

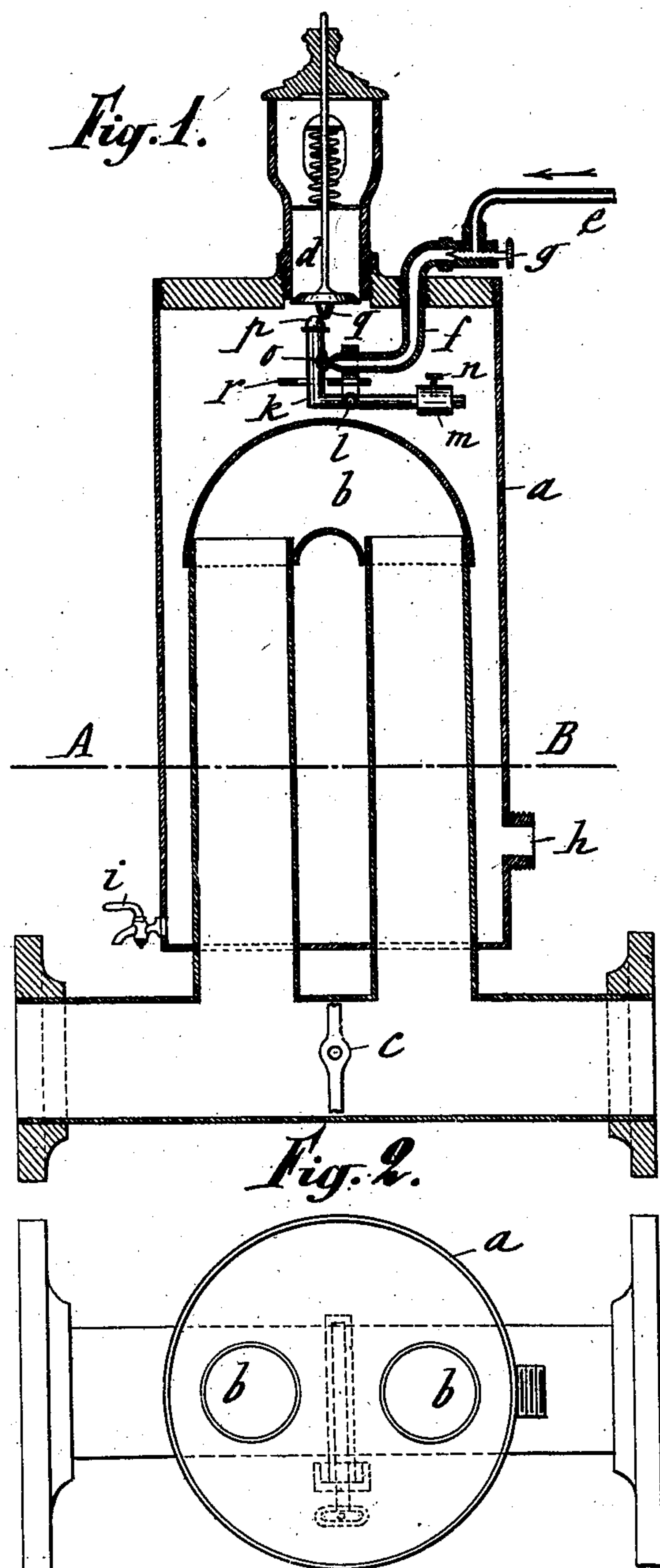
No. 756,249.

PATENTED APR. 5, 1904.

E. LENGLEZ.
CARBURETER FOR HYDROCARBON MOTORS.

APPLICATION FILED JUNE 12, 1902.

NO MODEL.



Witnesses
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UNITED STATES PATENT OFFICE.

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CARBURETER FOR HYDROCARBON-MOTORS.

SPECIFICATION forming part of Letters Patent No. 756,249, dated April 5, 1904.

Application filed June 12, 1902. Serial No. 111,387. (No model.)

To all whom it may concern:

Be it known that I, EMILE LENGLEZ, engineer, a subject of the King of Belgium, residing at 89 Boulevard Sainctelette, Mons, Belgium, have invented a certain new and useful Carbureter Applicable to Motors Worked by Petrol, Alcohol, or other Hydrocarbons, as well as to Motor-Cars, of which the following is a specification.

