

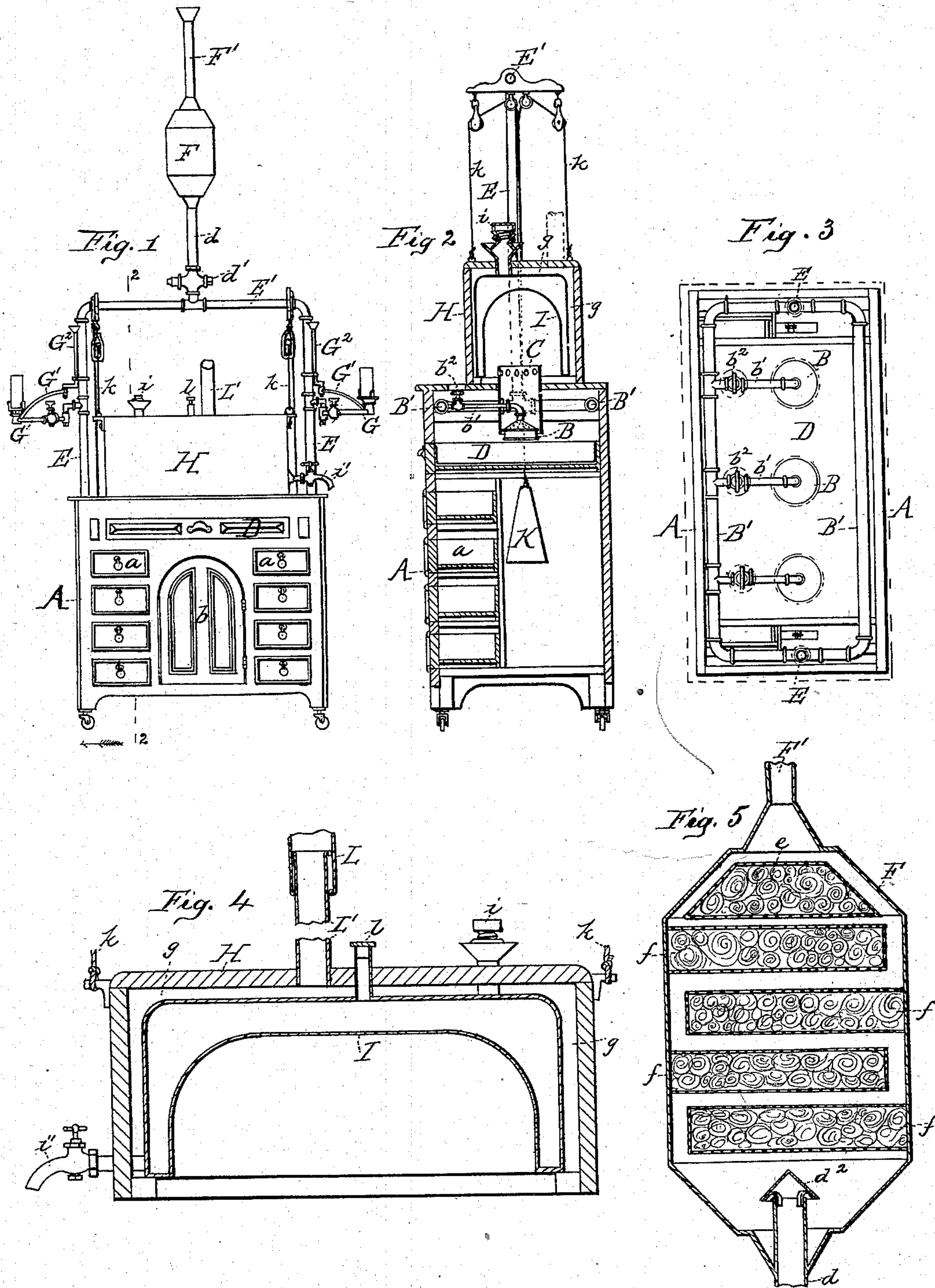
(No Model.)

2 Sheets—Sheet 1.

J. B. CROCKER.
COOKING APPARATUS.

No. 249,160.

Patented Nov. 8, 1881.



