No. 843,028. PATENTED FEB. 5, 1907.

E. L. MUELLER.

CARBURETER.

APPLICATION FILED OCT. 17, 1905.

Fig. 1

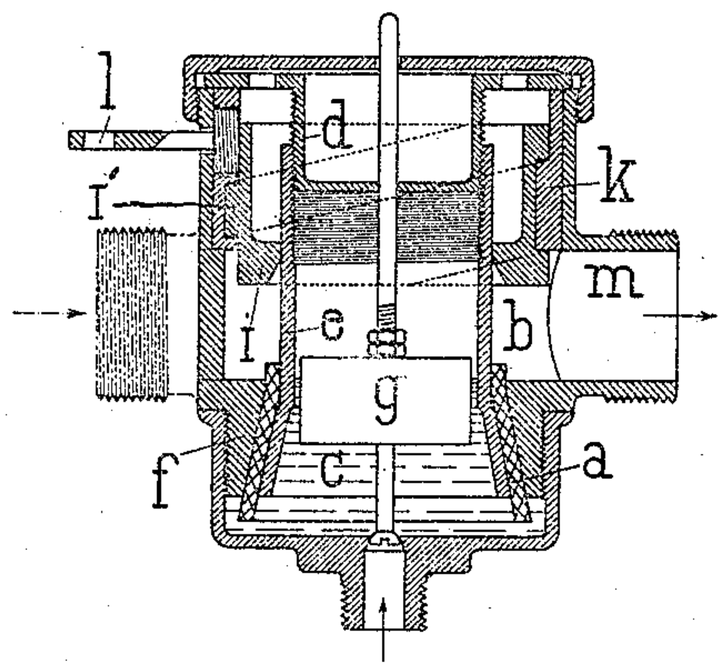
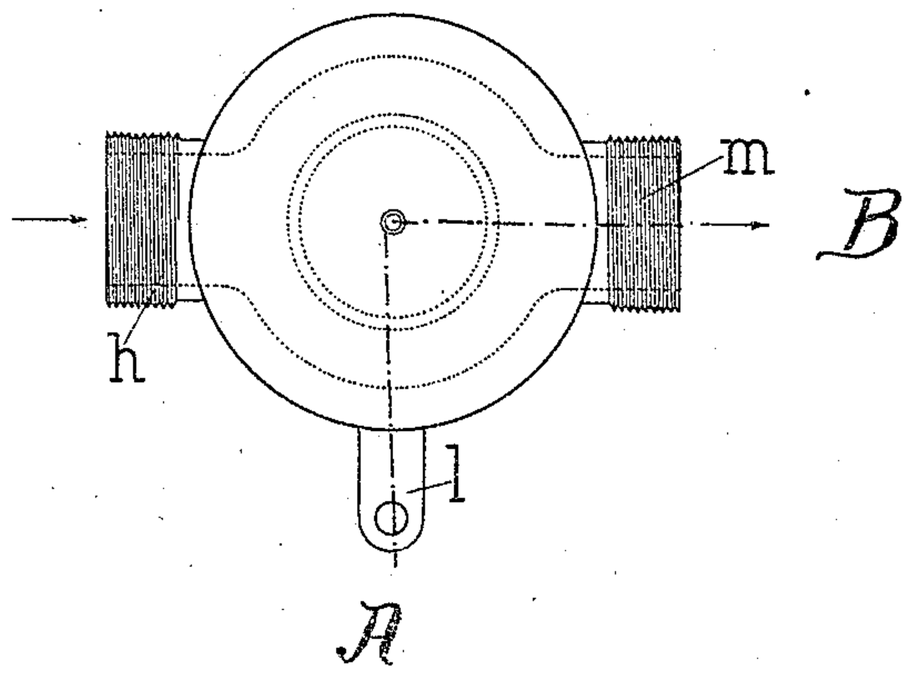


Fig. 2



Witnesses

Paul Arras

Chemnitz H. Schilling

Inventor

Eugen L. Mueller

By Paul Schilling

his attorney

UNITED STATES PATENT OFFICE.

