

971,520.

J. D. BRIGGS,
RANGE,
APPLICATION FILED FEB. 23, 1910.

Patented Oct. 4, 1910.

2 SHEETS—SHEET 1.

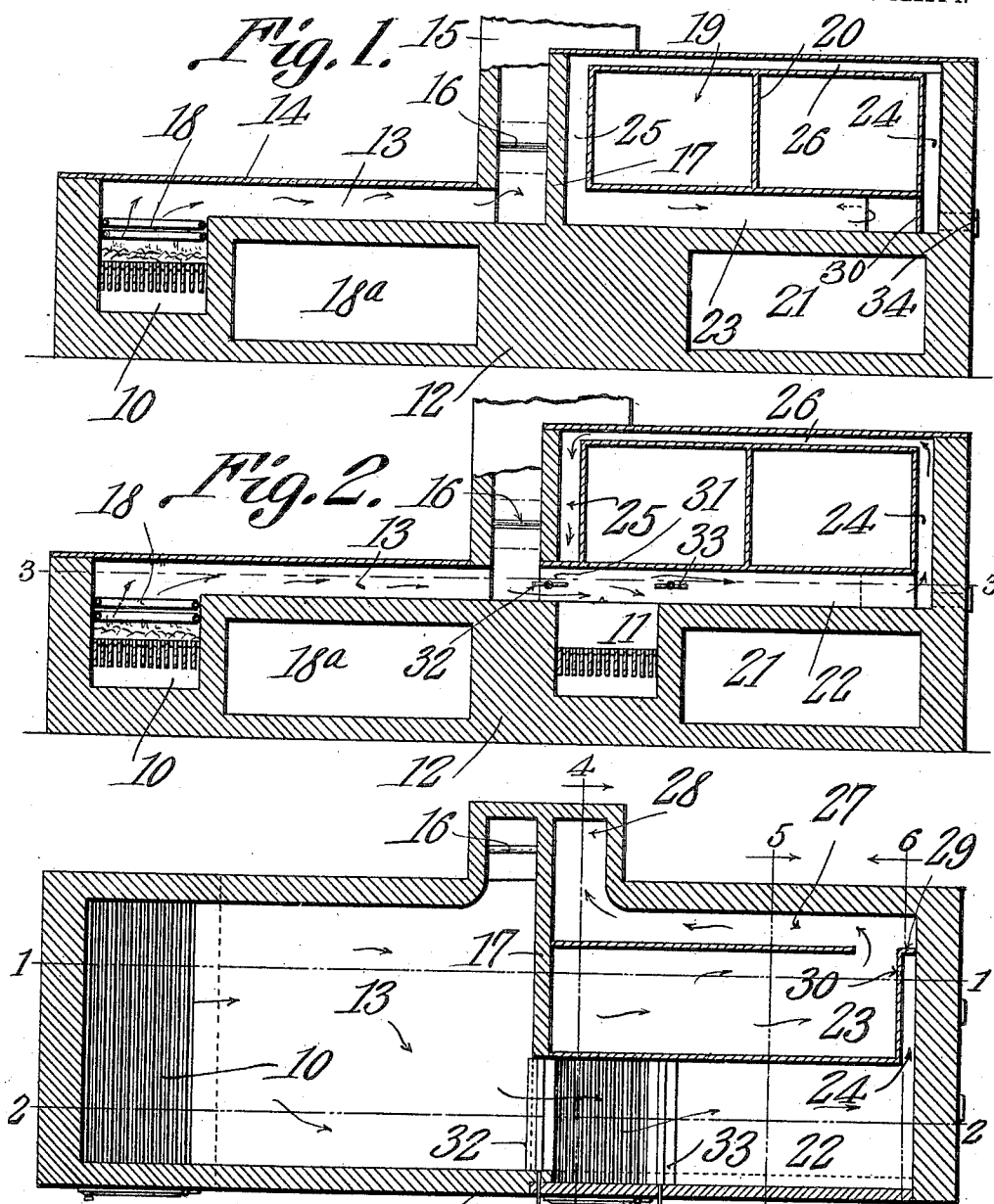


Fig. 3.

Joseph D. Briggs.

