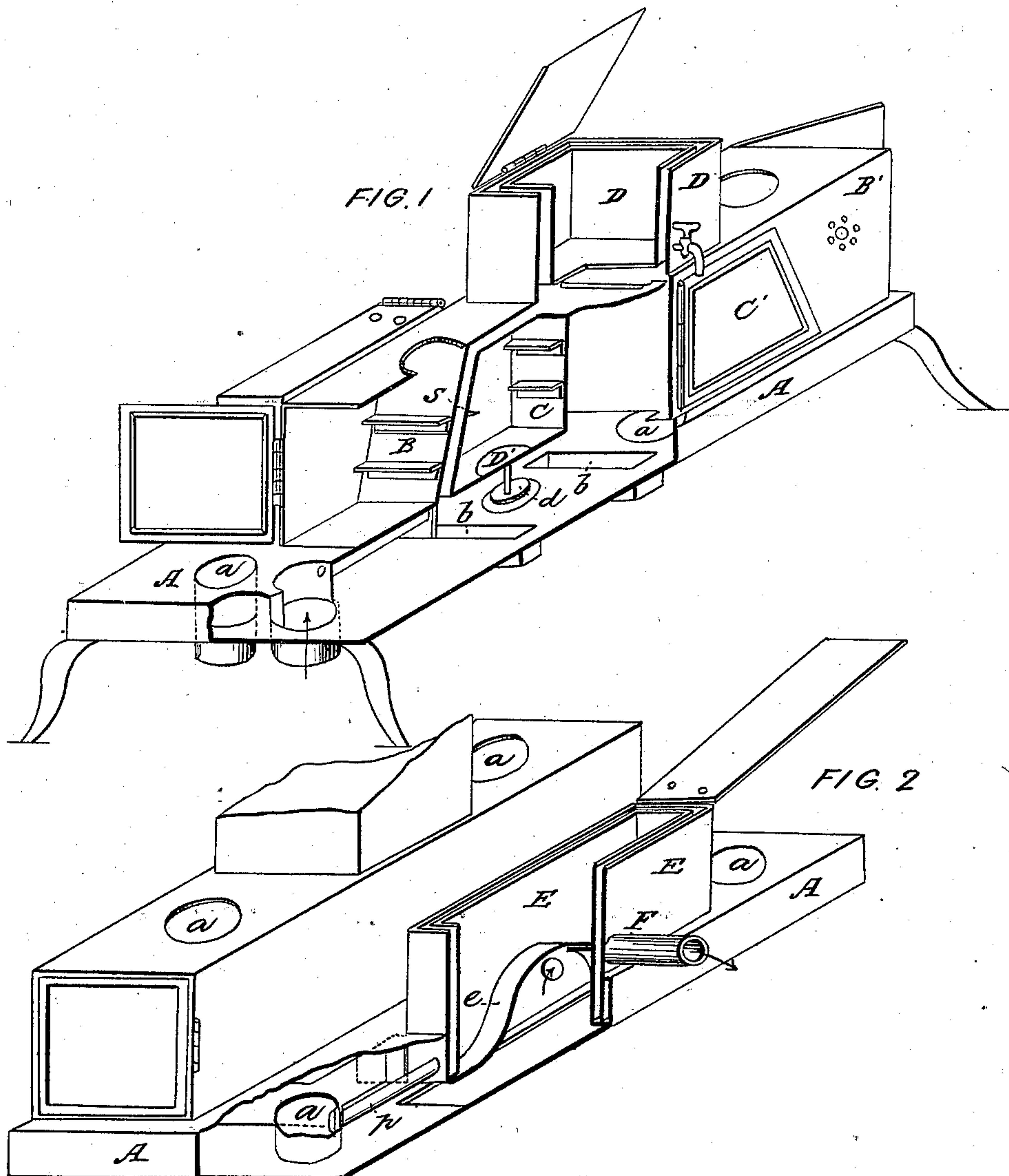


Gas Stove.

No. 70,432.

Patented Nov. 5, 1867.



