

C. H. MILLER.

STOVE.

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969,792.

Patented Sept. 13, 1910.

Fig. 1.

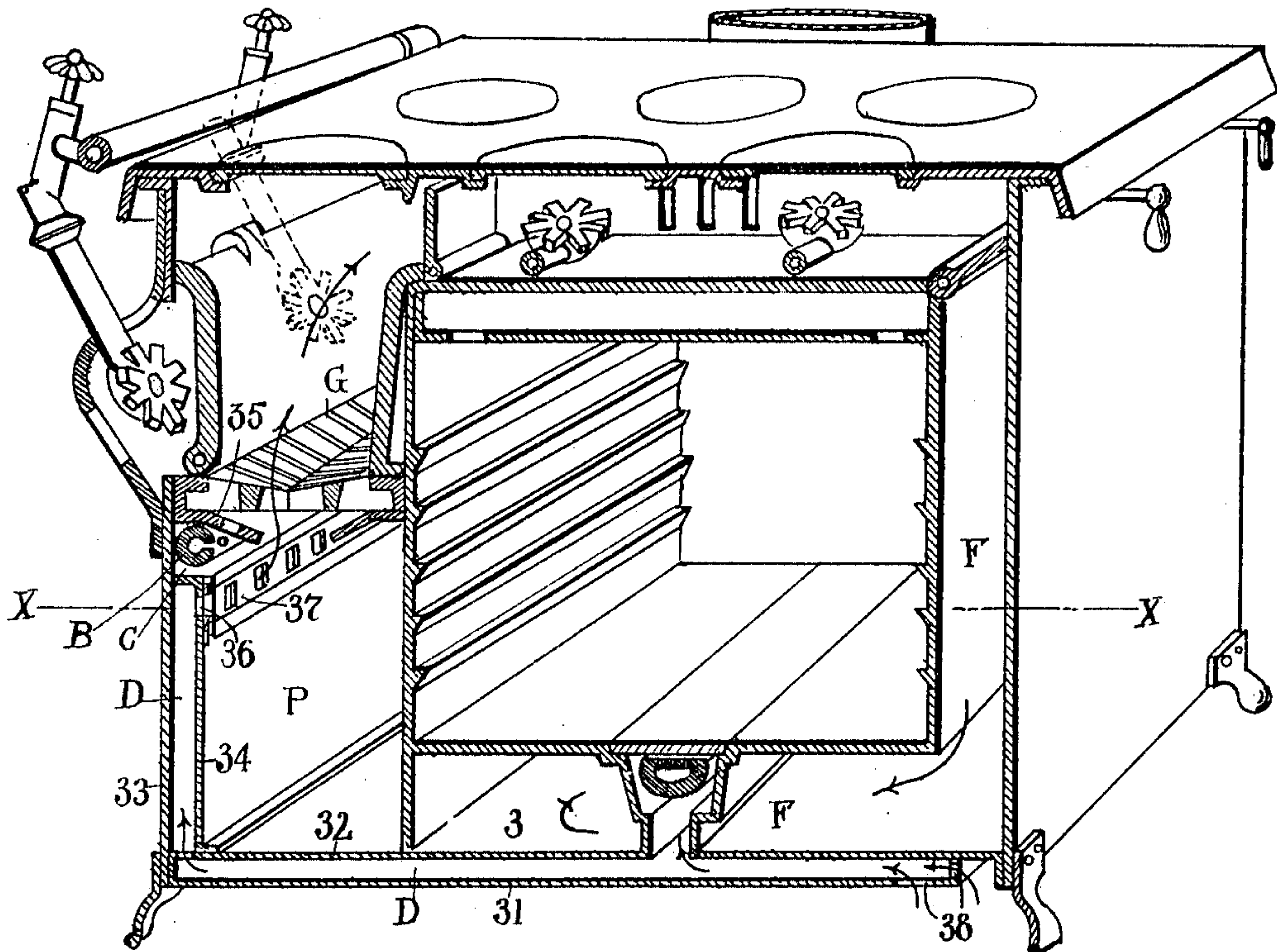
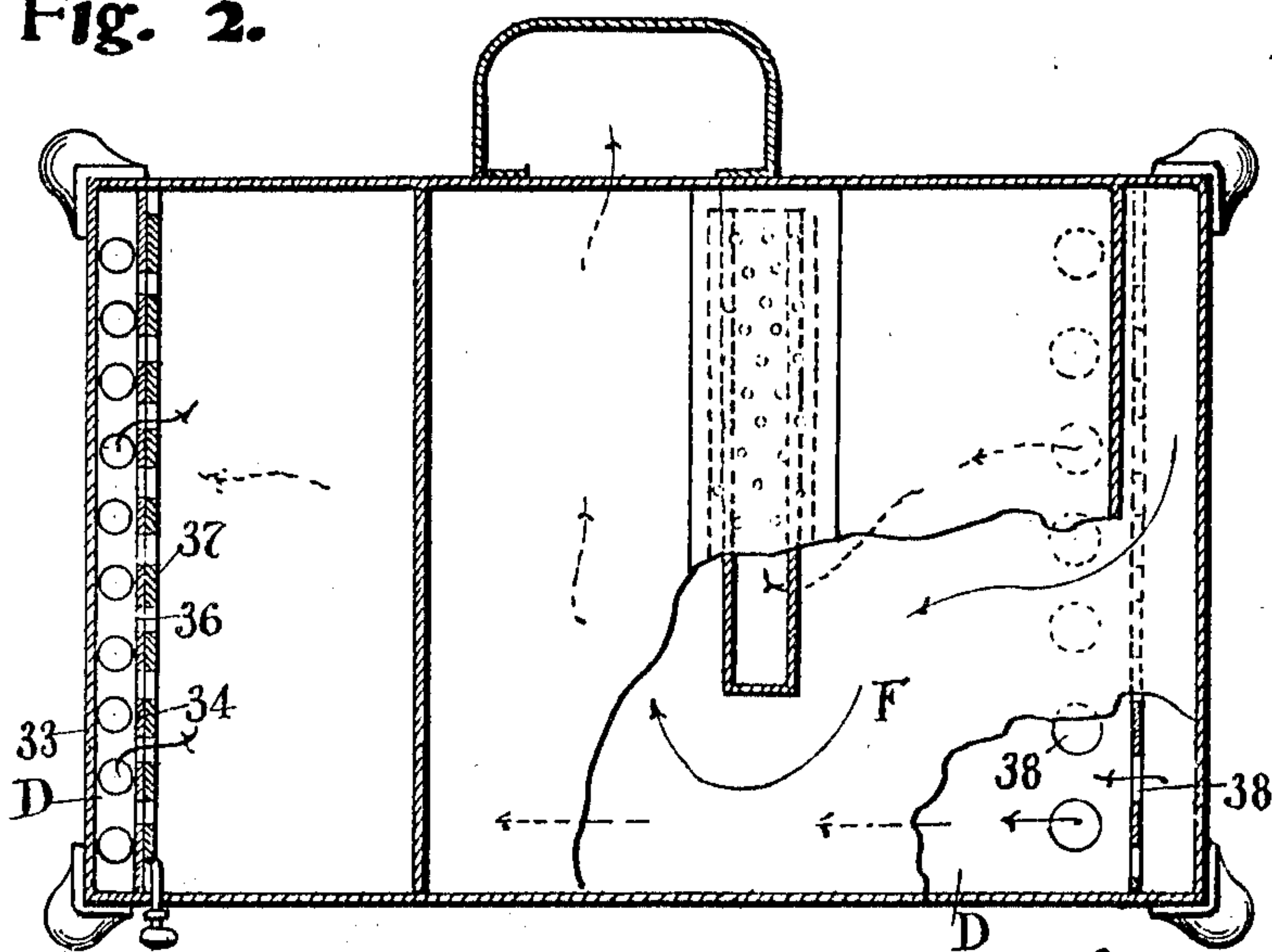


