No. 800,411. PATENTED SEPT. 26, 1905.

W. K. STAFFORD.

GAS RANGE.

APPLICATION FILED JUNE 2, 1904.

Fig. 1.

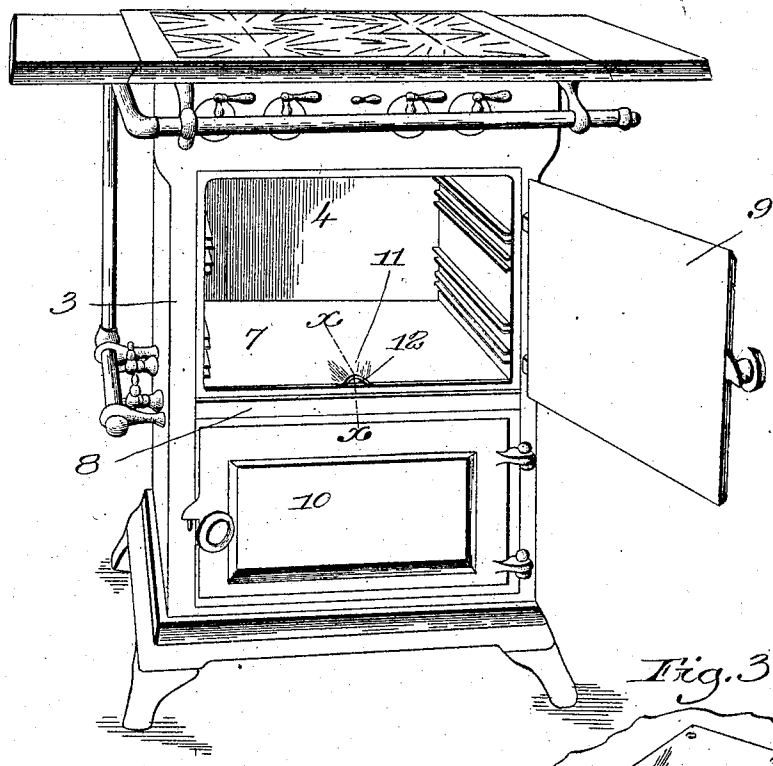


Fig. 3.

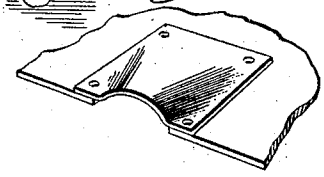
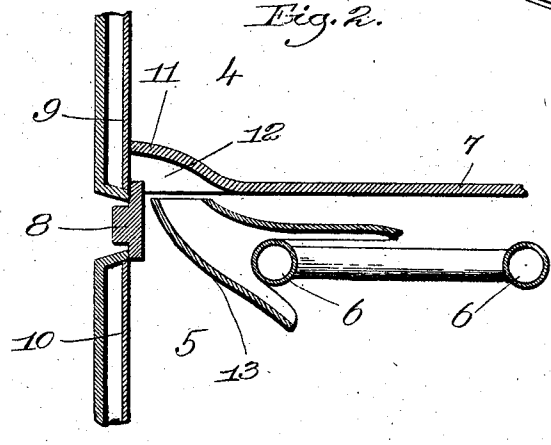


Fig. 2.



Witnesses:
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UNITED STATES PATENT OFFICE.

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GAS-RANGE.

No. 800,411. Specification of Letters Patent. Patented Sept. 26, 1905.

Application filed June 2, 1904. Serial No. 210,777.

To all whom it may concern:

Be it known that I, WALTER K. STAFFORD, a citizen of the United States, residing at Newton, in the county of Middlesex and State of Massachusetts, have invented an Improvement in Gas-Ranges, of which the following description, in connection with the accompanying drawings, is a specification, like figures on the drawings representing like parts.

This invention relates to gas-ranges, and especially to the means for lighting the oven-burners of such ranges. Some gas-ranges are provided with a pilot-burner which can be ignited from the outside of the range, said pilot-burner conducting the flame to the regular oven-burners. One disadvantage of this type of range is that it is very difficult to ascertain whether the oven-burners are properly lighted or not, and if they should fail to light after the valve is opened an explosion is very liable to occur. To remedy this and other disadvantages incident to this structure, it has been proposed to provide the floor of the upper oven with a lighting-opening through which the burners beneath said oven can be lighted, said opening being sufficiently large so that a portion of the oven-burners are visible through it, by means of which construction it is possible to see whether the oven-burners are properly lighted or not. In order that there may be proper combustion and proper circulation of the heated air, it is desirable that any opening in the floor of the upper oven should be closed while the burners are in operation, and the construction above referred to has therefore necessitated a slide or other equivalent device for closing said opening.