Inventor

Witnesses

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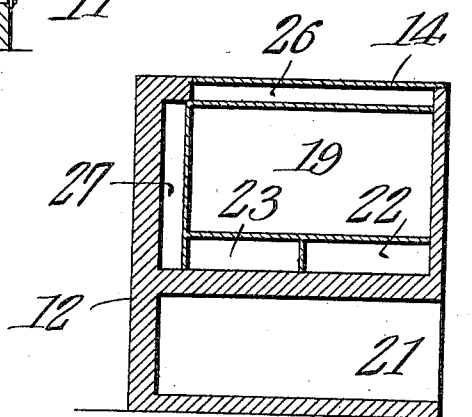
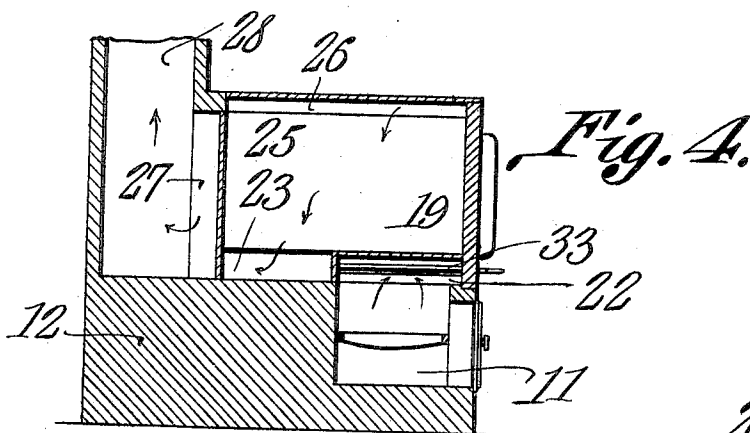


Fig. 6.

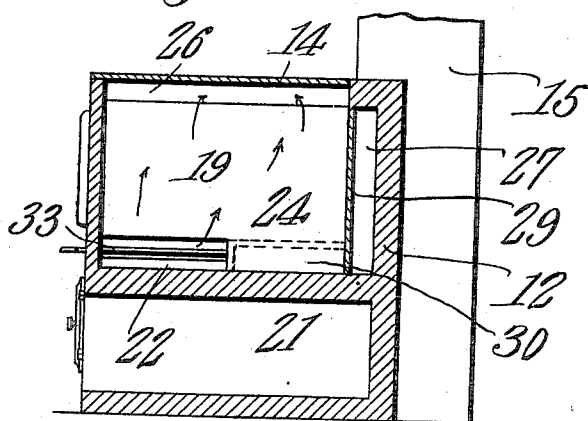


Fig. 5.

Witnesses
E. J. [Signature]
M. A. Schmidt

Joseph D. Briggs. Inventor.
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UNITED STATES PATENT OFFICE.

JOSEPH D. BRIGGS, OF FRESNO, CALIFORNIA.

RANGE.

971,520.

Specification of Letters Patent.

Patented Oct. 4, 1910.

Application filed February 23, 1910. Serial No. 545,461.

To all whom it may concern:

Be it known that I, JOSEPH D. BRIGGS, a citizen of the United States, residing at Fresno, in the county of Fresno and State of California, have invented a new and useful Range, of which the following is a specification.

This invention has for its object to provide in a range a novel arrangement of fire boxes, smoke flues and dampers controlling the latter, two fire boxes being provided, either one or both of which may be employed for heating the oven, or one may be employed for this purpose, and the other one for heating the other portion of the range.

Another object of the invention is to provide an arrangement of flues whereby the heat is evenly distributed all around the oven, and also to provide means for regulating the heat.

With these objects in view, the invention consists in the construction and combination of parts hereinafter described and claimed, reference being had to the accompanying drawings, in which,

Figure 1 is a longitudinal section of the range taken on line 1—1 of Fig. 3. Fig. 2 is a longitudinal section on line 2—2 of Fig. 3. Fig. 3 is a horizontal section on the line 3—3 of Fig. 2. Figs. 4 to 6 are transverse sections taken respectively on lines 4—4, 5—5 and 6—6 of Fig. 3.

In the drawings, 10 denotes the fire box of the main portion of the range, and 11 the fire box of the oven. These two fire boxes and the oven are set in a brick work indicated at 12, the latter being formed with a series of flues to be presently described.

