

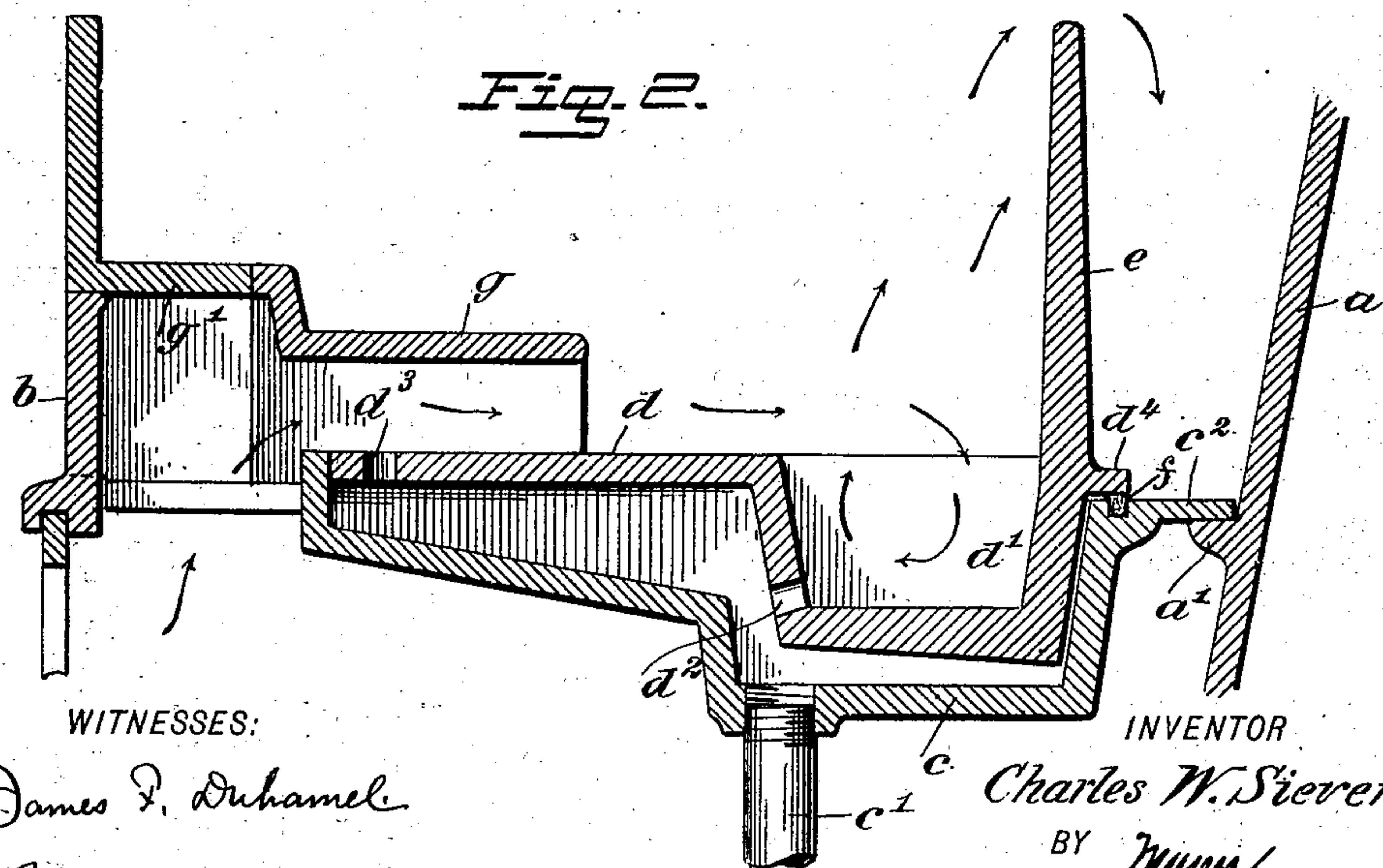
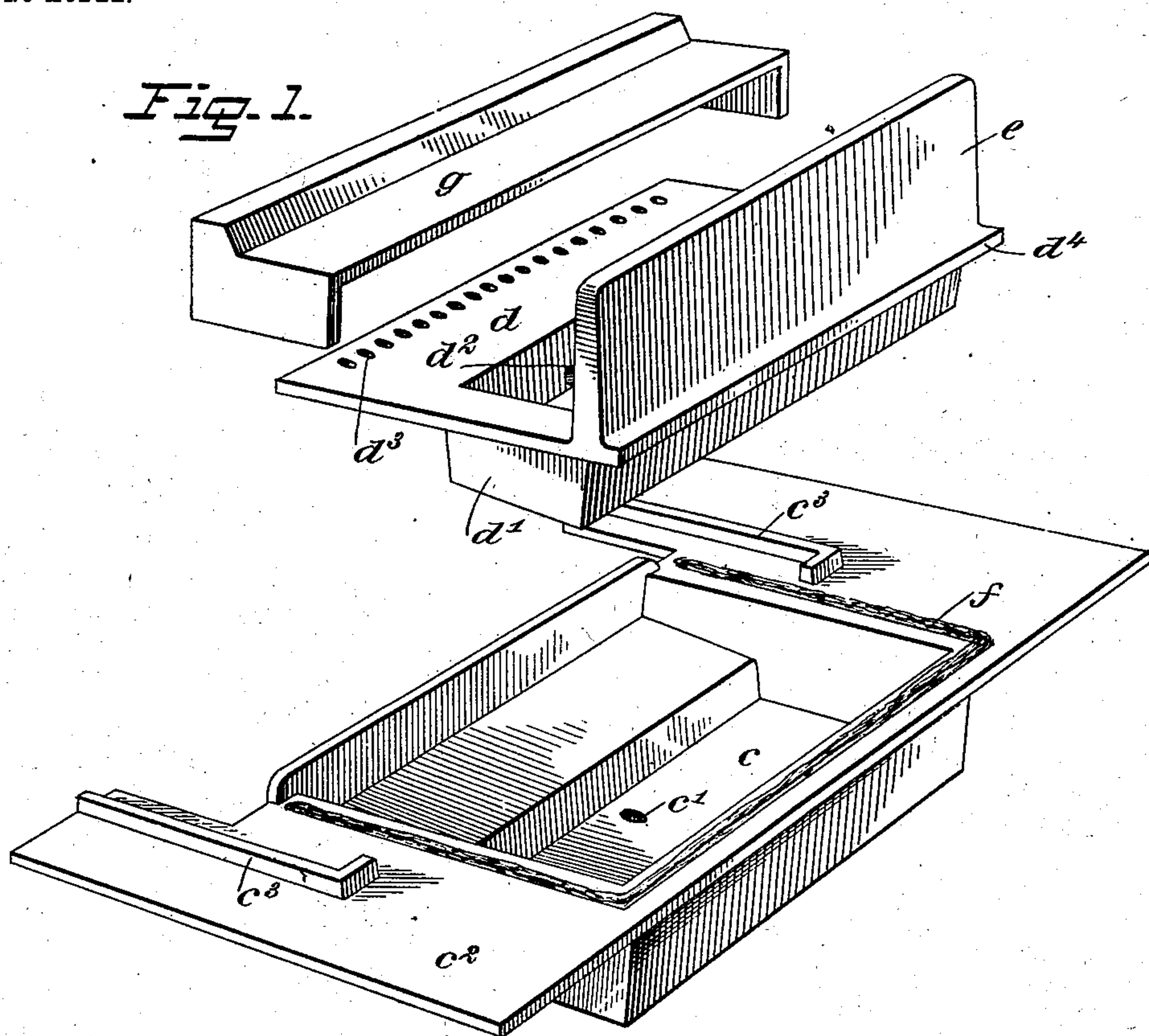
No. 726,106.

