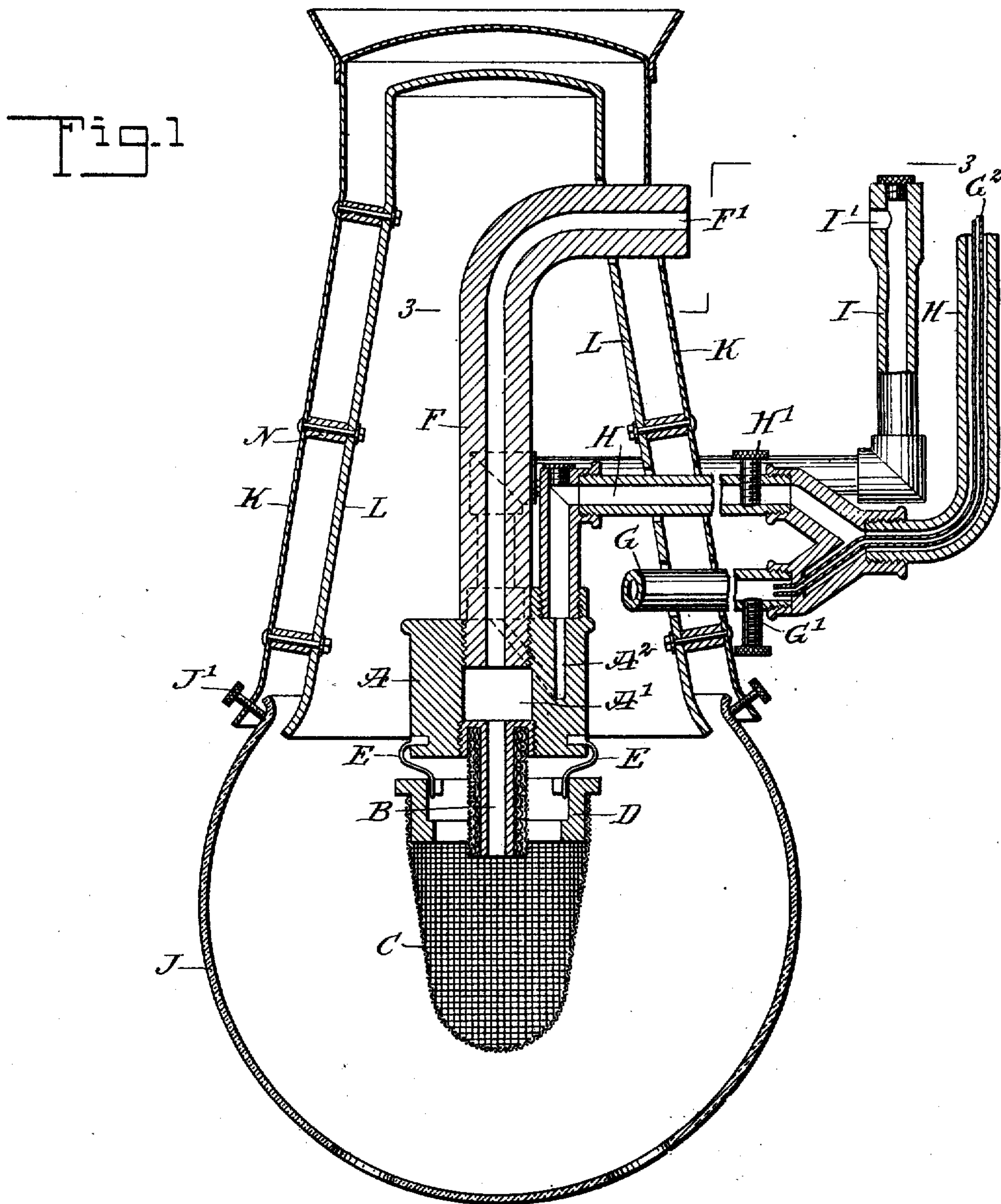


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COMBINATION GAS AND GASOLENE BURNER.
APPLICATION FILED JAN. 2, 1907.

907,698.

Patented Dec. 22, 1908.