WITNESSES

J. H. Lawton
A. W. Kashagen

INVENTOR

John B. Crocker
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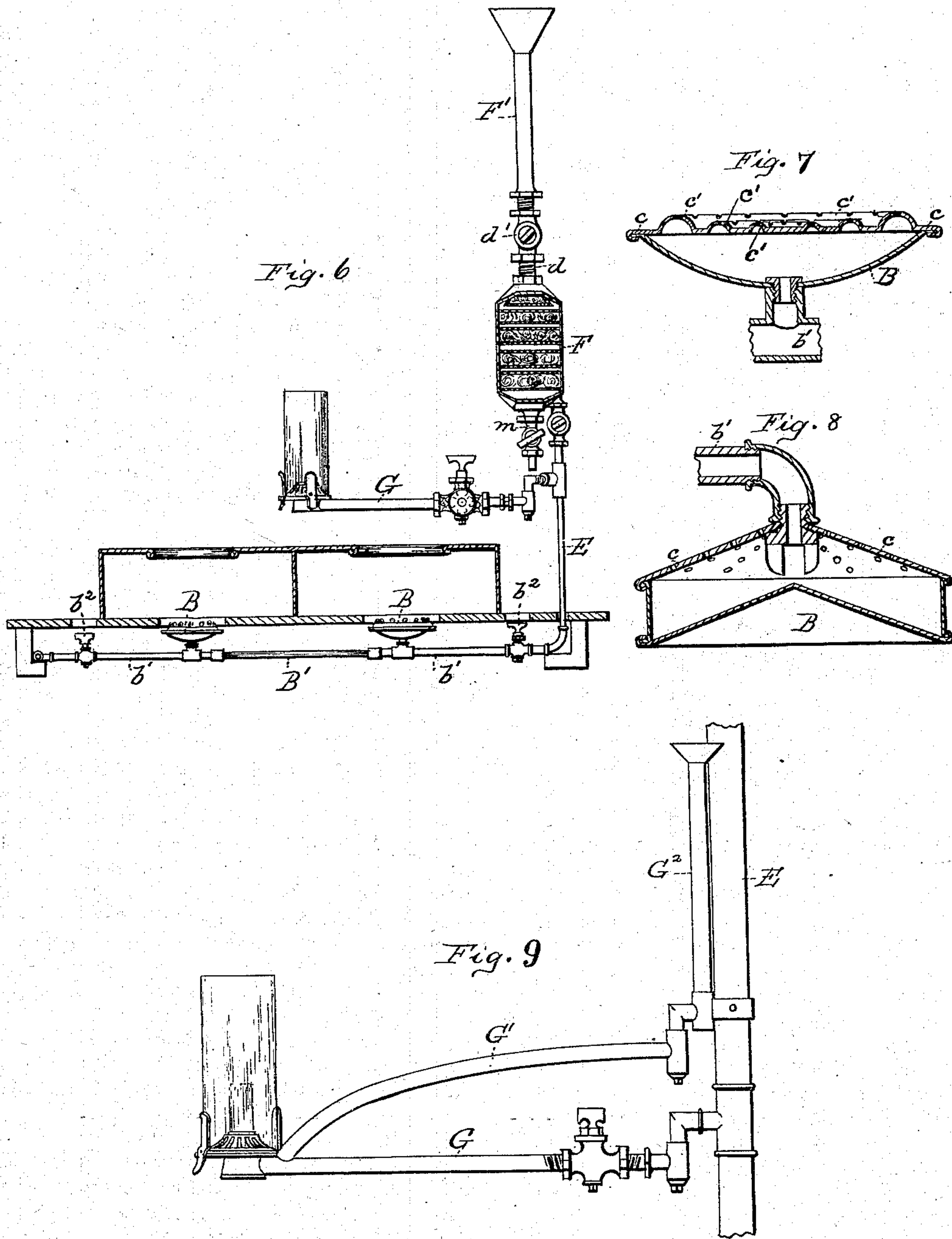
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UNITED STATES PATENT OFFICE.

JOHN B. CROCKER, OF CHICAGO, ILLINOIS.

COOKING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 249,160, dated November 8, 1881.

Application filed December 18, 1880. (No model.)

