

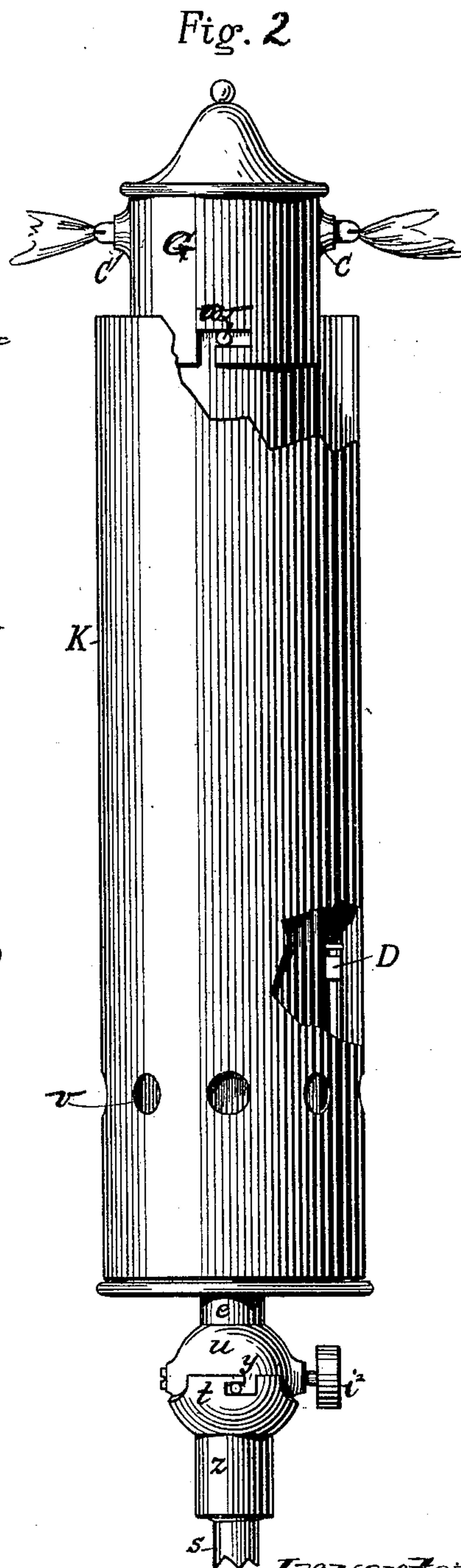
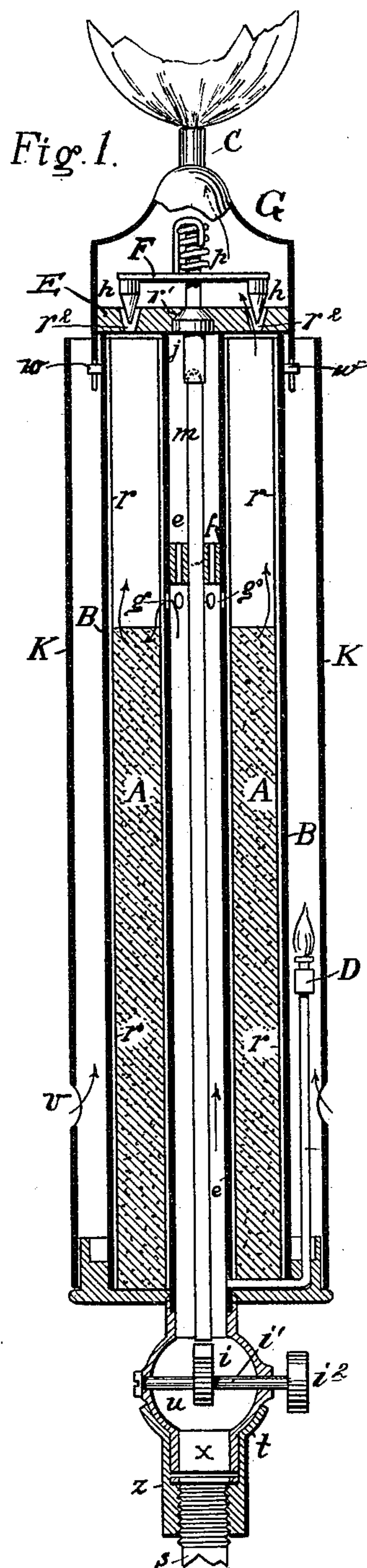
(No Model.)

