

No. 658,020.

Patented Sept. 18, 1900.

H. REY.
CARBURETER.

(Application filed Aug. 1, 1899.)

(No Model.)

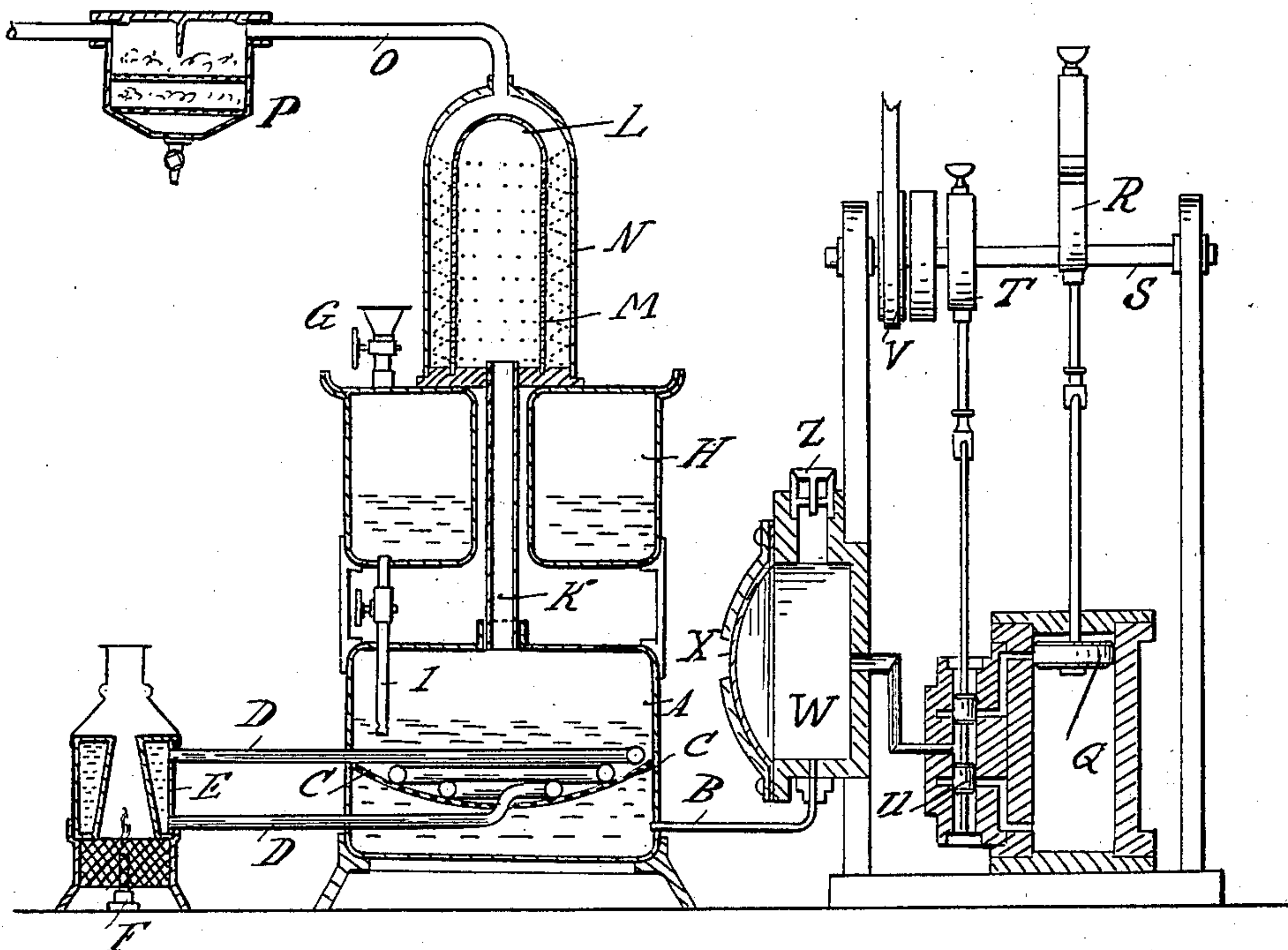


Fig. 1

