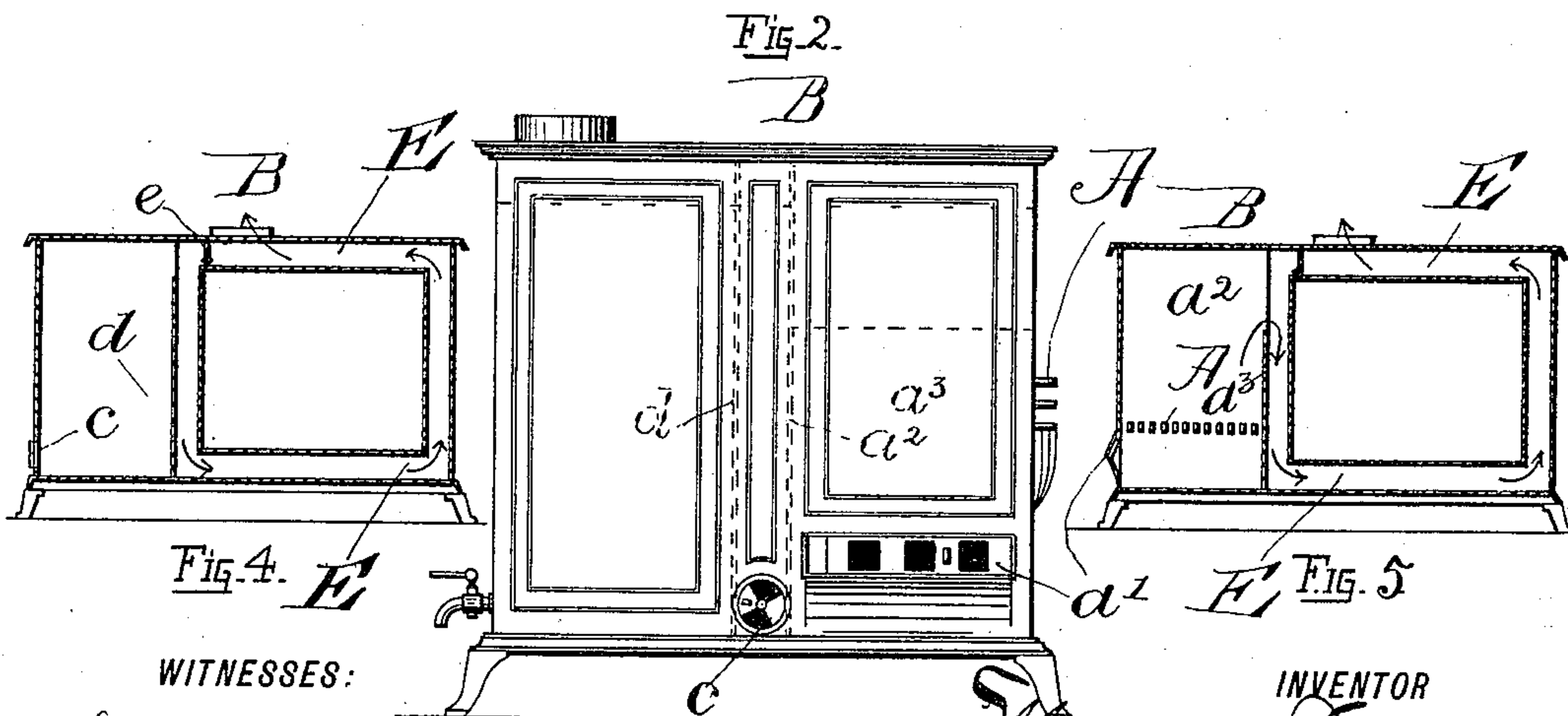
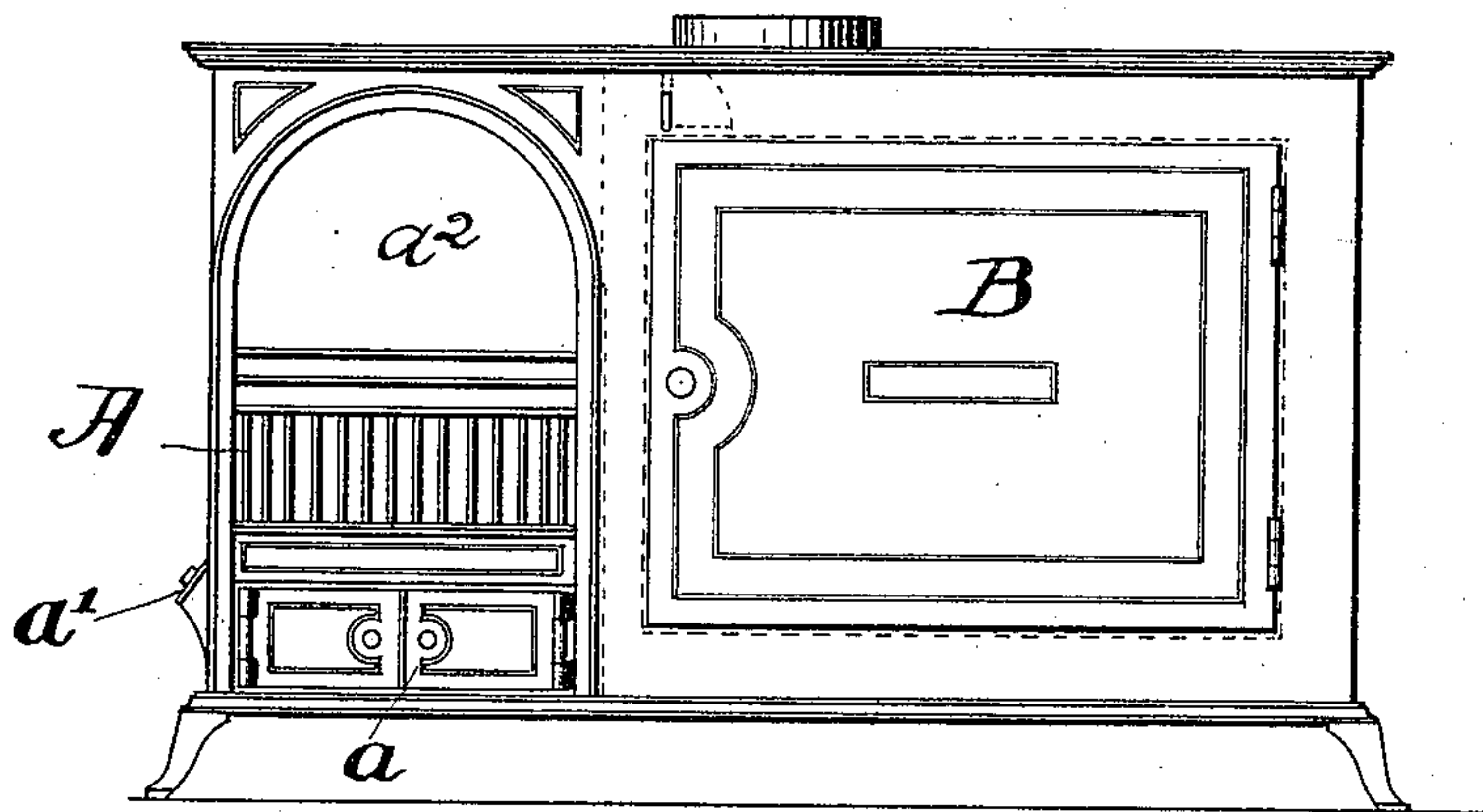