In making my present invention I have attempted to improve upon and to simplify these prior constructions and yet to retain all of the advantages of any of them.

A gas-range embodying my invention has the floor of the upper oven formed with a raised portion which extends above the bottom of the door-opening for said upper oven, said raised portion constituting a lighting-opening beneath the floor of the oven, through which opening the oven-burners may be ignited. The lighting-opening is so arranged that when the oven-door is closed the latter completely closes said opening and is so proportioned that the oven-burners are visible through it, so that it is possible at any time to determine whether said burners are ignited or not.

The device is very simple, since the opening of the oven-door opens up the lighting-opening and the door itself when closed closes said opening.

In the drawings, Figure 1 is a perspective view of the gas-range having my improvements applied thereto. Fig. 2 is a section on the line $x\,x$, Fig. 1. Fig. 3 shows a modification.

My invention can be embodied in any style of gas-range which has an oven provided with burners beneath the oven for heating the same and an oven-door to close the oven.

In the drawings, 3 designates a gas-range of any suitable or usual construction, it having the upper oven 4, in which baking is usually done, and the lower oven 5, in which the oven-burners 6, of any suitable or usual construction, are placed. The upper and lower ovens are separated by the usual partition 7, which forms the floor of the upper oven and beneath which the burners 6 extend. Said floor is usually situated on about the level of or slightly below the bottom of the door-opening for the upper oven or about on the level of the top of the front piece 8 of the stove, which extends across the stove-front between the upper and lower oven-doors 9 and 10.

The parts thus far described may be of any suitable or usual construction.

In applying my invention to a gas-range I shape the partition or floor 7 at its front edge to form the raised or hooded portion 11, which extends above the bottom of the upper-oven door-opening, thereby forming a passage or duct 12, which leads into the lower oven 5, said passage or duct being above the bottom of the upper-oven door-opening, but beneath the upper-oven floor. The front edge of the raised portion 11 is in substantially the same vertical plane as the front edge of the oven-floor, so that as the upper-oven door 9 is closed it abuts against and meets the raised portion 11 of the floor, thereby completely closing the duct or passage 12, as best seen in Fig. 2. Situated directly beneath the passage 12 is a flash-tube or pilot-tube 13 of any suitable or usual construction, which conducts the flame of a lighted match or other torch applied to the lighting-opening 12 to the burner 6, and thereby ignites said burners.

In using a gas-range having my improvements applied thereto the operator first opens the upper-oven door 9 and then opens the valves to one or both of the oven-burners 6,

as desired, and thereafter applies a lighted match or other torch to the lighting-opening 12. As the valve is opened the gas fills the burner 6 and flows into the flash-tube 13, so that when the lighted match or torch is applied to the lighting-opening 12 the gas in said flash-tube is ignited and the flame flashes back and ignites the burners and at the same time draws all the gas out of said flash-tube. The opening 12 is of such size that the oven-burners are visible through it and the operator can tell at a glance whether the burners are lighted or not. Moreover, because the opening is situated beneath the oven-floor and is formed by raising a portion of said floor the mouth of the lighting-opening stands in a vertical plane and is closed by the oven-door 9 itself when the latter is closed. My invention therefore does away with all movable parts for closing the lighting-opening and is such that it can be applied to any gas-range by merely giving to the floor of the upper oven the proper contour.

It is immaterial to the invention whether the hooded portion 11 is integral with the oven-floor or is made in a separate piece attached to said floor.

In Figs. 1 and 2 the oven-floor itself is bent to form the raised portion by means of suitable dies or otherwise, while in Fig. 3 the raised portion is formed in a separate piece, which is attached to the oven-floor and in effect becomes part of the oven-floor when in place. My invention can thus be applied to bakers' ovens or any other similar ovens which are heated by gas, where the oven-burners are beneath the floor of the oven proper.

Other changes than those suggested can be made in the invention without departing therefrom.

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

1. In a gas-range, an upper oven, a door therefor, and a lower oven having a lighting-opening leading thereto and arranged to be closed to the passage of gases by the door of the upper oven.

2. In a gas-range, an oven having a door-opening and a floor, and burners beneath said floor to heat the oven, said floor having at its front edge a raised portion extending above the bottom of the door-opening and forming a lighting-opening beneath said floor and accessible through the door-opening.

3. In a gas-range, an upper oven having a door-opening and a floor, a lower oven and burners within said lower oven, the floor of the upper oven having a raised portion forming a lighting-opening leading to said burners, said opening extending beneath the floor and above the bottom of the door-opening.

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

WALTER K. STAFFORD.

Witnesses:
LOUIS C. SMITH,
MARGARET A. DUNN.