2 SHEETS—SHEET 1.



WITNESSES

J. A. Brophy
Rev. G. H. H. H.

INVENTOR

George A. Manshardt

BY *Mumma & Co.*

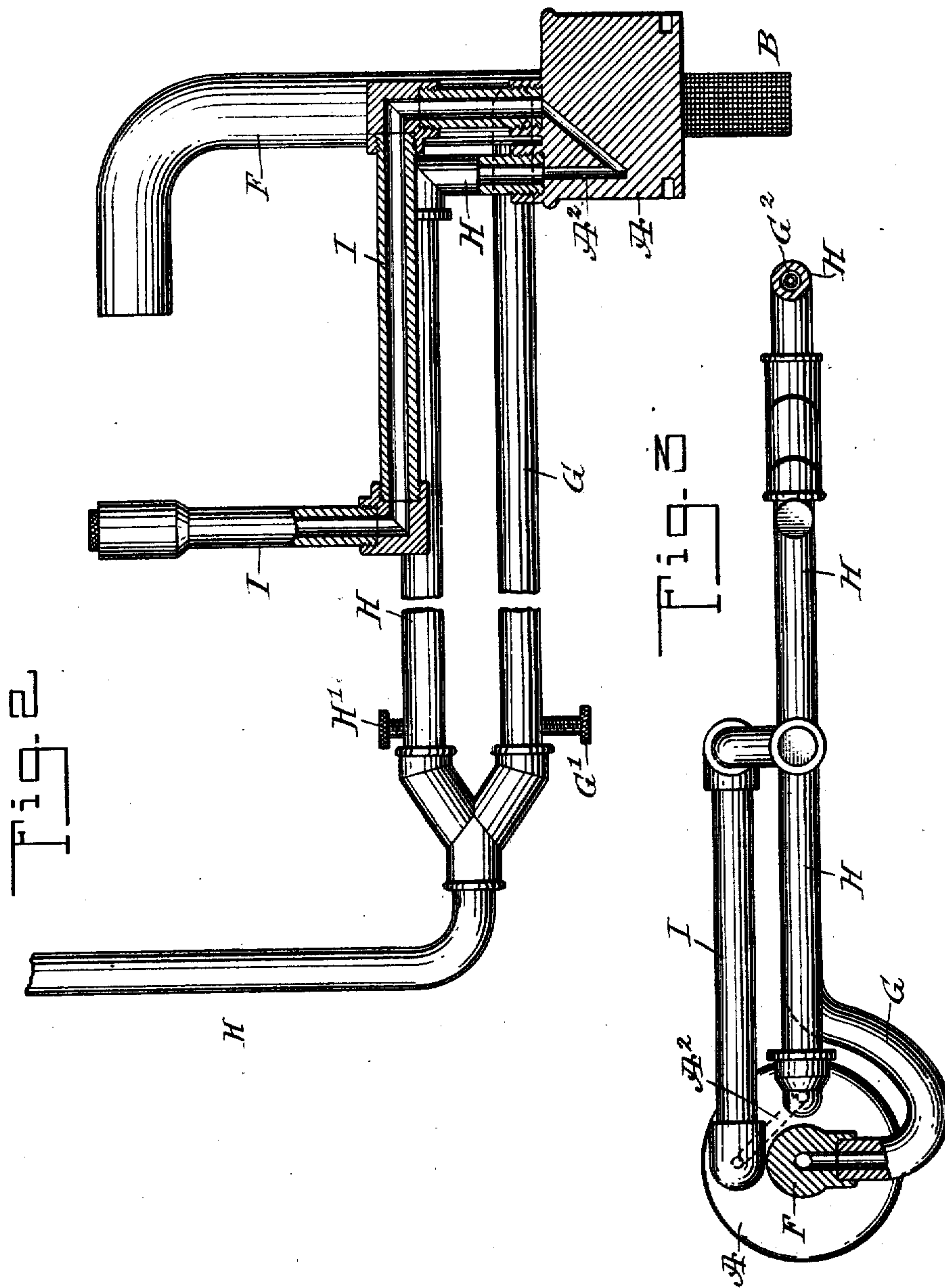
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UNITED STATES PATENT OFFICE.

GEORGE AUGUSTUS MANSHARDT, OF NAPERVILLE, ILLINOIS.

COMBINATION GAS AND GASOLENE BURNER.

No. 907,698.

Specification of Letters Patent.

Patented Dec. 22, 1908.