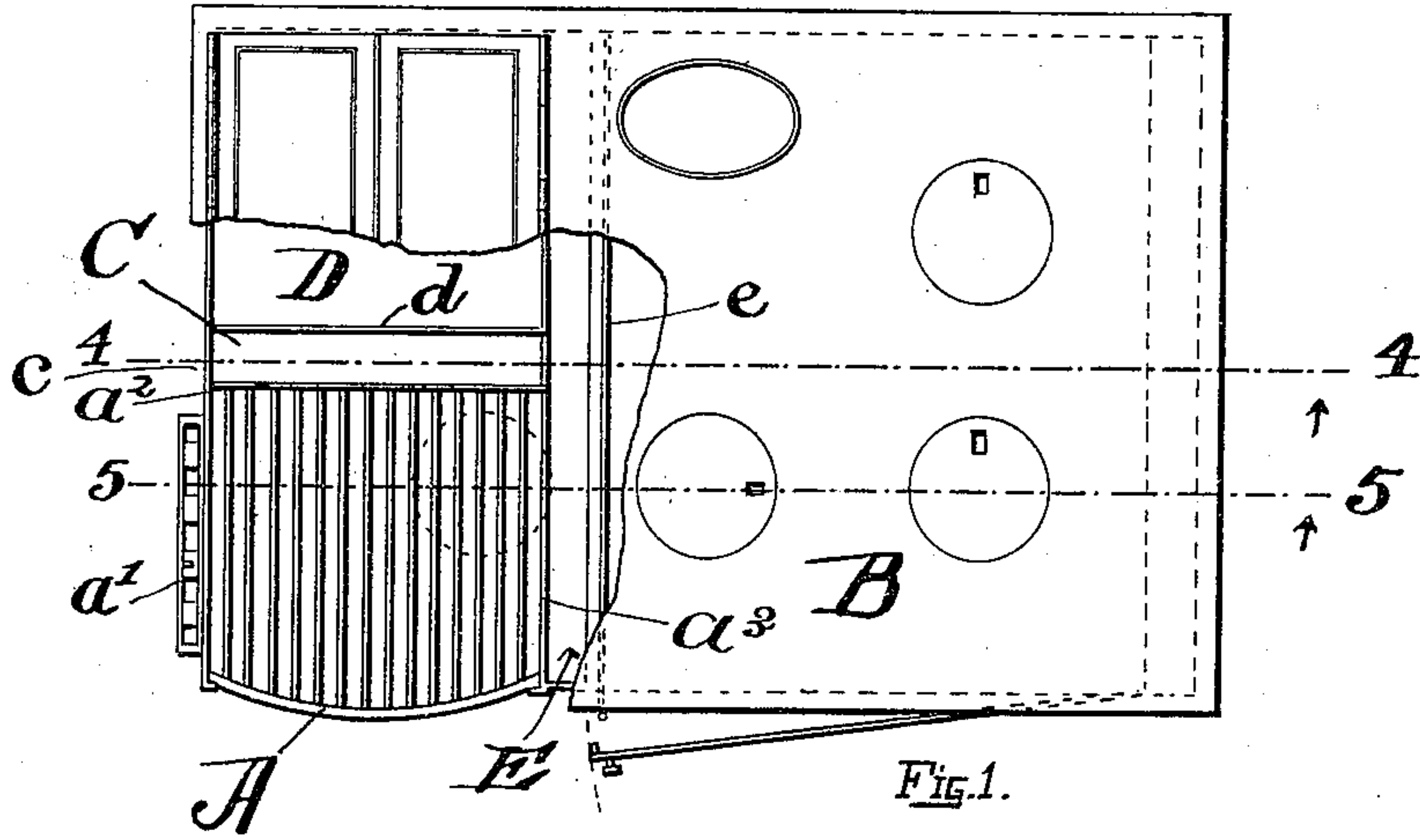