2 Sheets—Sheet 1.

L. DOMS.
CARBURETING LAMP.

No. 405,880.

Patented June 25, 1889.



Witnesses,
Geo. W. Rea
Robert Everett,

Inventor,
Leo Doms,
By James L. Norris,
Atty.

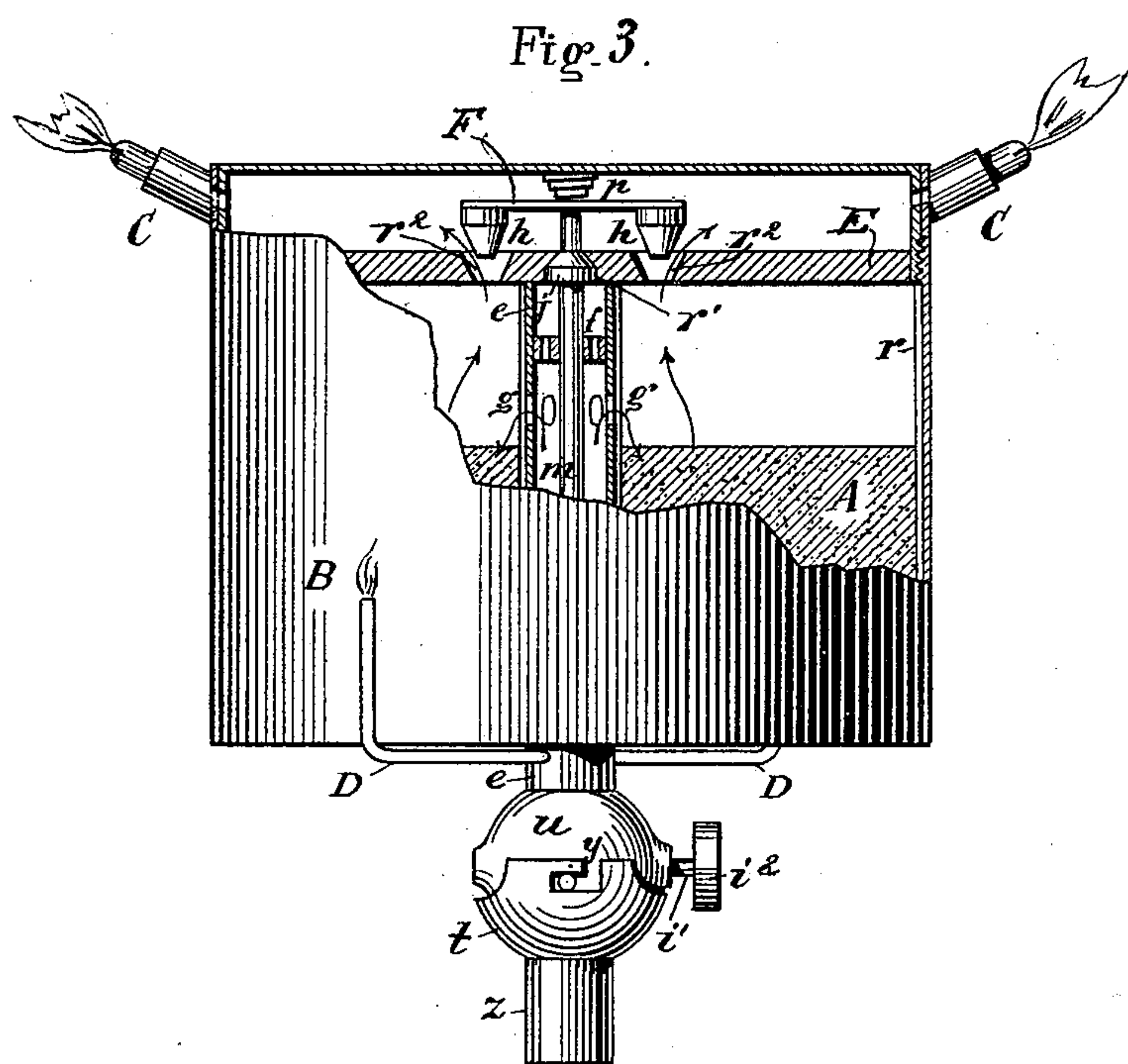
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UNITED STATES PATENT OFFICE.

