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D. SAPONARA

2,540,914

AIRATION PLATE

Filed March 4, 1947

Find. 1.

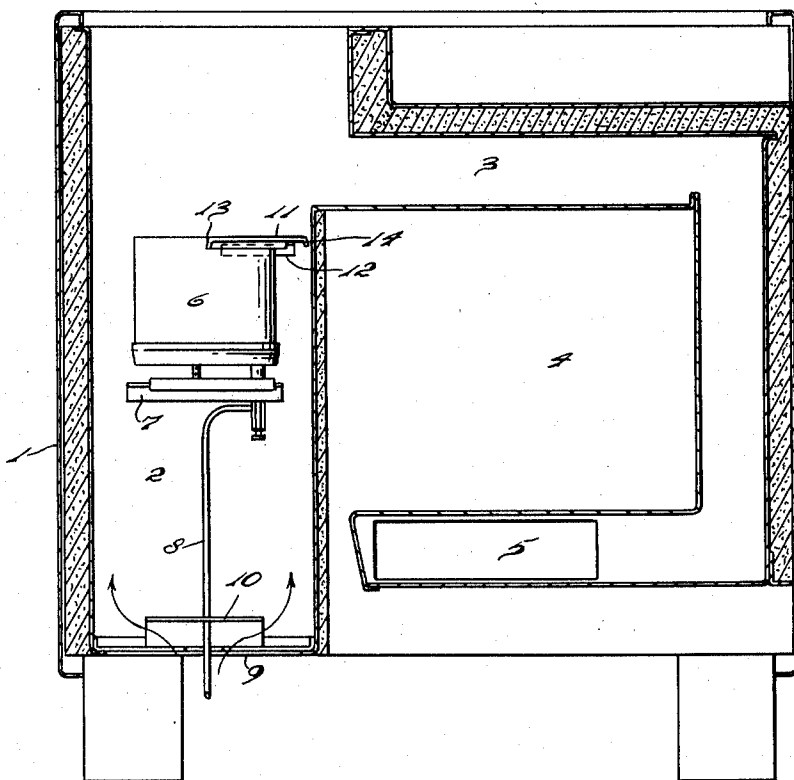
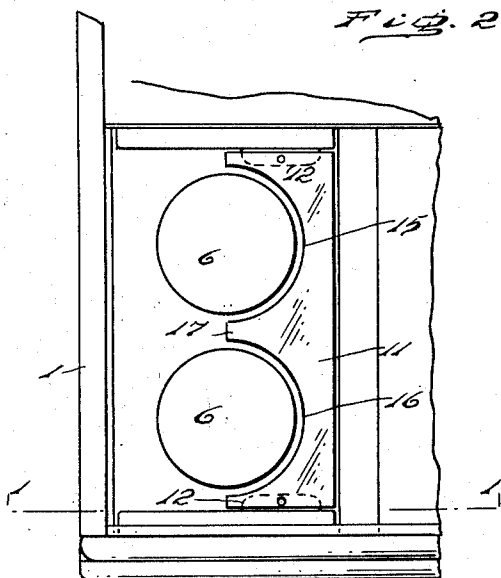


Fig. 2.



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AERATION PLATE

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2 Claims. (Cl. 126—44)

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The object of this invention is to devise a novel aeration plate for oil burners which is especially adapted for use with the oil burners of ranges.

It has heretofore been proposed to construct an aeration plate so that it completely surrounds the burners, and it has been found that to be effective the plate must lie close to the burners. This causes the temperature around the lower part of the burners to become excessively hot, resulting in very poor burner performance.

As a result of numerous experiments, I have found that the foregoing defects can be overcome if the plate is constructed as herein disclosed. Actual tests show that with such construction and arrangement, the tendency for the lower part of the burners to overheat is overcome, and the flame from the burners is deflected into the upper flue. The result is that the range heats up more quickly and to a higher temperature with a given amount of oil.

With the foregoing and other objects in view as will hereinafter clearly appear, my invention comprehends a novel construction and arrangement of an aeration plate for oil burners.

For the purpose of illustrating the invention, I have shown in the accompanying drawings a preferred embodiment of it which I have found in practice to give satisfactory and reliable results.

Figure 1 is a sectional elevation of a range, in conjunction with which an aeration plate embodying my invention is employed, the section being taken substantially on line 1—1 of Figure 2.

Figure 2 is a top plan view, partly broken away.

Similar numerals of reference indicate corresponding parts.

Referring to the drawings:

The general construction and arrangement of the range 1 may vary widely and may be of any desired or conventional construction. The range has a combustion chamber 2 leading to a flue 3 surrounding three sides of the oven 4 and discharging through the exit flue 5.

Oil burners 6 within the chamber 2 are supported on brackets 7 and provided with a supply pipe 8 leading from a source of oil supply. Air openings 9 in the bottom of the chamber 2 communicate with the atmosphere, and the incoming air for combustion passes beneath the baffle 10 into the chamber 2.

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An aeration plate 11 is supported on brackets 12 carried by opposite sides of the chamber 2. This plate 11 is of novel construction to accomplish its intended function. The front marginal portion 13 and the rear marginal portion 14 are deflected downwardly. Semi-circular cut-outs 15 and 16 provide spaces to receive the burners and form a tongue 17 disposed between the two burners. By such construction only one half of the burners is baffled and the flame from the burners is deflected into the flue 3. The burners may have the required clearance with the aeration plate.

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

1. The combination with a range having an oven, a combustion chamber with an air inlet, a flue leading from the combustion chamber around the oven to an exit for products of combustion, and an oil burner in said chamber, of an aeration plate having a cutout to receive the burner, supported in the combustion chamber near the top of the burner on the side adjacent the oven to extend therefrom to cover half of the combustion chamber and with the open half communicating with the flue, whereby flame from the burner is deflected into said flue.

2. The combination with a range having an oven, a combustion chamber with an air inlet, and a flue leading from said chamber around the oven to an exit, and two oil burners in said chamber, of an aeration plate having cutouts opening through one side thereof to receive the burners and provide a portion extending between the burners, said plate being on a side adjacent the oven to extend therefrom to cover half of the combustion chamber with the open half communicating with the flue, whereby flame from the burners is deflected into said flue.

DOMENICK SAPONARA.

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