

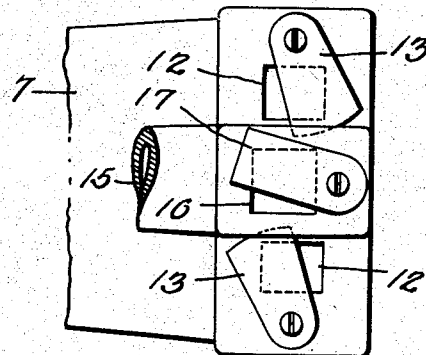
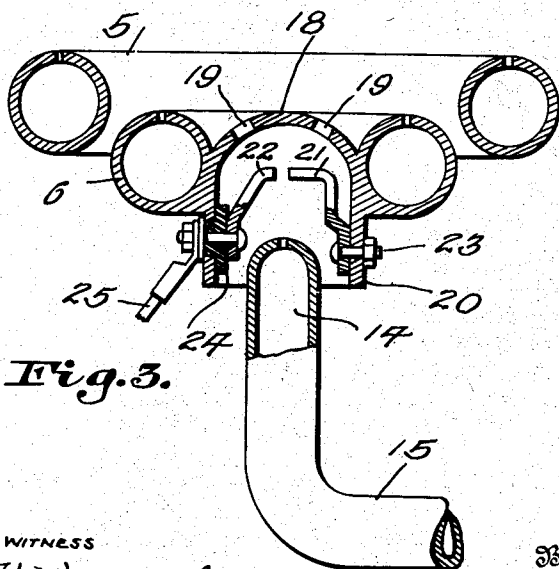
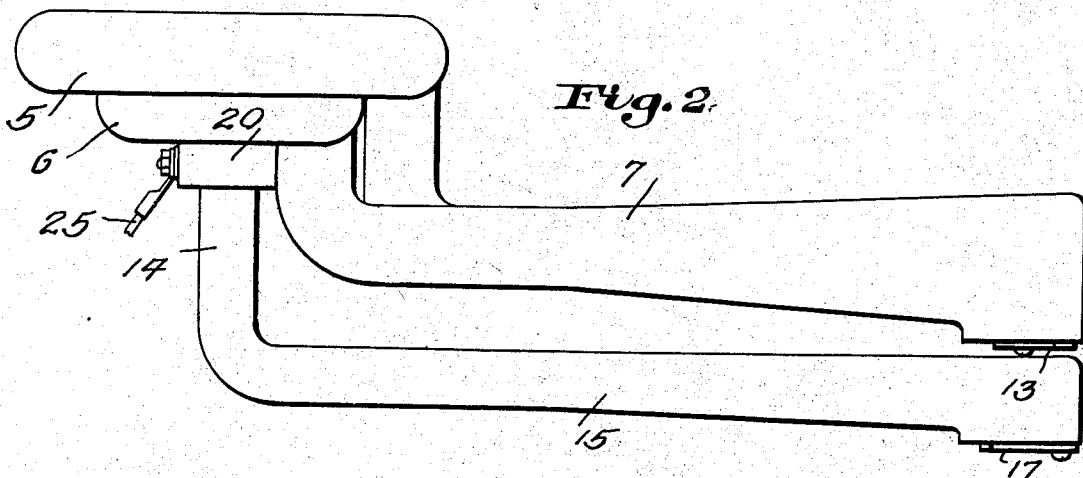
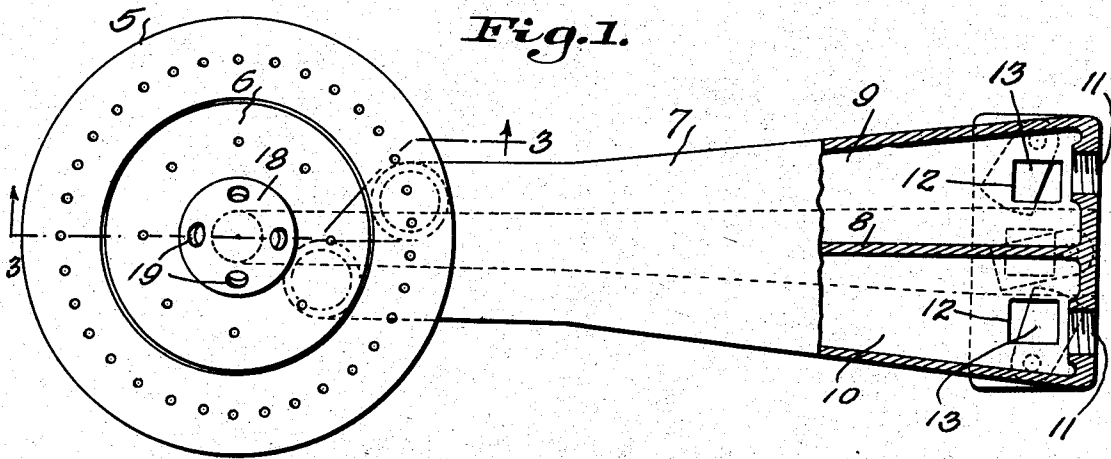
Nov. 21, 1939.