LEO DOMS, OF VIENNA, AUSTRIA-HUNGARY.

CARBURETING-LAMP.

SPECIFICATION forming part of Letters Patent No. 405,880, dated June 25, 1889.

Application filed October 2, 1888. Serial No. 286,969. (No model.)

To all whom it may concern:

Be it known that I, LEO DOMS, a subject of the Emperor of Austria, and a resident of the city of Vienna, Austria-Hungary, have invented certain new and useful Improvements in Carbureting-Lamps, of which the following is a specification.

This invention relates to that class of carbureting-lamps in which the illuminating-power of ordinary gas is increased by mixing the gas with hydrocarbon vapors that are generated by heating naphthaline or other suitable hydrocarbon in a receptacle attached to or forming part of the lamp.

The object of my invention is to improve the construction and operation of such lamps; and to this end the invention consists in the features hereinafter described and claimed.

In the annexed drawings, Figure 1 is a vertical sectional view of a carbureting-lamp embodying my improvements. Fig. 2 is a broken side elevation of the same. Fig. 3 is a partly sectional side elevation of a modified form of carbureting-lamp.

Referring to the drawings, the letter A designates a naphthaline cartridge, which is inserted into a vertical cylindrical receptacle B, that forms a vaporizing and mixing chamber.

C are the illuminating-lamp burners, and D is a burner for heating the naphthaline-receptacle.

The cartridge A is centrally perforated to surround a gas-pipe *e*, that extends centrally and in a vertical direction through the chamber or receptacle B, as shown in Figs. 1 and 3. This gas-pipe *e* is provided above the surface of the naphthaline cartridge with perforations *g g*, that permit the passage of gas from said pipe *e* into the vaporizing and mixing chamber B, that contains the naphthaline. In the gas-pipe *e* is a central vertical rod *m*, carrying a perforated piston-valve *f*, that is located on said rod near the perforations *g g*, in position to control the flow of gas into the naphthaline-receptacle, while the perforations in said piston-valve will permit a certain quantity of gas to pass onward to the lamp-burners without entering the naphthaline-receptacle. The upper portion of the rod *m* passes through an opening or valve-seat *r'* in the center of a plate E, that is located at

the top of the naphthaline-receptacle B, as shown in Fig. 1, or in the upper part of said receptacle, as shown in Fig. 3. Below the valve-seat *r'*, and on the rod *m*, is a valve *j*, for controlling the passage of gas from the gas-pipe *e* directly to the burner or burners C; and on the rod *m*, above the plate E, is a cross-head F, that carries at each end a depending conical valve *h*, for controlling the passage of mixed gas and naphthaline vapor from the receptacle or chamber B through openings *r²* in the plate E, and thence to the lamp-burner. The rod *m* is normally pressed downward by a spring *p* at its upper end in such a way as to close the upper valves *h h* and open the lower valve *j*, thus closing the naphthaline-receptacle or mixing-chamber B and permitting a flow of unmixed gas to the burners. The rod *m* extends downward through the gas-pipe *e*, and can be raised, in the manner presently described, for the purpose of opening the valves *h h* and wholly or partly closing the valve *j*, so as to allow the passage of mixed gas and naphthaline vapors from the chamber or receptacle B to the burners. This is effected by means of a cam *i*, beneath and in contact with the lower end of the rod *m*, which cam is mounted on a shaft *i'*, having a handle *i²*, by which said shaft and cam may be operated. The cam-shaft *i'* is supported or journaled in a spherical chamber *u*, that supports the gas-pipe *e* and the receptacle or chamber B, and this sphere *u* is provided on its lower side with a short inlet-pipe *x*, that enters a coupling *z*, which is screwed onto a gas-supply pipe *s*, as shown in Fig. 1, said coupling *z* being provided at its upper end with a socket *t*, that is connected with the sphere *u* by a bayonet-joint *y*, as shown in Figs. 2 and 3.