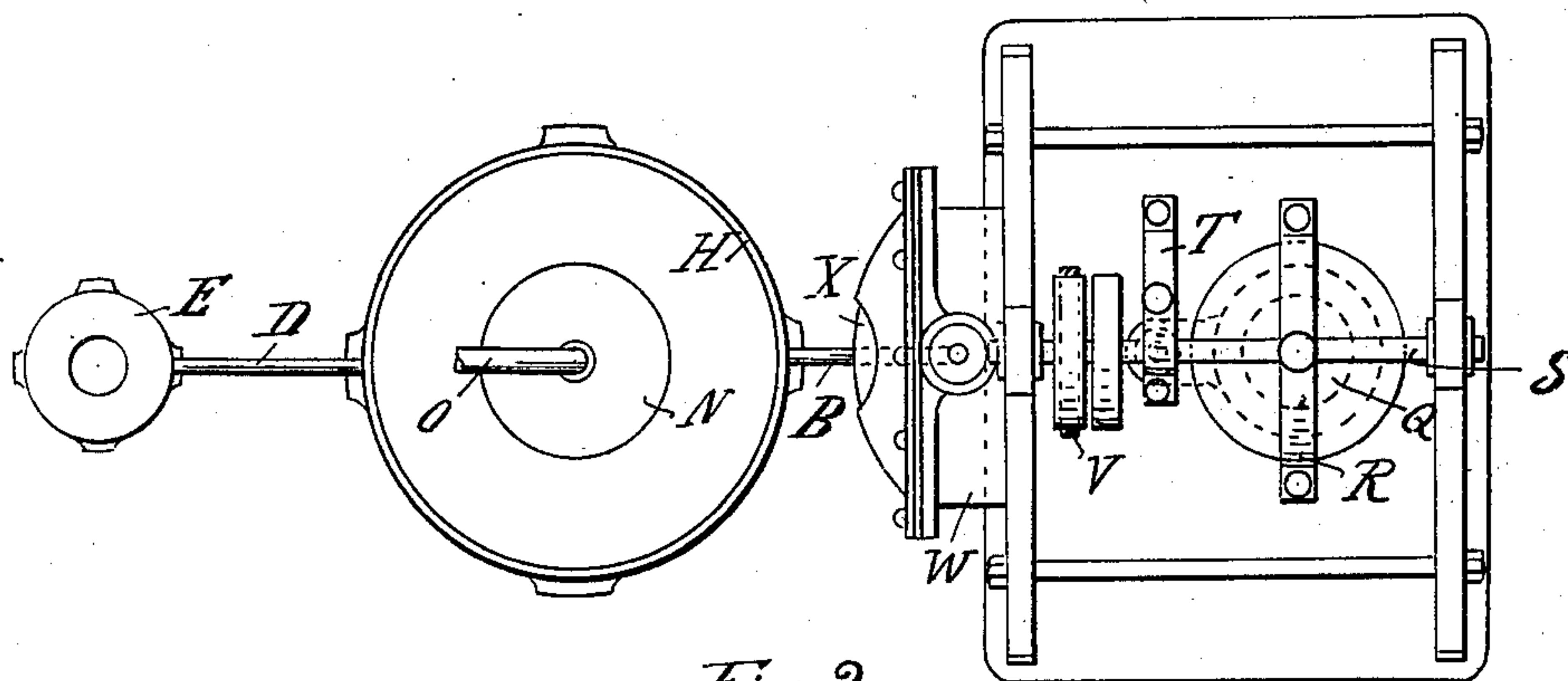


Fig. 2

Witnesses:
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UNITED STATES PATENT OFFICE.

HENRI REY, OF BRUSSELS, BELGIUM.

CARBURETER.

