranged upon the arc of a circle, of a drop-door, and a counterpoise-weight secured to the door capable of movement between the oven and partition, provided with a cylindrical outer edge and a straight upper sur-
25 face, substantially as shown and described.

GEORGE G. KNIFFIN.

Witnesses:

WILLIAM N. CALDER,
HENRY CHASTY.