WITNESSES:

J. H. Adams
N. S. G. Wade

INVENTOR:

D. G. Haskins

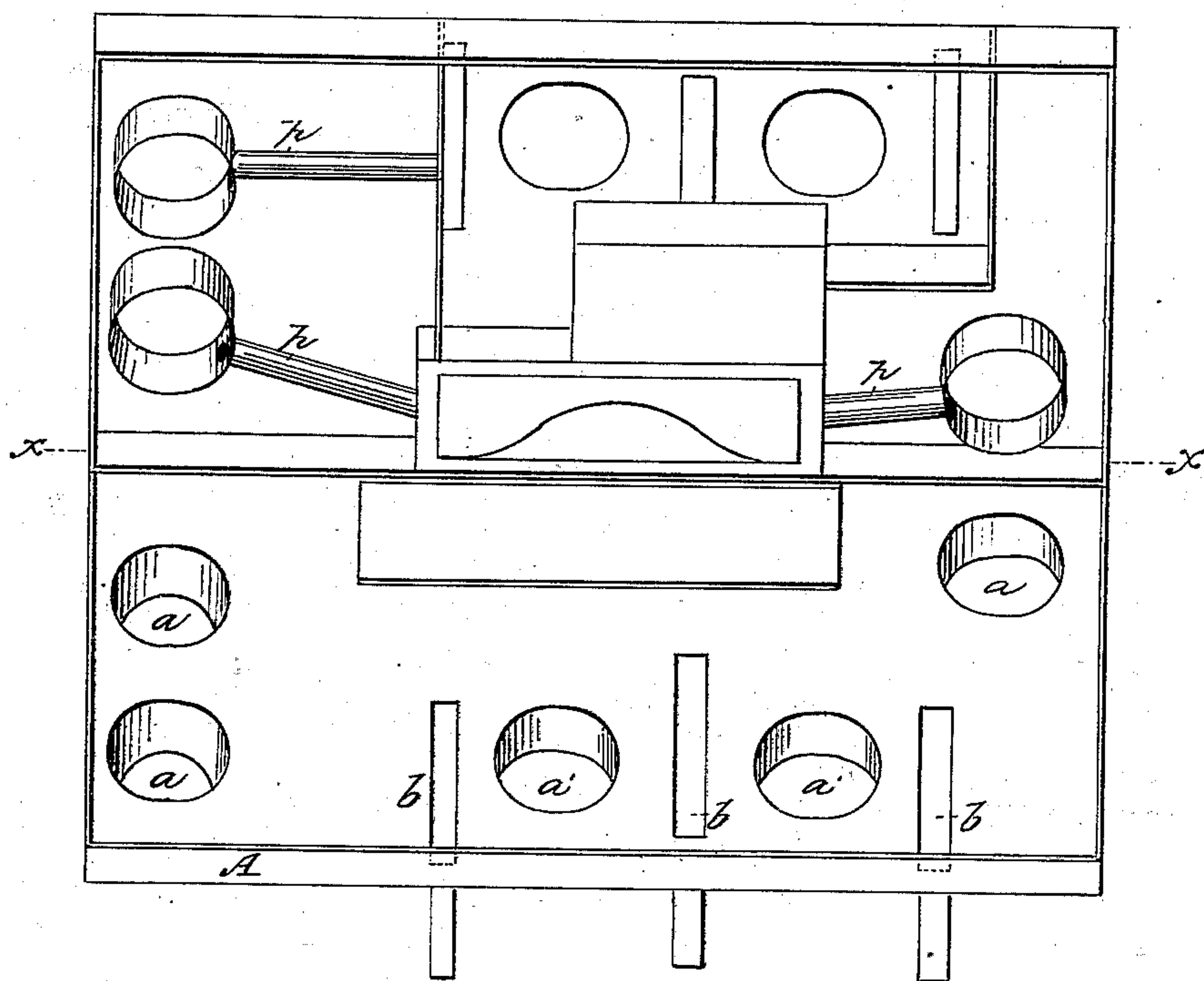
D. G. HASKINS.

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FIG. 3



WITNESSES:

J. H. Adam.
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INVENTOR:

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United States Patent Office.

DAVID G. HASKINS, OF CAMBRIDGE, MASSACHUSETTS.

Letters Patent No. 70,432, dated November 5, 1867.

GAS COOKING-RANGES.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, DAVID G. HASKINS, of Cambridge, in the county of Middlesex, and State of Massachusetts, have invented a new and useful Improvement in Gas Cooking-Ranges, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 represents a perspective view of a range containing my improvements, with a portion of the outside removed.

Figure 2 is a view of the rear portion of the same, also with a portion removed, and

Figure 3 is a plan view of the base or lower portion of the range, and also a view of the under side of the upper portion which fits over the base, representing the two parts as opened.

Similar letters indicate like parts in the several figures.