SPECIFICATION forming part of Letters Patent No. 658,020, dated September 18, 1900.

Application filed August 1, 1899. Serial No. 726,770. (No model.)

To all whom it may concern:

Be it known that I, HENRI REY, administrateur délégué de la Société du Nouveau Gas, a citizen of Belgium, residing at Brussels, in the Kingdom of Belgium, have invented a new and useful Improvement in Apparatus for Producing Carbureted Air, (for which I have obtained a patent in Belgium, No. 141,940, dated April 8, 1899,) of which the following is a specification.

The object of the present invention is to produce carbureted air at an elevated pressure, as required for intensive incandescent gas lighting and heating purposes, in such a manner that the air will lose but little of its initial pressure by friction and that the heat of a simple gas-burner will suffice to prevent the oil from freezing even when producing great quantities of gas. I attain this object by forcing air through a single perforated plate which plunges into a bath of mineral oil and which is heated by a coil in order to prevent it from being obstructed by ice particles. By spraying through the oil-bath the latter is converted into a vesicular state and passes through a perforated cylinder, bell, or box, where it is divided again into a great number of currents and deflected from a surrounding envelop acting as an evaporator. The apparatus is completed by an air-compressor consisting of an air-pump, in which the continuity of the air-current is obtained by means of an air vessel provided with an elastic diaphragm and with a safety-valve so arranged that air will escape from it into the atmosphere as soon as the pressure in the carbureter increases above the pressure required. Consequently the air forced through the carbureter will at any time correspond with the gas consumption, which may be variable.

In order to enable my invention to be fully understood, I will proceed to describe the same with reference to the accompanying drawings, in which—

Figure 1 represents a vertical section of the improved apparatus, and Fig. 2 a plan view of the same.

A is the carbureter; B, the air-pipe; C, the perforated plate; D, the heating-coil, through

which circulates water heated in a small boiler E by means of a gas-burner or lamp F.

G is a funnel for filling the oil-holder H, which maintains automatically a convenient level in the carbureter by means of a Mariott's pipe I.

K is a pipe connection leading the pulverized mixture of oil and air into the bell L, which is provided with perforations, as indicated by the dotted line M M, and surrounded by the envelop N. As the latter has a great surface exposed to the outer air, which is relatively warm, it favors the volatilization of the sprayed oil at a low temperature and acts as an evaporator.

O is the gas-pipe, and P a condensing vessel which contains upon grates layers of quicklime for the purpose of absorbing the condensed water contained in the air and of producing heat. Several of these vessels may be inserted in the gas-pipe at convenient points.

Q is the piston of the air-pump, which is actuated by the eccentric R, mounted upon the axis S, upon which is also mounted a second eccentric T, operating the distributing-slide U.

V is a transmission-pulley.

W is the air vessel, provided with an elastic diaphragm X, of india-rubber, and with a safety-valve Z.

I am aware that prior to my invention perforated plates and heating-coils have already been used in air-carbureters; but they have not been combined and arranged as I do for producing, first, the pulverization of the oil by projecting the same through a directly-heated perforated plate, and, secondly, the volatilization of the mixture of air and oil-dust obtained by radially projecting the same through a perforated cylinder against an envelop heated by the outer air and acting as a surface heater.

Therefore what I do claim as my invention, and desire to secure by Letters Patent, is—

1. In an air-carbureter, the combination of a perforated plate C plunging into an oil-bath and having a heating-coil D placed directly

upon it, with a perforated cylinder L surrounded by a deflecting-envelop N, substantially as shown for the purpose specified.

2. In an air-carbureter having a perforated
5 plate C heated by a coil D and a perforated cylinder L surrounded by a deflecting-envelop N, the air vessel W provided with an india-rubber diaphragm X, a safety-valve Z and an

air-tube B communicating with the carbureter A below the perforated plate C, substantially as set forth.

HENRI REY.

Witnesses:

CHARLES HASTRAUF,
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