J. E. BROWNING

2,180,789

GAS BURNER

Filed Aug. 17, 1938



Inventor

James E. Browning

WITNESS
H. Woodard

By *H. B. Wilson & Co.*
Attorneys

UNITED STATES PATENT OFFICE

2,180,789

GAS BURNER

James E. Browning, San Antonio, Tex., assignor
of one-half to Claude V. Birkhead and Werner
N. Beckmann, both of San Antonio, Tex., co-
partners doing business as Birkhead, Beck-
mann, Stanard & Vance

Application August 17, 1938, Serial No. 225,488

1 Claim. (Cl. 158—115)

This application is a continuation in part of my parent United States application Serial No. 187,322, filed January 27, 1938.

well be supplied with current in the same manner as shown in said application.

5 The invention relates to a gas burner associated with an igniting burner and electrodes for igniting the gas discharged from said igniting burner, the whole being intended primarily for effecting burner lighting on gas stoves and the like simply when a gas valve is properly manipulated.

10 The object of the invention is to provide for a simple, inexpensive and efficient relation of burner, perforated hood, igniting burner and electrodes, whereby a spark jumping between the electrodes ignites gas discharged from the igniting burner, and the flame thus produced passes through the perforations in the hood to ignite the burner proper.

15 With the foregoing in view, the invention resides in the novel subject matter hereinafter described and claimed, description being accomplished by reference to the accompanying drawing.

20 Figure 1 is a top plan view partly in horizontal section showing a burner constructed in accordance with my invention.

Figure 2 is a side elevation.

25 Figure 3 is a sectional view substantially on line 3—3 of Fig. 1.

30 Figure 4 is a fragmentary bottom plan view showing the air admission valves.

35 In the drawing above briefly described, the numerals 5 and 6 denote a main burner and a simmer burner respectively, said burners being both of annular form and disposed in concentric relation. Gas and air may be supplied to the burners in any preferred way, and for illustrative purposes, I have shown a single conduit member 7 longitudinally partitioned at 8 to provide one gas passage 9 for the main burner 5, and another passage 10 for the simmer burner 6. At their outer ends, these passages are formed with suitable openings 11 to communicate with passages of a valve or valves. Each passage 9—10, is also formed with an air admission opening 12 closed by a suitable pivoted valve 13.

40 In concentric relation with the burners 5 and 6 and spaced downwardly therefrom, I have shown a small igniting burner 14, the gas and air supply conduit 15 of which is provided with an air inlet 16, with a pivoted valve 17 for said air inlet, and with an appropriate gas inlet (not shown) to communicate with a passage of a suitable valve. For use in connection with the three burners, a valve of the type disclosed in my United States application Serial No. 225,487, filed August 17, 1938, may well be used, and the ignition electrodes hereinafter described, may

5 A dome-like plate 18 is formed integrally with the inner periphery of the burner 6, in the present disclosure, said plate having perforations 19. Also formed integrally with the inner periphery of the burner 6, is a downwardly projecting continuous wall 20, said wall 20 and the dome-like plate 18 jointly forming a perforated hood disposed over the igniting burner 14, within 10 the confines of the two burners 5 and 6. Within this hood are two electrodes 21 and 22 between which a spark may jump to ignite the gas discharged from the igniting burner 14, thus producing a flame which passes through the openings 19 and will immediately ignite the gas discharged from either of the burners 5 or 6.

15 Electrode 21 is shown grounded at 23 to the wall 20, whereas the electrode 22 is insulated at 24 from said wall, said electrode 22 being connected with a conductor 25 forming part of an electric circuit including the electrodes and an ignition coil, (not shown). Obviously, both electrodes could be insulated from the burner structure should a two-wire system be desired.

20 It will be seen from the foregoing that simple and inexpensive provision has been made whereby an igniting burner for another burner may be electrically lighted whenever desired, the construction being such that the mixture of gas and air from said igniting burner, discharging under the perforated hood, effectively intermingles with additional air, the mixture being immediately ignited by the spark jumping between the electrodes, to in turn ignite the burner 5 or 6, as desired. Moreover, the disposal of the burner 14 under the hood, and location of the electrodes within the hood, effectively protects them, particularly against any food which may boil over when cooking.

25 As excellent results may be obtained from the details disclosed, they are preferably followed. However, within the scope of the invention as claimed, variations may be made.

I claim:

30 A gas burner of annular form, a perforated dome-like plate integrally joined at its peripheral edge to the inner periphery of said annular burner, a continuous vertical wall integrally joined to said inner periphery of said burner and projecting downwardly therefrom, said perforated plate and wall cooperating with said inner periphery of said burner in forming a perforated hood, an igniting burner extending upwardly into the lower portion of said hood in spaced relation with said wall, and electrodes mounted on said wall within said hood and providing a spark gap over said igniting burner.

JAMES E. BROWNING.