The object of my invention is to provide a range in which gas is employed as the fuel for heating, and which shall be capable of performing all the functions required in the various culinary processes on an extended scale, and also be capable of performing only one or more processes with a minimum expenditure of gas, thereby obviating the expense of a large amount of fuel when only a simple process is required; and the invention consists in the combination and arrangement of a series of ovens or cooking-apartments, a water-back, and a boiler, each surrounded, or nearly so, by a double casing through which the products of combustion are caused to pass from gas-burners placed under openings properly arranged on the under side of the base of the apparatus.

To enable others skilled in the art to make and use my invention, I will proceed to describe the same.

Referring to the drawings, A represents the base or lower portion of the apparatus, of an oblong rectangular shape, and composed of two plates of sheet metal separated a little distance from each other, so as to leave a space between them, and closed at the sides and ends. At various or convenient parts of the said base-portion are openings, *a a'*, which may be of circular or oblong form, in which are fitted tubes, which project a little below the under surface of the base for the introduction of the burners. These tubes form combustion-chambers, and at or near their upper ends are provided with holes or tubes which communicate with the space in the base-portion of the range, and through which the products of combustion pass to the chimney or exit flue. The upper ends of the tubes are left open, and are designed to receive a kettle or implement for cooking or boiling, and when not so used they are covered over as usual in ranges of the ordinary construction.

The oblong or flattened tubes *b*, as seen in fig. 3, communicate with the openings or spaces *S*, formed between the ovens or cooking-apartments.

B B' C C' represent cooking-apartments for baking, boiling, roasting, etc. The double partition and spaces *s* between the two inner and the two outer apartments on either side are made inclined as shown, for the purpose of causing the ascending products of combustion to act more perfectly and thoroughly on the sides of the said apartments, with a view of increasing the heat in the same. One end of the range may form a roasting-oven, and be provided with accommodations for a spit, as seen at *B'*.

The ovens or cooking-apartments are provided with ledges or cleats, on which shelves may rest. *D'* represents a plate, which is designed to be placed over the opening in the bottom of the oven. It has another plate attached to its under side by a rod or rods, which additional plate acts as an absorbent and conductor of heat. It may be removed, and a cooking utensil of any description may be fitted in the opening. On the top plate of the ovens are also openings, which may be provided with covers, and in which kettles or other cooking utensils may be fitted. In the top of the inner ovens or apartments *C C'* are arranged dampers, which cover openings into the flue space, the said openings being for the purpose of allowing the fumes of the articles being cooked to pass off with the products of combustion.

Over the central portion of the range is placed a vessel or reservoir, *D*, for containing water, and which has a double casing around its sides, forming a space for the products of combustion, and communicating with the flue space of the range below. A pipe may be arranged to conduct the steam to the chimney or other exit flue. It is provided with a suitable cock to draw off the water as required.

The several ovens or cooking-apartments are provided with suitable doors as shown. The tubes or heating-chambers *a* communicate, by means of pipes or passages *p*, with the inclined flue spaces *s*, as shown.

In the rear of the range is a water-back, E, provided like the vessel D with a double casing, and surrounded by a flue space through which the products of combustion pass to the exit pipe and chimney F, as seen in fig. 2. The bottom of the water-back E is formed of a curved plate, *e*, as shown, for the purpose of affording room to place an additional burner to heat the same when necessary, or when the other part of the range is not heated. Proper pipes for the inlet of cold and the outlet of hot water may be attached in the usual manner. The water-back is to be made of any material of sufficient strength to withstand the action of the heated water and steam.

It will thus be seen that a variety of processes in cooking may be advantageously and economically conducted at one and the same time, and that all the heat produced from the burners will be utilized in its passage to the exit flue. The articles will be cooked by radiation of the heat from and not by the direct action of the burning gases. The products of combustion as well as the fumes from the cooking articles will all be carried away from the range to the chimney, instead of escaping into the room, and thus avoid the objections to the gas cooking-ranges now in use. By a proper arrangement of dampers the heat may be confined to and made to act upon only a portion of the range at one time, thus saving the expense of fuel and wear of the unused portions of the range. The water-back for supplying the upper or other rooms with hot water may be used or not, as desired. Instead of gas the flame of any oil or burning-fluid which may emit a sufficient amount of heat may be employed as fuel.

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

1. I claim the combination of the base A and combustion-chambers *a b* with the ovens or cooking-apartments B C, and the interposed inclined flue space *s*, as and for the purpose specified.

2. I claim the combination of the base A and combustion-chambers *a b*, the ovens or apartments B C, and the reservoir D, as and for the purpose specified.

3. I claim, in combination with a gas cooking-range constructed substantially as described, a water-back, E, as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

DAVID G. HASKINS.

Witnesses:

JOS. H. ADAMS,

M. S. G. WILDE.