PATENTED APR. 21, 1903.

C. W. SIEVERT.
OIL BURNER.

APPLICATION FILED JUNE 13, 1902.

NO MODEL.



WITNESSES:

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CHARLES WILLIAM SIEVERT, OF LOS ANGELES, CALIFORNIA.

OIL-BURNER.

SPECIFICATION forming part of Letters Patent No. 726,106, dated April 21, 1903.

Application filed June 13, 1902. Serial No. 111,502. (No model.)

To all whom it may concern:

Be it known that I, CHARLES WILLIAM SIEVERT, a citizen of the United States, and a resident of Los Angeles, in the county of Los Angeles and State of California, have invented a new and Improved Oil-Burner, of which the following is a full, clear, and exact description.

The principal purpose of this invention is to adapt an oil-burner to domestic stoves, particularly cooking-stoves; and to this end the invention comprises certain novel features of construction fitting the burner to a fire-box of a cooking stove or range.

This specification is an exact description of one example of my invention, while the claims define the actual scope thereof.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in both views.

Figure 1 is a perspective view showing the several elements of the invention separated, and Fig. 2 is a longitudinal section of the burner.

a indicates the front wall of the oven of the stove, and b indicates the front of the stove itself. The top wall or covering and the side walls of the stove have been omitted from the drawings; but, of course, it will be understood that the parts are inclosed in the usual manner.

A pan or tray c is provided for the reception of the oil, and to this tray leads the oil supply pipe c' . The tray has its rear portion deepest and inclined upward toward the front, as best shown in Fig. 2. In this tray is placed a fire-plate d , which forms the bottom of the fire-box, such plate having a depressed portion or pan d' , which lies in the tray c and communicates therewith by a passage d^2 .

d^3 indicates a series of openings for the passage of the gas, these openings being located at the front edge of the fire-plate d .