The present application for patent relates to apparatus for vaporizing petrol, benzene, alcohol, benzol, and generally all hydrocarbons, the apparatus being devised especially to effect carburization of air by means of heavy oils of little cost, which most apparatus cannot utilize or can only very imperfectly do so without practical results. This object is realized by the complete utilization of the exhaust of the motor, the carbureter being placed directly on the discharge. The system is also characterized by the fact that the carburization of the air takes place in the apparatus and not in the motor and that all the parts that regulate the supply of hydrocarbons in quantity proportional to the power given out by the motor are in the interior of the apparatus, so that there are no leakages of hydrocarbon and complete absence of smell and of risk of fire, this latter advantage being also insured by the fact of employing heavy oils.

The system, which is applicable to motor-cars, as well as to stationary motors, whatever be their arrangement, is shown, by way of example, in the accompanying drawings.

Figure 1 is a vertical section of the carbureter, and Fig. 2 a horizontal section on the line A B of Fig. 1.

The carbureter consists of a cylinder *a*, in which is a tube *b*, in form of an inverted U, placed directly over the exhaust-pipe of the motor. The space around the U-tube is filled with porous material covered by a layer of cotton or other suitable substance. The porous material serves as a filter to prevent any hydrocarbon from being drawn into the motor, and it at the same time facilitates the carburization by distributing the mixture of air and hydrocarbon in the carbureter.

The U-tube gives the heat necessary to ef-

fect complete carburization of the air drawn into the carbureter. The flow of the exhaust through it is regulated by the valve *c*.

The apparatus is surmounted by a shift-valve *d* for air, which is automatically moved by the suction of the motor.

h is the gas-outlet leading to the motor, and *i* is a blow-out cock.

The oil, or more generally the hydrocarbon, enters the apparatus by the pipe *e f*, its supply being regulated as follows: A conically-pointed screw *g* is the first regulating appliance. A bent lever *k* is pivoted at *l* to the pipe *f* or to any other suitable part. The horizontal arm of the lever *k* carries a sliding counterweight *m*, adjustable as desired and held by a settling-screw *n*. The vertical arm of the lever *k* has on it at one place a leather pad *o* or its equivalent, which bears against the pointed end of the pipe *f*, so as to form a pulverizer, and at another place a tappet *p*, against which abuts a projection *q* from the air-valve *d*. A stirrup *r* limits the stroke of the lever *k*.

The action may be understood on inspection of the drawings. When the motor works, the air-valve *d* opens, admitting into the carbureter the air required for gasifying. By the descent of the valve *d* the projection *q* meets the tappet *p*, moving the lever *k*, and so allows admission in the desired quantity of the hydrocarbon, which strikes the pad *o* and is pulverized.

The system comprises three very distinct means of regulating: first, that by the screw *g*; second, that resulting from the position of the weight *m*; third, that effected by the movement of the bent lever *k*—that is to say, by the descent of the air-valve *d*, this last regulation being automatic and proportioned to the power given out by the motor.

Obviously the arrangements described are not of absolute character, but may be varied in construction without departing from the spirit of the invention.

Thus, without further dwelling on details of construction, I claim—

1. In combination in a carbureter, an outer casing *a*, an air-valve, a combustible-fluid valve operated thereby, said valves controlling the supply of air and fluid into the upper

part of said casing, a U-shaped pipe extending upwardly into said casing, said pipe being connected with the exhaust-gas pipe of the motor, and a valve in said exhaust-gas pipe
5 between the limbs of the U-shaped pipe, substantially as described.

2. In combination with the air-valve, a supply-pipe *f* for the combustible fluid, and an oscillating elbow-lever *h* arranged to be operated by the air-valve, the one arm of said lever carrying an adjustable weight, the other arm of said lever being in the path of move-

ment of the air-valve and provided with the combustible-fluid valve, said valve consisting of a disk of leather or other suitable material
15 against which the combustible fluid strikes and becomes pulverized, substantially as described.

In witness whereof I have hereunto set my hand in presence of two witnesses.

EMILE LENGLEZ.

Witnesses:

ALBERT FRAIPONT,
GREGORY PHELAN.