From the fire box 10 a flue 13 leads under the range top 14 to a smoke outlet flue 15 containing a damper 16. A wall 17 divides this portion of the range from that portion containing the oven. The fire box 10 contains a hot water coil 18. In the brick work 12, on one side of the fire box 10, is a stowaway opening 18^a.

The oven is indicated at 19, it being divided by a partition 20 into two sections. In the brick work, beneath the oven is a stowaway opening 21.

Under the oven 19 are two flues 22 and 23 respectively, each of said flues being substantially one-half the width of the oven, and extending throughout the entire length thereof. The flue 22 leads from the fire box

11 to one end of the oven at which end it communicates with a vertical flue 24. At the opposite end of the oven is a vertical flue 25. These two end flues have substantially the same area as the ends of the oven in order that the heat may spread all over said ends. The end flue 24 communicates at its upper end with a flue 26 extending across the top of the oven from one end to the other throughout its entire surface, so that the hot air entering said flue from the flue 24 may spread over the entire top surface of the oven. This top flue leads to the end flue 25, and said end flue 25 communicates at its lower end with the bottom flue 23. Adjacent to the first mentioned end of the oven the flue 23 opens into a flue 27 extending along the back of the oven to a smoke outlet 28. The flue 23 is cut-off from the flue 24 by partitions 29 and 30. The flue 27 extends from the top to the bottom of the oven so that the hot air may travel along the entire rear surface of the oven, and said flue also extends throughout the entire length of the oven. The flue 13 is connected by a short flue 31 with the space above the fire box 11, said flue being in alinement with, and having substantially the same width as the flue 22, and containing a damper 32. In the entrance end of the flue 22 is located a damper 33.

By the herein described arrangement of fire boxes, flues and dampers, the oven may be heated from either one, or both fire boxes. If the fire box 10 is to be employed, the damper 16 will be closed, and the dampers 32 and 33 opened. The products of combustion then travel through the flue 13, and pass by the way of the flue 31 to the flue 22, and thence around the oven to the smoke outlet 28. If the fire box 11 only is to be used for heating the oven, the damper 32 will be closed, and the damper 33 opened. The fire box 10 may then be used for heating the other portion of the range, the damper 16 being opened. If the oven gets too hot, the damper 33 may be partly or entirely closed, and the damper 32 opened, whereupon the products of combustion from the fire box 11 will escape to the outlet 15 without going around the oven. A further advantage of the structure is that the fire box 11 need be used only when baking. If the oven is used for warming food, the damper 16 will be closed, and the dampers 32 and 33

opened, so that the products of combustion from the fire box 10 may pass around the oven as described.

The path of the products of combustion around the oven is as follows:—By the flue 22 under the front portion of the oven, then upwardly over one end of the oven through the flue 24, across the top of the oven through the flue 26, down the opposite end of the oven through the flue 25, along the rear half of the bottom of the oven, through the flue 23, then along the back of the oven through the flue 27, and thence to the outlet 28. By this system of flues, the entire surface of the oven is exposed to the heat whereby the oven is rapidly heated, the heat being readily regulated by operating the damper 33. Suitably located clean-outs 34 will be provided in order that the flues may be kept clean.

The ovens will be arranged with their bottom portions substantially level with the range top 14; so that they can be easily worked. The stowaway openings 18^a and 21 form handy and convenient places for storing cooking utensils, fuel, etc. A further advantage of a range constructed and operated

as herein described is that it effects a saving of fuel, as only one fire box need be used if the oven is not employed for baking. The two fire boxes may also be cut-off from each other upon closing the damper 32, the fire box 11 being employed for heating the oven, and the fire box 10 for heating the other portion of the range.

What is claimed is:—

A range comprising a fire box and an oven, said range having flues at the bottom, ends, the top and the back of the oven, one of the bottom flues leading from the fire box to the flue at one end of the oven, and said end flue leading to the top flue, the top flue leading to the other end flue of the oven, and the last mentioned end flue leading to the other bottom flue, said last mentioned flue leading to the flue at the back of the oven, and the last mentioned flue having an outlet.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

JOSEPH D. BRIGGS.

Witnesses:

FRANK LANING,
ROBERT A. WALKER.