Formed preferably integral with the rear wall of the pan or depression d' is a baffle-plate e , which stands vertically just forward of the wall a of the oven. The tray or pan c has a rearwardly-projecting ledge c^2 , which bears on a bead a' , formed on the wall a , and

said tray is engaged with the side walls of the stove in the same manner, such ledge c^2 extending around both sides of the tray, as shown in Fig. 1. The fire-plate d has a ledge d^4 projecting rearward from the baffle-plate e , and this ledge, together with the side portions of the fire-plate, bears on top of the ledge c^2 , a fibrous packing f being placed in a groove in the ledge c^2 , so as hermetically to connect the parts c and d and prevent leakage of the gas. The front wall of the fire-plate d lies back of the front wall of the pan c .

Over the orificed front portion of the fire-plate d a bridge-plate g is located, this plate forming a passage from the front of the stove rearward over the fire-plate, through which passage the air is admitted into the fire-box to support combustion. This arch or bridge g has a continuation g' extending to the front wall b of the stove, and said passage opens at the front and at the bottom, as shown.

In using the apparatus the oil is introduced into the pan or tray c until it runs through the orifice d^2 and covers the bottom of the depression or tray d' . It is then ignited, and the heat generated by the burning oil will cause the oil in the bottom of the tray c to be vaporized, forming a gas which passes out of the orifices d^3 and is there mixed with the air under the bridge g and burns over the tray d' , the burning gases striking against the baffle-plate e and passing over it down under the oven in the ordinary manner. The arrows in Fig. 2 illustrate the course taken by the gases. The bridge g and its extension g' rest on the ledge c^2 of the tray c , and beads c^3 are provided to be engaged by said parts. It will be observed that should any of the gas condense before it passes through the orifices d^3 the oil of condensation will flow back on the inclined bottom of the tray c , into the lower portion thereof, and again be converted into vapor. After the oil is burned out of the tray d' its level is kept below the orifice d^2 .

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

1. A gas generator and burner, comprising a pan or tray, and a flame-plate set thereon and having a depressed portion extending into

the tray or pan, said depressed portion being orificed to communicate with the tray, and the flame-plate being orificed to permit the passage of the gas from the tray over the flame-plate.

2. A gas generator and burner, comprising a pan or tray, a flame-plate set thereon and having a depressed portion extending into the tray or pan, said depressed portion being orificed to communicate with the tray and the flame-plate being orificed to permit the passage of the gas from the tray over the flame-plate, and a baffle-plate rising from one side of the said depressed portion of the flame-plate.

3. A gas generator and burner, comprising a pan or tray, a flame-plate set thereon and having a depressed portion extending into the tray or pan, said depressed portion being orificed to communicate with the tray and the flame-plate being orificed to permit the passage of the gas from the tray over the flame-plate, and a bridge-plate placed over the perforated portion of the flame-plate to deflect the gases toward the depressed portion thereof and to form an air-passage.

4. A gas generator and burner, comprising a pan or tray, a flame-plate set thereon and having a depressed portion extending into the tray or pan, said depressed portion being orificed to communicate with the tray and the flame-plate being orificed to permit the passage of the gas from the tray over the flame-plate, a baffle-plate rising from one side of the said depressed portion of the flame-plate, and a bridge-plate placed over the perforated portion of the flame-plate to deflect the gases toward the indented or depressed portion of the flame-plate and to form an air-passage for the admission of air to the combustion-chamber.

5. A gas generator and burner, comprising a pan or tray adapted to receive a hydrocarbon oil, a flame-plate set over the tray, said flame-plate having orifices for the passage of the gas through it to permit burning the gas over the flame-plate, and an arch or bridge plate set over the perforated portion of the flame-plate to deflect the gases over the flame-

plate and also to form a passage for the admission of air to the combustion-chamber.

6. A gas generator and burner, comprising a pan or tray adapted to receive a hydrocarbon oil, a flame-plate set over the tray, said flame-plate having orifices for the passage of the gas through it to permit burning the gas over the flame-plate, an arch or bridge plate set over the perforated portion of the flame-plate to deflect the gases over the flame-plate and also to form a passage for the admission of air to the combustion-chamber, and a baffle-plate located at the opposite edge of the flame-plate and standing vertically thereon.

7. A gas generator and burner, comprising a pan or tray adapted to have the oil introduced into and vaporized therein, and a flame-plate covering the pan or tray and adapted to have the gas burned over it, said flame-plate having a depressed portion with an orifice therein communicating with the pan or tray, for the purpose specified.

8. A gas generator and burner, comprising a pan or tray adapted to receive a hydrocarbon oil, a flame-plate set over the tray, said flame-plate having orifices for the passage of the gas to the top of the plate to permit burning the gas over the flame-plate, means at one edge of the flame-plate to facilitate the introduction of a current of air, and a baffle-plate located at the opposite edge of the flame-plate and standing vertically thereon.

9. A gas generator and burner, comprising a pan or tray adapted to have the oil introduced thereinto and vaporized therein, and a flame-plate covering the pan or tray, the generator and burner having a passage for the vapor from the pan or tray to the top of the flame-plate, whereby to permit burning the gas over said plate, and the flame-plate having a depressed portion with an orifice therein communicating with the pan or tray.

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

CHARLES WILLIAM SIEVERT.

Witnesses:

CURT P. DIETZE,
D. M. McDONALD.