EUGEN LUDWIG MUELLER, OF PARIS, FRANCE.

CARBURETER.

No. 843,028. Specification of Letters Patent. Patented Feb. 5, 1907.

Application filed October 17, 1905. Serial No. 283,187.

To all whom it may concern:

Be it known that I, EUGEN LUDWIG MUELLER, a citizen of the German Empire, and residing at Paris, France, have invented certain new and useful Improvements in Carbureters, of which the following is a specification.

My invention relates to an improved carbureter combining the advantages of the injection-carbureter, such as compactness and uniformity in the quantity of fuel utilized, with those of the surface carbureters, in particular the formation of a homogeneous mixture.

The new carbureting device has the additional advantage that the cross-section of the vaporizing-chamber is regulated by a single member, the air-supply aperture and the mouth of the screw connection to the motor being regulated in the same proportion.

In the accompanying drawings, Figure 1 represents a vertical section of the vaporizer on the line A B of Fig. 2, and Fig. 2 is a plan view of Fig. 1.

In place of an injection-nozzle I employ a wick *a*, which enters the mixing-chamber *b* above and the float-chamber *c* below. The liquid to be vaporized is distributed and presented to the air-current by the wick over a relatively large area in a state of such fine distribution that the vaporization takes place actually at the wick itself and that there is no danger of particles of liquid being entrained and entering the working cylinder. This homogeneity of the mixture insures silent and at the same time economical working, characterized by absence of odor.

A further advantage of the wick is the increased resistance it offers to the tendency of the liquid to be sucked through the device. When the motor is running at high speed, this resistance increases to a much higher degree than in the case of ordinary injection-carbureters and the liquid in motion will not rush through on decrease of speed. In this manner substantially the same conditions of suction are secured for the liquid, as well as for the air, wherefore it is much easier to obtain a uniform mixture for all speeds of the motor. The resistance which the wick offers to the flow of the fuel through the device can be regulated by means of the nut *d*, which displaces the cone *e* in vertical direction, and thus presses the wick more or less forcibly against the corresponding cone *f* of the carbureter-casing. The adjustable float *g* enables the level of the liquid to be kept constant.

Air is supplied through the screw-connection pipe *h*. The mouth of the latter where it enters the mixing-chamber *b* is regulated by an annular slide *i*, moving in vertical direction only. For this purpose the slide *i* is provided on its outside wall with a thread *i'* of high pitch, with which the nut *k*, which operates in the casing, engages. The nut *k* can be operated by the handle *l*, projecting through a slot in the casing, in which manner the annular slide can be raised or lowered, as desired, whereby the cross-section of the mixing-chamber and the outlet-aperture *m* for the working mixture can be adjusted. In vaporizers of this kind of large dimensions I preferably provide a hot-water jacket to heat the mixing-chamber.

What I claim is—

1. A carbureter, comprising in combination, a mixing-chamber having an air-inlet and a mixture-outlet, a liquid-reservoir located below said mixing-chamber and presenting a conical wall, a vertically-adjustable member having a conical wall projecting into the said reservoir parallel to the first said conical wall, and a wick located between the two said conical walls and projecting from said reservoir into said mixing-chamber, substantially as set forth.

2. A carbureter, comprising in combination, a mixing-chamber having an air-inlet and mixture-outlet, a liquid-reservoir located below said mixing-chamber and presenting a conical wall, a vertically-adjustable member having a conical wall projecting into said reservoir parallel to the first said conical wall, a vertically-moving screw-threaded member located in the mixing-chamber and regulating the cross-section of the same and of the said inlet and outlet passages, a nut fitting the said regulator, and means for actuating said regulator from without the device, and a wick located between the two said conical walls and projecting from said liquid-reservoir into said mixing-chamber, substantially as set forth.

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

EUGEN LUDWIG MUELLER.

Witnesses:

F. ANT. HUBBUCH,

JOSEPH ROHMER.