Feb. 25, 1930. F. E. SMITH 1,748,194

FLUE FOR PILOT LIGHTS FOR GAS RANGES

Filed Nov. 15, 1928 2 Sheets-Sheet 1

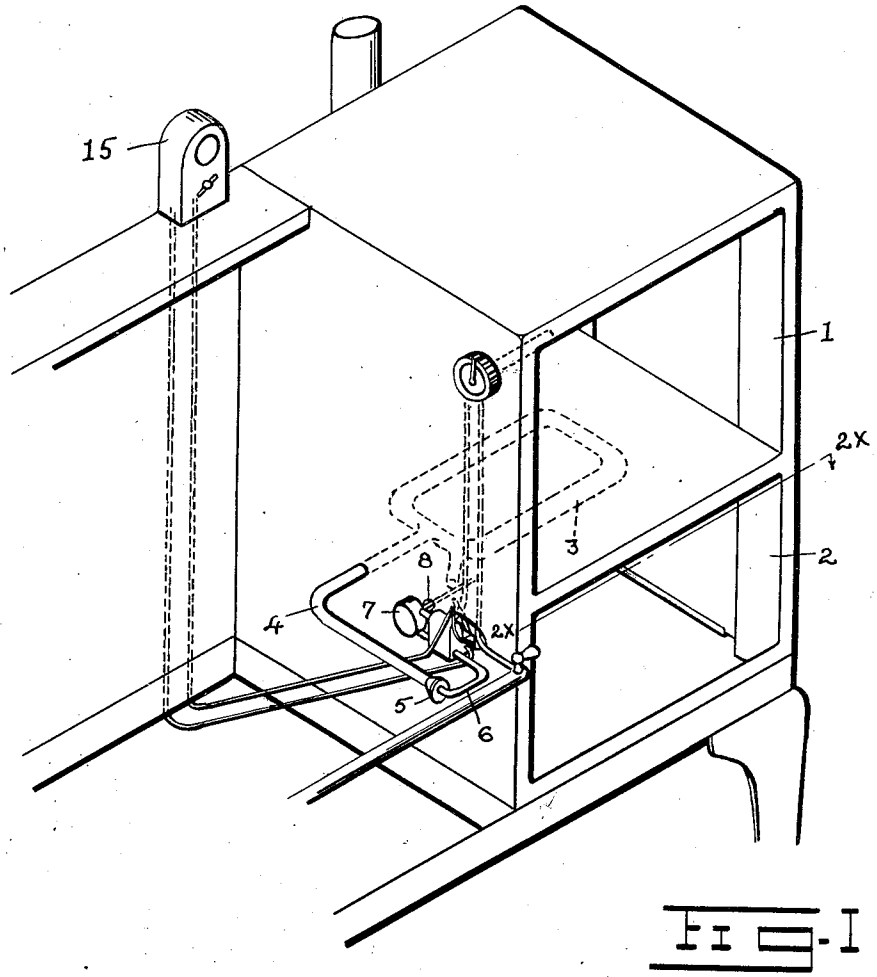


Fig. 1

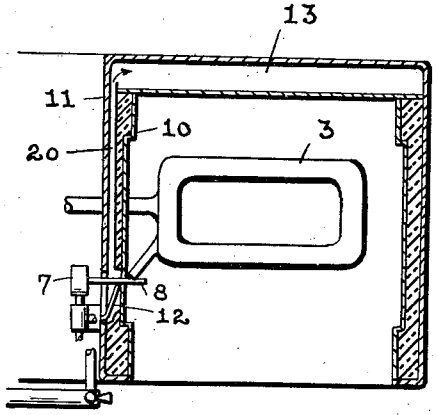


Fig. 4

Inventor

Fred E. Smith

By Francis Keipler

Attorney

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FLUE FOR PILOT LIGHTS FOR GAS RANGES

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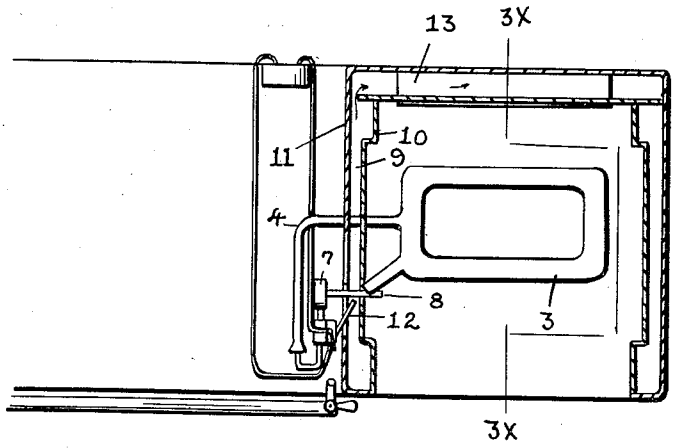