(No Model.)

M. DALLAS.  
COMBINATION GRATE AND STOVE.

No. 435,965.

Patented Sept. 9, 1890.



WITNESSES:

Luke P. Hayden.  
A. P. H. H.

FIG. 3.

INVENTOR

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BY  
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# UNITED STATES PATENT OFFICE.

MARTHA DALLAS, OF ATLANTA, GEORGIA.

## COMBINATION GRATE AND STOVE.

SPECIFICATION forming part of Letters Patent No. 435,965, dated September 9, 1890.

Application filed May 2, 1890. Serial No. 350,383. (No model.)

*To all whom it may concern:*

Be it known that I, MARTHA DALLAS, a citizen of the United States, and a resident of Atlanta, in the county of Fulton, State of Georgia, have invented certain new and useful Improvements in a Combined Grate and Cooking-Stove; and I do 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 appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

This invention relates to heating and cooking devices, and more especially to the combination of a grate in which can be had an "open" fire, and elements whereby said fire can be utilized and directed in performing all the necessary functions of a cooking stove or range when desired, the details of all of which are shown in the accompanying drawings, and will be hereinafter fully described.

In the drawings, Figure 1 is a plan of the device, partly in section, showing a form of arrangement of the top, and, by reason of a section thereof being broken away, also showing the interior construction and arrangement of the fire-box, hot-water reservoir, damper, and other elements. Fig. 2 is a side elevation of this device, further showing the elements shown in Fig. 1 and showing also the doors to the ash-chamber. Fig. 3 is an end elevation showing, besides some of the elements hereinafter mentioned, the register-opening into the cold-air flue and a faucet through which water may be drawn from the hot-water reservoir. Fig. 4 is a section on the line 4 4, Fig. 1, showing the reservoir and the flue passing around the oven and the damper closed. Fig. 5 is a section on the line 5 5, Fig. 1, and shows the back of the fire-chamber and the bottom of the grate and the flue also which passes around the oven, also showing the damper closed.

