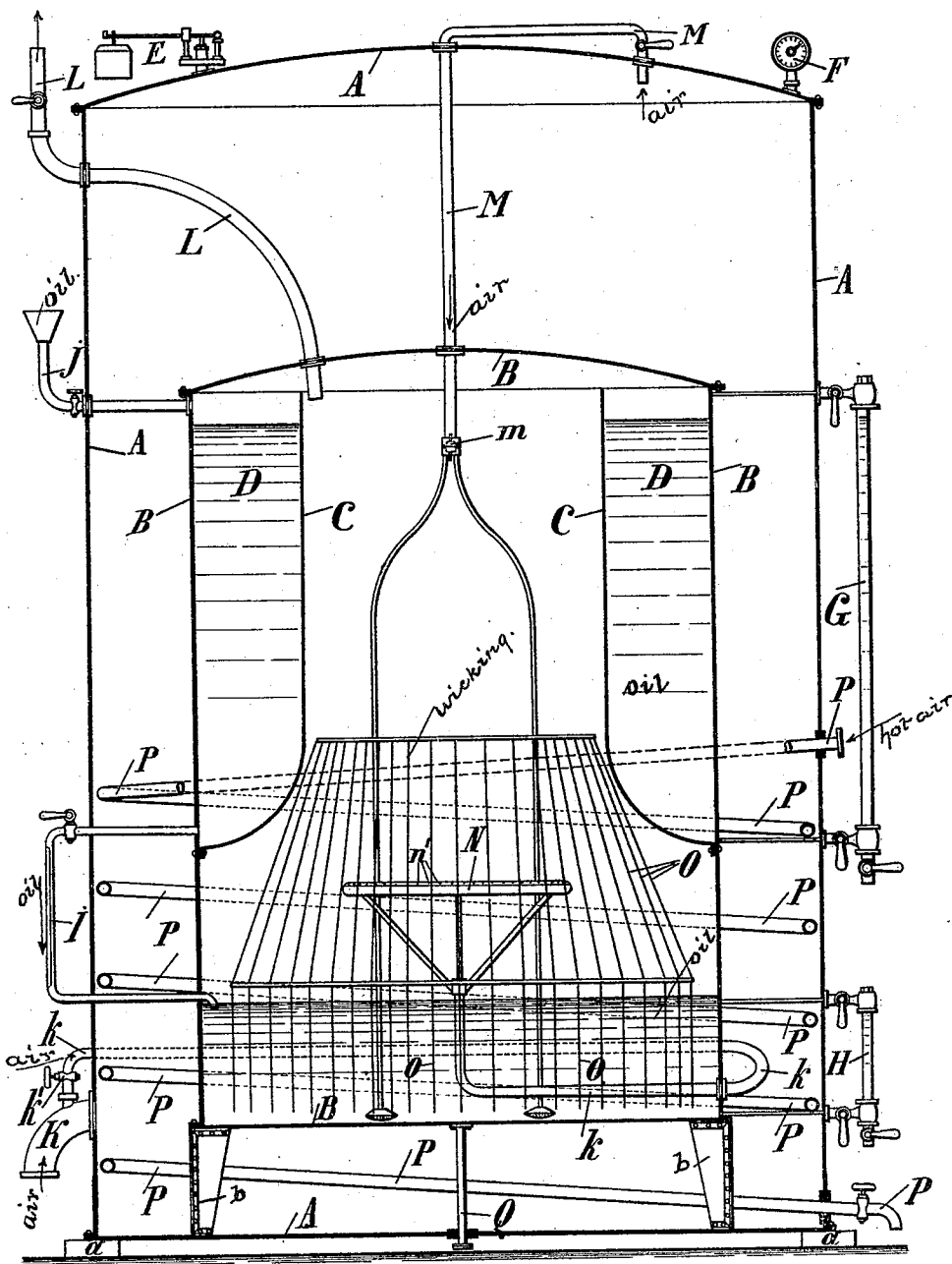


(No Model.)

G. CABRIÉ-GARDIEN.
CARBURETOR.

No. 515,287.

Patented Feb. 20, 1894.



Witnesses
Percy J. Griffith
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UNITED STATES PATENT OFFICE.

GUSTAVE CABRIÉ-GARDIEN, OF PARIS, FRANCE.

CARBURETOR.

SPECIFICATION forming part of Letters Patent No. 515,287, dated February 20, 1894.

Application filed July 18, 1893. Serial No. 480,848. (No model.)

To all whom it may concern:

Be it known that I, GUSTAVE CABRIÉ-GARDIEN, a citizen of the Republic of France, and a resident of Paris, France, have invented certain new and useful Improvements in Carburetors, of which the following is a specification.