To all whom it may concern:

Be it known that I, JOHN B. CROCKER, of Chicago, in the county of Cook and State of Illinois, have invented a certain new and useful
5 Improvement in Cooking Apparatus, of which the following is a specification.

The object I have in view is to produce cooking apparatus, using oil for fuel, which will be much cleaner and more convenient than the oil-
10 stoves heretofore constructed, will not smoke when the flames are turned down to the lowest point, will provide its own light, and in which the fumes and gases will be conducted off, and there will be little or no danger of explosion.

15 My invention consists in the peculiar novel devices and combinations of devices employed by me, as fully hereinafter explained, and pointed out by the claims.

In the accompanying drawings, forming a
20 part hereof, Figure 1 is a front elevation of the preferred form of the apparatus; Fig. 2, a vertical section of the same on line 2 2, on an enlarged scale; Fig. 3, a horizontal section above the burners, also on an enlarged scale; Fig. 4,
25 a longitudinal vertical section of the oven removed; Fig. 5, a vertical section of the carburetor; Fig. 6, a vertical section of a simplified form of the apparatus without the cabinet; Figs. 7 and 8, views of two forms of burner;
30 and Fig. 9 an elevation of one of the light-brackets.

Like letters denote corresponding parts in all the figures.

In the preferred form of my apparatus the
35 parts are supported by a cabinet, A, which is preferably a rectangular box having drawers *a* at each side, and a central space for pots, pans, &c., closed by a door, *b*.

Within the top of the cabinet are arranged the
40 burners B, connected by independent branch pipes *b'* with a pipe, B', running around the sides of the cabinet, within the same. These branch pipes are provided with stop-cocks *b*² arranged beneath openings in the top of the
45 cabinet, so that the flames of the burners can be regulated, extinguished, or lighted independently of each other.

The burners are arranged in the center of the cabinet at the top, and each is inclosed by a
50 vertical cylinder, C, which rises through the top of the cabinet, and is perforated or notched

at its upper end. Such burners are made in the form of hollow disks, with perforated top plates, *c*, Figs. 7 and 8. These perforations are preferably made in annular ridges *c'*, formed
55 on the top plate, *c*. The branch pipes *b'* may enter the bottom or top of such disk-burners; or, instead of hollow disk-burners, pipes coiled into the form of flat spirals can be used. This spiral pipe will be provided with small perfora-
60 tions, and the gas will be burned directly on the surface of the pipe without the aid of burner-tips.

Below the burners the cabinet is provided with a drawer, D, which is lined with zinc.
65 This drawer is intended to be partly filled with water, and, in addition to preventing the heating of the cabinet, catches all grease and scraps that may drop down from the articles being
70 cooked.

From the horizontal pipe B' at the ends of the cabinet rise vertical pipes E, which are connected over the top of the cabinet by a pipe, E'. To the center of the pipe E is connected
75 a vertical branch pipe, *d*, having a stop-cock, *d'*, and supporting a carburetor, F. This carburetor is provided at its top with a filling-pipe, F', having a funnel-shaped upper end, and made of sufficient length so that the vapor of the oil will not rise to the top of the same.
80 The carburetor is provided with a number of horizontal chambers, *ef*, made of wire-gauze or perforated plates and filled with a fibrous substance. All the chambers *ef* extend entirely across the carburetor from front to rear.
85 The upper chamber, *e*, does not extend quite to the sides of the carburetor, while the lower chambers, *f*, are connected alternately to the opposite sides. In this manner a zigzag air-passage is formed. The chambers all extend
90 across the filling-pipe, so as to receive oil therefrom, and a large surface for evaporation is produced. The pipe *d*, which enters the lower end of the carburetor, rises above the bottom of the same, and is provided with a cap, *d*², so
95 that no oil can run down to the burners.

