

No. 666,460.

Patented Jan. 22, 1901.

C. H. BLANCHARD.
RANGE.

(Application filed July 13, 1900.)

(No Model.)

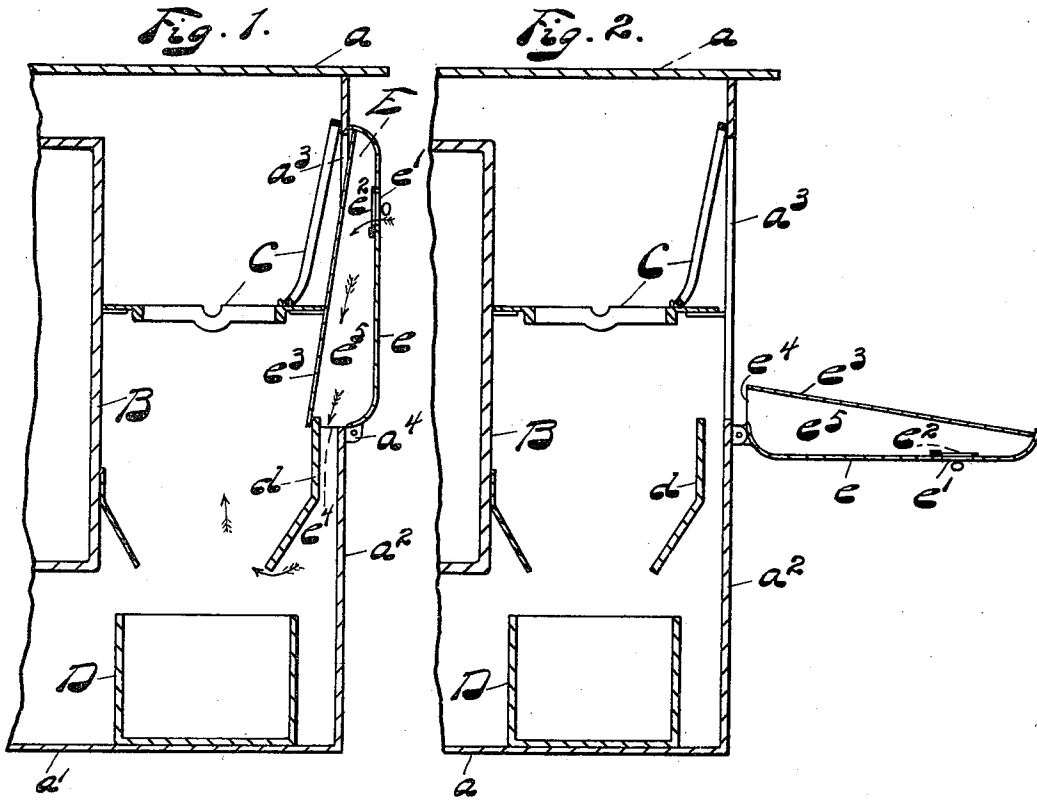
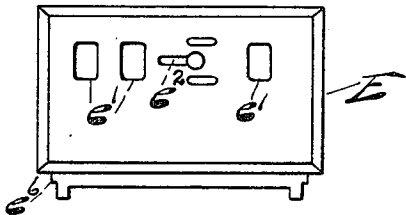


Fig. 3.



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UNITED STATES PATENT OFFICE.

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RANGE.

SPECIFICATION forming part of Letters Patent No. 666,460, dated January 22, 1901.

Application filed July 13, 1900. Serial No. 23,458. (No model.)

To all whom it may concern:

Be it known that I, CHARLES H. BLANCHARD, a citizen of the United States of America, and a resident of Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Ranges, of which the following is a specification.

The object of my invention is a double door to be attached to the end of a range through which air passes adjacent to the grate-bars and down under the center of the fire-box to heat the air and insure a more perfect combustion of the fuel. This object is attained by the means described in the annexed specification and illustrated in the accompanying drawings, in which—

Figure 1 is a longitudinal sectional view taken through a range at the center of a door embodying my invention, showing the door closed. Fig. 2 is a similar view with the door open. Fig. 3 is a detail front view of the door upon a reduced scale.

Referring to the parts, the top a , the bottom a' , the oven B, the grate-bars C, and the ash-pan D of the range are of ordinary construction, and therefore need not be particularly described.

In the end a^2 of the range is an opening a^3 . Upon the interior of the range, adjacent to the lower edge of the opening a^3 and secured to the front and rear walls of the range, is an angle-plate d for deflecting the ashes falling from the grate into the center of the ash-pan.

Door E is hinged to lugs a^4 at the lower edge of opening a^3 . It consists of an outer bulging plate e , which has openings e' , controlled by a slide-plate e^2 , and a straight inner plate e^3 , of thin metal. Plates e and e^3 are connected together at the ends by plates e^4 , forming a chamber e^5 between them, which is open at the bottom. In its closed position the upper end of the door abuts against the upper edge of opening a^3 , and the lower edge of plate e^3 overlaps the upper edge of deflecting-plate d .

In operation, door E being closed, as in Fig. 1, air for the fire enters chamber e^5 through perforations e' , becomes heated up by com-

ing into contact with plate e^3 , which is itself kept hot by the radiation of heat through the grate-bars, passes down through the opening in the bottom of the chamber, and down around deflecting-plate d and up under the center of the fire in the grate C. The heating of the air before it comes into contact with the fuel insures a more perfect combustion, while the bringing of the air up under the center of the fire-box creates an even combustion in all parts thereof. When swung down, the door is held in a horizontal position by lugs e^6 contacting with similar lugs upon lugs a^4 , so that the door when open will act as a support for a broiler for broiling or toasting food before the open grate.

What I claim is—

1. In combination with a range having an opening in the end adjacent to the grate-bars an angle-plate for deflecting ashes into the ash-pan secured beneath said opening at a short distance from said end, and a door for closing the opening consisting of an outer plate having perforations near its upper edge, an inner plate secured to the outer plate leaving between the plates a chamber open at the bottom, said inner plate overlapping the angle-plate when the door is closed to direct the air down from said chamber under the center of the grate, substantially as shown and described.

2. In combination with a range having an opening in it adjacent to the grate-bars, a door for closing said opening consisting of an outer plate having perforations in it, an inner plate secured to it adjacent to and extending down below the lower edge of the grate leaving between the plates a chamber open at the bottom to convey the heated air down under the center of the fire-box and being hinged at its lower edge so that when opened it is held in substantially a horizontal position, substantially as shown and described.

CHARLES H. BLANCHARD.

Witnesses:

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