The main or illuminating-gas burners C may be directly attached to the upper part of the receptacle B, as shown in Fig. 3, or they may be attached to a cap G, that is connected to said receptacle or chamber B by means of bayonet joints or catches W, as shown in Figs. 1 and 2.

The burners D, for heating the vaporizing and mixing chamber or receptacle B, are supplied from the lower part of the gas-pipe *e*, as shown in Figs. 1 and 3. If desired, these heating-burners D may be inclosed by a cylin-

dricul casing or air-jacket K, surrounding the receptacle or chamber B, and provided with air-inlets *v*, as shown in Figs. 1 and 2.

In order that by increasing the evaporating-surface a better evaporation of the naphthaline shall be effected, the receptacle B is provided with a lining *r*, of paper, or a thin layer of other highly-absorbent substance. The paper lining *r* does not require to be changed, as it does not burn in a hot state, and in a cold state it firmly adheres to the wall of the receptacle.

By means of the rod *m* and perforated piston-valve *f* in the gas-admission pipe *e* the perforations *g*, for admitting gas to the receptacle B, can be opened or closed at will. By means of the valves *h* the discharge of gas impregnated with naphthaline vapors can be readily controlled through the rod *m*, while the valve *j*, also carried by said rod, controls the delivery of unmixed gas to the burner. By closing the perforations *g* no naphthaline vapors can pass to the burners after the flame is extinguished.

The form of lamp shown in Fig. 3 is substantially the same as that described with reference to Figs. 1 and 2, with the exception that the naphthaline-receptacle is decreased in height and enlarged in diameter, the burners C are attached to the sides of said receptacle, and the outer casing or air-jacket is omitted.

Instead of using naphthaline, the lamp can be employed with other solid hydrocarbons capable of being vaporized.

What I claim as my invention is—

1. In a carbureting-lamp, the combination of a receptacle for naphthaline or other hydrocarbon, a gas-burner supported by said receptacle, a gas-pipe extended centrally through the naphthaline-receptacle and supporting the same, said gas-pipe being provided

with perforations leading into said receptacle, a plate located at the upper end of the naphthaline-receptacle and provided with openings communicating with said receptacle and with the gas-pipe, a gas-burner adapted for heating the naphthaline-receptacle, a vertically-movable rod supported centrally in the gas-pipe, a perforated piston-valve carried by said rod to control the passage of gas into the naphthaline-receptacle, and valves carried by the upper portion of said rod and adapted to control the passage of gas and mixed gas and vapor through the perforated plate to the burner, substantially as described.

2. In a carbureting-lamp, the combination of a receptacle for naphthaline or other hydrocarbon, an illuminating-gas burner supported by said receptacle, a gas-pipe extended centrally through the naphthaline-receptacle and provided with perforations leading into said receptacle, a gas-burner adapted for heating the naphthaline-receptacle, a jacket surrounding said heating-burner, a plate located at the upper end of the naphthaline-receptacle and provided with openings through which the said receptacle and gas-pipe communicate with the illuminating-burner, a vertically-movable rod supported centrally in the gas-pipe, a perforated piston-valve carried by said rod and adapted to control the passage of gas into the naphthaline-receptacle, and valves carried by the upper portion of said rod to control the passage of gas and mixed vapor and gas to the illuminating-burner, substantially as described.

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

LEO DOMS.

Witnesses:

C. O. PAGET,
E. G. F. MOELLER.