This invention relates to carburetors for carbureting air or other fluids, and has for its object to provide a device which shall be both inodorous and safely operated, as well as simple and cheap in construction.

The accompanying drawing, in which like letters of reference indicate similar parts, illustrates a vertical sectional view through the center of the apparatus.

The device consists mainly of an outer cylinder A preferably of metal of any desired thickness, being inclosed at both its top and bottom. It is mounted on legs *a* which isolate it from the floor or ground on which it is placed. Within the cylinder A is a second cylinder B also mounted on legs *b* and conforming in shape and structure with, and of considerably less dimensions than the first. In practice, the proportionate measurements of the two cylinders are about seven to five in breadth and twelve to seven in height. These cylinders form two vessels absolutely air and water tight, and isolated the one from the other, without any inter-communication except such as is hereinafter mentioned. At the interior of the smaller cylinder B and at about its vertical center is a partition wall C extending almost to the top of the vessel, being cylindrical in shape and flaring at the base where it is riveted to the sides of the vessel. The said partition is substantially concentric to the cylinder B and so disposed that by consequence of its form, it leaves between itself and the said cylinder, a compartment or reservoir D adapted to hold the oil or other fluid.

On the top of the cylinder A are mounted a movable balance weight valve E, serving as both a safety valve and pressure regulator and an indicator F. At the outside of the apparatus is a level tube G by means of which the height of the fluid inclosed in the reservoir D, with which the said tube connects, may be ascertained. Similarly mounted and connecting with the base of the cylinder B is a second tube H indicating the height of

the liquid submitted to the action of the air. Communication between the reservoir D and the base of the cylinder B is effected by means of a pipe I.

J is a pipe which serves to introduce the fluid into the apparatus, K is a pipe for the entry of the air and L a pipe for the escape of the carbureted air or gas. M is a pipe uniting the outer cylinder A with the inner one B in which latter the said pipe is prolonged in the shape of a fork, extending almost to the bottom of the cylinder and below the level of the liquid therein contained where each end of the fork is provided with a rose. At the beginning of the fork is a clapper *m*.

All of the pipes hereinbefore or hereinafter mentioned are furnished at their points of junction with the cylinders with garnitures or armatures to assure the tightness of such joints.

From the pipe K through which the air enters, branches off a second pipe *k*, furnished with a stop-cock *k'*. This pipe *k* makes a turn of one-half circumference around the cylinder B and then enters into the interior of the same, and extends almost to the center of the vessel where it is curved around to form a crown or ring N, which is hollow and bored at preferably equidistant points to form small holes *n* around its entire circumference.

Around the lower portion of the cylinder B are disposed in the shape of the trunk of a cone, wicks O, soaking by one of their ends in the liquid and so formed as to be constantly charged. Circulating around the inner cylinder B is a worm or pipe coil P, through which hot air or other fluid is passed to counteract the tendency of the carburetor to cool, caused by the volatilization of the hydrocarbon. The inner cylinder is also provided with a pipe Q, by means of which the apparatus may be emptied.

The operation of the device is substantially as follows:—The air entering by the pipe K, diffuses itself into the first or outer cylinder A and passing through the tube M descends into the inner cylinder B and enters into the liquid therein contained, where it is carbureted and afterward escapes by the pipe L. In the case of a forced production, the cock *k'* of the pipe *k* is turned and the air

passes through the latter, arriving at the crown N, where it is projected against the wicks O, thus considerably augmenting the production.

5 By the use of this invention, the apparatus proper may be completely isolated from the encompassing air, thereby rendering the carburetor inodorous and free from danger.

Having thus fully described my invention,
10 what I claim is—

1. A carbureting apparatus consisting of an outer vessel provided with an inlet pipe, an inner vessel divided into two compartments and provided with an outlet for the carbureted
15 air, a pipe connecting the two vessels and prolonged in the shape of a fork, a pipe branching from the inlet and entering the inner vessel where it forms a crown, wicks suspended in said vessel, and a worm surrounding the
20 said vessel, all substantially as shown and described.

2. A carbureting device consisting of an

outer vessel provided with an inlet, a safety valve and an indicator, an inner vessel divided by a partition into two parts, each connecting with a level tube and with each other, the said inner vessel being provided with an outlet for the carbureted air, a pipe connecting the two vessels and prolonged in the shape of a fork, a liquid inlet and an outlet attached
25 to the inner vessel, wicks suspended therein, a pipe branching from the air inlet and entering the inner vessel, where it forms a crown and a worm circulating between the two vessels, substantially as shown and described. 35

In testimony that I claim the foregoing as my invention I have signed my name, in presence of two witnesses, this 12th day of June, 1893.

GUSTAVE CABRIÉ-GARDIEN.

Witnesses:

J. BURY,

M. CORROYO.