From each or either one of the pipes E projects a swinging gas-bracket, G, having a gas-burner on its end of any desired construction. An air-pipe, G', is connected with the bracket
100 near the burner, and is jointed to a vertical pipe, G², secured to the pipe E. This air-pipe

G' swings with the bracket and supplies additional air to the vapor, so as to produce a bright light at the burner. The quantity of oil which the fibrous material of the carburetor will readily absorb having been ascertained, that amount of any light volatile oil is poured into the filling-pipe F'. The evaporation of this oil producing cold, and the vapor being heavier than the atmosphere, air will be drawn down through the carburetor, being charged with vapor in its passage, and will pass to the burners B and the gas-brackets. At the burners B the carbureted air will produce an intense heat, while at the light-burners the additional supply of air will give bright flames. By using carbureted air in this manner, the danger of explosion is very much reduced, since no oil-reservoir is necessary. The apparatus can also be kept much cleaner and does not emit any disagreeable odor. The lights also add greatly to the convenience of the apparatus, since they will light up the room in which the apparatus is placed, and can be used for that purpose whether cooking is being done or not.

The flames of the cooking and lighting burners can be turned down to any point without smoking, which is a great advantage over all oil-stoves heretofore constructed.

For frying and boiling articles the pan and vessel can be placed on the upper ends of the cylinders C, which are constructed to receive stove-furniture of all kinds. For baking and heating water, however, I provide a specially-constructed oven, to be used with the cabinet before described. This oven is a rectangular box, H, with open bottom, which rests on the top of the cabinet, over the burners B. There is supported within the box H a hollow metal jacket, I, for containing water, a space, *g*, being left between such water-jacket and the surrounding box. The water-jacket, further, does not extend quite down to the lower edge of the box H, so that the heat can pass under the same into the space *g*. The heat passes around the jacket to the exit and heats the outside as well as the inner side of such jacket. This jacket forms a reverberating oven, which receives the heat directly from the burners. The water is poured into the jacket I through a pipe rising through the top of the box H, and is drawn off by a faucet *i*.

The box H is connected by cords *k*, extending over pulleys hung from the cross-pipe E', with weights K, working within the ends of the cabinet. These weights are preferably of such size that they will overbalance the oven when its water-jacket is partly filled, so that when the water becomes lowered to a certain point the oven will be raised from the top of the cabinet and elevated to near the cross-pipe E'.

A suitable catch may be provided for holding the oven in an elevated position when its jacket is filled.

A pipe, L L', is connected with the space *g*

of the oven and extends to the chimney. The joint L' of this pipe, rising from the box H, slides within the next joint L, which may be supported in any suitable manner. The sliding joint allows the oven to be moved vertically. This pipe not only carries off the fumes and the products of combustion when articles are being baked, but also when the apparatus is in use for frying or boiling, since then the fumes will be caught by the oven as they rise. I provide the oven with a whistle, *l*, which will be sounded by the generated steam when the water boils, so as to give notice of that fact.

As a modification of my apparatus it can be used without the cabinet or the specially-constructed oven, as shown in Fig. 6. The carburetor of this device is elevated on two pipes, which extend down to a suitable table or frame. The burners are located on branch pipes in openings in this table or frame, and above each burner is a drum which is adapted to receive the furniture of ordinary oil-stoves. A gas-bracket projects from one of the pipes that support the carburetor, and will be provided with an additional air-pipe, as before described. The carburetor is provided with a central pipe, *m*, extending from its lower end, for the purpose of allowing all the oil to be drawn off that is not taken up by the fibrous material when the carburetor is charged.

What I claim as my invention is—

1. In oil cooking apparatus, the combination, with the heating-burners and elevated carburetor, of one or more swinging gas-brackets, G, having swinging air-pipes G' G², substantially as described and shown.

2. In portable cooking apparatus, the combination, with the cabinet A, of the burners B, located in the top of the cabinet, the rests C for stove-furniture projecting through the top of the cabinet, and the elevated carburetor F, supported by the cabinet and connected with the burners, substantially as described and shown.

3. The oil cooking apparatus described, having a cabinet, A, provided with burners B, and supporting an elevated carburetor, F, and gas-brackets G, substantially as described and shown.

4. In oil cooking apparatus, the combination, with the heating-burners and the rests for stove-furniture, of the double-wall reverberating oven, having an open bottom, the space *g* between the walls of the oven being connected at its bottom with such oven, substantially as described and shown.

5. In oil cooking apparatus, the oven composed of outer casing, H, with open bottom, the water-jacket I, and space *g*, substantially as described and shown.

JOHN B. CROCKER.

Witnesses:

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