Fig. 2.



ATTEST

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UNITED STATES PATENT OFFICE.

CARL H. MILLER, OF CLEVELAND, OHIO.

STOVE.

969,792.

Specification of Letters Patent. Patented Sept. 13, 1910.

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To all whom it may concern:

Be it known that I, CARL H. MILLER, citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Stoves, of which the following is a specification.

This invention is an improvement on the stove or range shown and claimed in joint application, Ser. No. 508,277, in which is described a construction adapted to utilize gas for starting or kindling a hard wood fire and in or by which the gas may be used to supplement or stimulate the volume of heat derived from the hard fuel itself if such fuel, for any reason, be insufficient.

To these ends, the invention consists in the construction and arrangement of parts substantially as shown and described and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 shows a perspective view of a range or stove embodying my improvement and having the immediate front sectioned away to disclose the interior construction and relation of parts. Fig. 2 is a plan view in section on line $x-x$, Fig. 1, a portion of the oven and flue being broken away.

In the above mentioned application an auxiliary or supplemental gas burner or burner tube B is shown in substantially the same position and relation as herein and adapted to cooperate with fire grate G and the hard fuel crib over the same for initial lighting of the fire or for sustaining heat as the conditions may require. The oven is also shown with similar draft flues F about the same to distribute the heat from the fire box to the oven as before. But the entire construction is materially improved as compared with said former application in several particulars and especially in the manner of supplying air to said burner B and grate G. Formerly said burner was located in the angle between the ash pit and the bottom of the grate next to the end wall of the range and except as it was protected from above by a shield plate was otherwise exposed in the ash pit and combustion was supplied with such air as said pit contained. And the air supply for said pit was received at the lower right hand corner of the pit. The results from this arrangement were good but not the best, as we have now discovered, because combustion of fuel, such as

coke, in grate G and combustion of the gas was imperfect.

In the present arrangement the gas burner is housed in a chamber C and the escape of gas is from the side of the chamber, which is its only exposed part and which side is partially inclosed and sheltered by top plate 35. The said plate extends across the top of said burner chamber and down at an inclination at the front thereof in such relation as to perfectly house the burner from droppings from the grate. Now, having burner B in this position and relation, air is supplied directly thereto from beneath the oven by a duct or channel D between the bottom plate 31 and the bottom 32 of the range and the side wall 33 of the range and a secondary wall 34 next inward therefrom and extending up to the chamber for burner B, where said inner wall is provided with a series of draft perforations or holes 36 controlled by a slide damper 37. The said duct or channel D has inlet openings 38 for outside air at its rear, and both the theory and the experience is that air entering at this point is heated en route to its outlet at holes 36 and delivered at a greatly increased temperature to the gas burner. Furthermore, better combustion takes place in the fire box above grate G for the reason that the superheated air when delivered as in this case, at the left and bottom of grate G must pass from left to right through the entire body of the fuel in the fire box, thus more uniformly distributing the air than in my former construction wherein the incoming air supply naturally was greater at the right hand side of the pit and fire-box than elsewhere because both intake and outlets for said pit and fire box were at the right.

As to all the other features of the range not particularly described herein it will be understood that they are the subject matter of other applications for patents or of patents already issued, and therefore are not claimed herein.

What I claim is:

1. A kitchen range and the like provided with a grate for hard fuel and a recess horizontally in the wall thereof next beneath said grate and a shield plate over the said recess provided with a series of holes, and a gas burner located in said recess and adapted to start the fire in the grate when lighted.

2. A kitchen range having an oven, a fuel pot and a burner chamber next beneath said

pot at one side, an air duct leading to said chamber from beneath the oven and having discharge openings next beneath the inner side of said chamber and a gas burner in said
5 chamber.

3. A kitchen range having a fire box for fuel and a grate, in combination with a gas burner beneath one edge of said grate and a perforated shield over said burner, an air
10 supply duct at the bottom of said range having discharge openings scattered along

beneath said burner, whereby superheated air is supplied to both said burner and the fuel in said fire pot and uniform combustion is promoted.

In testimony whereof I affix my signature
in presence of two witnesses.

CARL H. MILLER.

Witnesses:

FRED C. ALBER,
E. M. FISHER.