Application filed January 2, 1907. Serial No. 350,345.

To all whom it may concern:

Be it known that I, GEORGE AUGUSTUS MANSHARDT, a citizen of the United States, and a resident of Naperville, in the county of Dupage and State of Illinois, have invented a new and Improved Combination Gas and Gasolene Burner, of which the following is a full, clear, and exact description.

The object of the invention is to provide a new and improved combination gas and gasolene burner, arranged to permit of burning gas or gasolene in such a manner that it requires no tedious waiting for producing the desired flame when gasolene is used as the fuel.

The invention consists of novel features and parts and combinations of the same, which will be more fully described hereinafter and then pointed out in the claim.

A practical embodiment of the invention is represented in the accompanying drawings forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a sectional side elevation of the improvement; Fig. 2 is a rear sectional side elevation of the same the casing being omitted, and Fig. 3 is a sectional plan view of the same on the line 3—3 of Fig. 1.

The generator A is provided with a central supply chamber A' and a generating chamber A² in the wall of the generator and separate from the supply chamber A', and from the latter extends downwardly a burner tube B opening into a mantle C attached at its upper end to a holder D supported on spring arms E fastened to the generator A, as plainly illustrated in Fig. 1. Into the top of the supply chamber A' opens an upwardly extending air and gas supply tube F, and into the latter near the lower end thereof opens a gas pipe G having a valve G' and a pipe connection G² connected with a suitable source of gas supply such as natural gas, artificial gas or gasolene vapors. Now when the valve G' is opened the gas can flow through the pipe G into the supply chamber A' and from the latter by way of the tube B into the mantle C to be burned therein in the usual manner.

The generating chamber A² is in the form of a V-shaped channel, as plainly indicated in Fig. 2, and its entrance end connects with a gasolene supply pipe H having a valve H' and connected with a gasolene supply tank,

so that when the valve H' is open the gasolene can flow into the generating chamber A², to be immediately vaporized as the generator A is heated by the gas burning at the time in the mantle C. The outlet end of the generating chamber A² is connected with a discharge pipe I arranged directly opposite the entrance end of the gas and air supply pipe F, so that the gas generated in the chamber A² and passing up the tube I and out through the outlet I' thereof mixes with the air, and the mixture of air and gas passes into the tube F and down the same into the supply chamber A', from which the mixture can pass through the burner B into the mantle C to be burned therein. It is understood that when this takes place the valve G' is closed so as to shut off the gas supply.

From the foregoing it will be seen that when it is desired to use the burner for lighting purposes it is only necessary first to turn on the gas by opening the valve G' and igniting the gas in the mantle C, whereby the generator A is sufficiently heated within a very short time, so that the gas can be turned off by closing the valve G' and the gasolene turned on by opening the valve H', so that the gasolene is immediately generated into gas, is discharged from the pipe I, mixed with air and passes into the tube F and down the burner B to be burned in the mantle C.

As illustrated in Fig. 1 the burner is used in connection with a gas lamp having a globe J attached at its upper open end by screws J' to a lamp casing K provided with a lining L of asbestos or other suitable material, spaced from the casing K by spacers N so as to form an air chamber between the casing K and its lining L. The several pipes G, H and the tubes F and I extend through the side walls of the casing A and its lining L to the interior thereof, to connect with the generator, as above explained. The generator A is suspended centrally in the casing K, as indicated in the drawings.

The gas connecting pipe G² above mentioned may be extended through the gasolene supply pipe H, the latter being in the form of a chandelier pipe, so as to suspend the lamp in the room in the desired manner.

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

A burner comprising a generator having a main central supply chamber and a generat-

ing chamber in the wall of the generator, a
burner tube connected with the supply cham-
ber, a gas and air supply tube leading up-
ward from the main chamber its free end be-
5 ing arranged at an angle to the body portion,
a gas supply pipe connected with the main
chamber, a valve for closing said pipe, a gaso-
lene pipe leading to the generating chamber
and a gasolene discharge pipe leading from
10 the generating chamber and having an out-

let opposite the free end of the gas and air
supply pipe and discharging thereinto.

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

GEO. AUGUSTUS MANSCHARDT.

Witnesses:

JOHN RICE,

FRANK A. MESSERSCHMIDT.