In the figures, like reference-marks indicate corresponding parts in the several views.

A is a grate, which is substantially the same in form as the grates usually set in open fire-places, with the exception that it extends back slightly farther in proportion and is set in the

corner of the stove B, the construction of which stove will be hereinafter fully described. In its outward appearance the grate A and its surrounding plate is very much like the setting of an open fire-place as commonly used, having, however, for access into the ash-chamber, doors *a*, and for admission or regulation of the admission of the draft a small sliding register *a'* is inserted in the end of the stove opening into the interior below the grate A, it forming, preferably, the cover of a short chute for the purpose of preventing the passing out of ashes through said register when open. The back *a<sup>2</sup>* of the fire-chamber is set vertically and longitudinally of the said stove at about midway of the same laterally, a deflector *a<sup>3</sup>* for the heat and flame passing upwardly from the bottom of the stove at one side of the fire-chamber and forming the other inner wall thereof, an extension laterally of the stove of said wall *a<sup>3</sup>* forming the division-wall between the cold-air flue C and the hot-water reservoir D and the flue E, the plate *d* forming the partition between the flue C and the reservoir D. The wall *a<sup>3</sup>* at the point where it forms the deflector for the flame, &c., from the fire-chamber is, as best shown in Fig. 5, projected upwardly slightly above the top of the grate A, while between the flue E and cold-air flue C it extends upwardly to a point near the under side of the top of the stove. It contacts and is secured to said stove-top along the part forming the dividing-wall between the flue E and reservoir D. Near the bottom of the cold-air flue C is a small register *c* opening into the said flue through its outer wall, which is for the purpose of allowing entry of cold air into the said flue to prevent the overheating of the water in the reservoir D and to rapidly cool the same should, by any accident, the water be allowed to wholly evaporate therefrom and the plate *d* become overheated. This register *c* may obviously be made as large as found requisite for the proper performance of its functions. The flue starting at the top edge of the plate *a<sup>3</sup>* passes downwardly, thence backwardly under the oven, then upwardly between the back of the stove and the back plate of the oven, then over the oven and under the top and to the chimney having a damper *e*, which stops the smoke



at that point and directs the flame to the pipe when the said damper shall be closed. A short section of this flue extends from the top of the fire-chamber upwardly and directly into the pipe, and the damper being open has direct communication between the fire and the pipe. If desired, in the said flue E may be placed any number of deflectors for the purpose of directing the passage of the smoke against any desired point, either of the top of the stove or the oven, which will serve to equalize the heat and to prevent the accumulation of soot in any part of the flue. However, at present the flue, substantially as described, is to be unrestricted, as it allows the free passage through the same of smoke, &c. As a means of causing air to be drawn upwardly through the bed of live coals either the blower as used in the common open fire-place for closing the aperture above the grate or a door operating to the same end may be employed. If desired, an ash-pan may be placed within the ash-chamber, which will facilitate the removal of ashes. This construction will be found to be very desirable, as it forms at will an open fire-place or a cooking-stove which has no disadvantage over any good stove, and which obviates the necessity of a

family of the class for which this stove is particularly designed keeping more than one fire burning at a time and allowing them to use the same as an open fire or a stove. 30

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is— 35

In a stove, the combination of the combustion-chamber, the hot-water reservoir, and the oven, the rear wall  $a^2$  of said chamber and the partition  $d$ , forming a wall of the reservoir, forming the flue C between said chamber and reservoir, said flue having an exterior opening  $c$ , the partition  $a^3$ , forming a side of the combustion-chamber and of the reservoir and the partition  $e$ , forming a flue between said reservoir and combustion-chamber and the oven, said flue connecting at its upper part with the combustion-chamber and the flue C and passing around the oven, substantially as and for the purpose specified. 40 45

In testimony whereof I hereunto affix my signature in presence of two witnesses. 50

MARTHA DALLAS.

Witnesses:

A. P. WOOD,  
S. M. WOOD.