Fig. 2

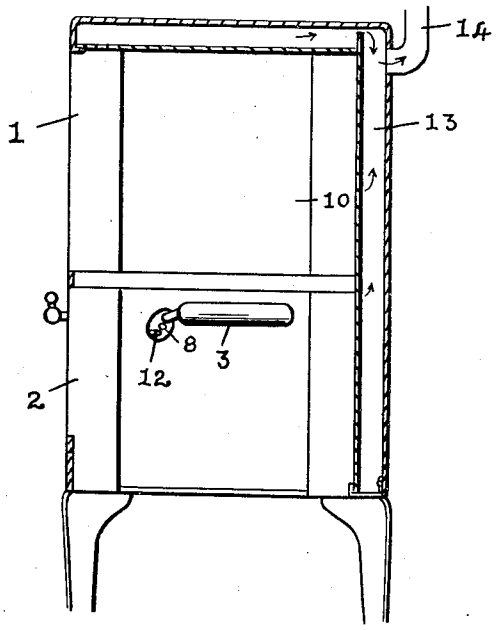


Fig. 3

Inventor

Fred E. Smith

By Francis Keifer

Attorney

Patented Feb. 25, 1930 1,748,194

UNITED STATES PATENT OFFICE

FRED E. SMITH, OF GENEVA, NEW YORK, ASSIGNOR TO ANDES RANGE AND FURNACE CORP., OF GENEVA, NEW YORK, A CORPORATION OF NEW YORK

FLUE FOR PILOT LIGHTS FOR GAS RANGES

Application filed November 15, 1928. Serial No. 319,542.

The object of this invention is to provide the side wall of the oven of a gas range with a special flue which will carry off the products of combustion and heat of the pilot light so that the heat from the pilot light will not get into or pass through the oven.

Another object of the invention is to keep the oven as cool as possible until the main burner of the oven is lit for the purpose of cooking.

These and other objects of the invention will be illustrated in the drawing, described in the specification and pointed out in the claims at the end thereof.

In the drawings:

Figure 1 shows a perspective view of a gas range in which the heating of the oven by the gas burner is automaticaly controlled by automatically turning on or off the supply of gas from the main burner.

Figure 2 is a horizontal section on the line 2^{x}, 2^{x} of Figure 1 showing the special flue for the pilot light in the side wall of the oven.

Figure 3 is a section on the line 3^{x}, 3^{x} of Figure 2.

Figure 4 is a horizontal section through the gas range showing the modified form of flue for the pilot burner in the side wall of the oven.

In the drawing like reference numerals indicate like parts.

In the drawings reference numeral 1 indicates the baking oven of the gas range and 2 indicates the broiling oven of the gas range. In the broiling oven is placed a burner 3 to which is fed a gas supply by the gas pipe 4 fed from a mixer 5 and pipe 6. The supply of gas to the pipe 6 is controlled by a valve 7 which is operated by a thermostat tube 8. This thermostat tube passes through the side wall of the oven. This side wall is hollow from top to bottom of the upper oven and the lower oven. This side wall of the oven is made up of two plates of sheet metal 10 and 11 with an air space between them which constitutes the flue. An opening is provided through both of these plates at the pilot 12 and thermostat tube 8. The pilot 12 is lit continuously and burns normally with a small flame which small flame is normally contained in the flue 9 so that the heat and products of combustion rising from the pilot light pass up through the flue 13 in the back of the oven to the pipe 14. In order to light the burner, the automatic control 15 increases the pilot light, the larger flame of which then extends into the oven and which in turn heats the thermostat tube 8 which in turn opens the valve 7 and permits the gas to flow in large quantities through the burner 3, where it is lit by the pilot light. These regulatory features, however, constitute no part of my invention.

It will be understood that in gas ranges of this type that are automatically controlled the food is placed in the oven by the cook or housewife for several hours before the cooking of it will begin, and in due time the automatic regulatory features will turn on the gas supply to the oven burner and start the cooking. In the meantime, however, it is desirable to keep the oven at as low a temperature as possible so that there will be as little danger as possible of spoiling the food that is left in the oven for the several hours before the oven burner starts to heat the oven.

It has been found by experience that the pilot by itself will raise the temperature of the oven from 20 to 30 degrees if the products of combustion and the heat arising therefrom is discharged directly into the oven. To prevent the oven from being heated by the pilot light, I provide the special flue above described which carries off the products of combustion and the heat of the pilot light quickly passes through the flue so that this heat is not allowed to mix with the atmosphere of the oven, but is discharged as quickly as possible into the chimney through the pipe 14. This prevents the pilot light from raising the temperature of the oven more than 2 or 3 degrees where otherwise if the heat were thrown directly into the oven the temperature of the oven would be raised 20 or 30 degrees, and the quality of the food might be impaired or the food might even be spoiled before the cooking of it began.

In Figure 4 I have shown an oven in which the side walls are packed with insulating material such as asbestos. In such case there

is no open air space between the inner and outside walls of the oven. In such case I provide a small tube 20 which is placed in the insulating material so as to carry off the heated products of combustion arising from the pilot light and discharge same into the flue 13 and pipe 14 of the range. The tube 20 is relatively small, being only a half or three quarters of an inch in diameter.

I claim:

1. An oven having an inner wall and an outer wall on the side, back and top of the oven with an air space between them, said side walls having an opening through them transversely, a pilot light normally burning in said opening between the inner and outer walls, the air space acting as a flue to carry away from the pilot light the heated products of combustion and keep them out of the oven.

2. An oven having an inner wall and an outer wall on the side, back and top of the oven, a flue between said walls, a vent to which said flue leads, said side walls having an opening extending through them transversely, a pilot light normally burning in said opening between the inner and outer walls, said flue connecting with said opening and being adapted to carry away from the pilot light the heated products of combustion and keep them out of the oven.

In testimony whereof I affix my signature.

FRED E. SMITH.