June 14, 1932. O. HALM 1,863,402

CARBURETOR

Filed Oct. 6, 1927

Fig. 1.

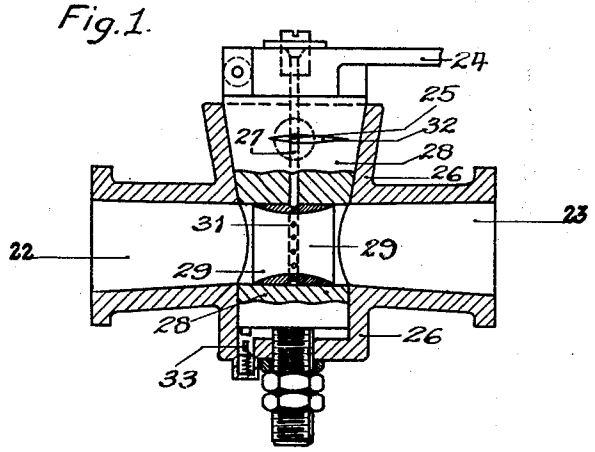


Fig. 2

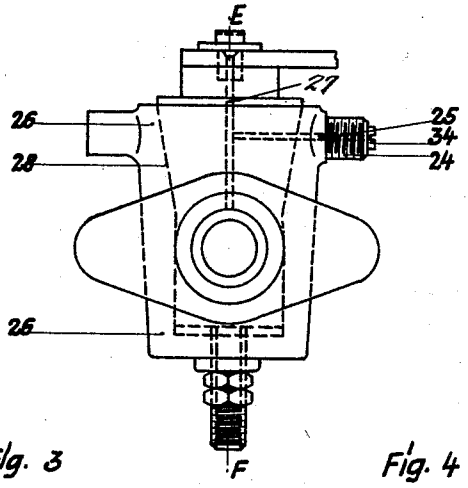


Fig. 3

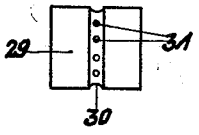
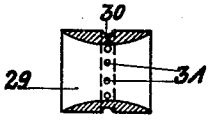


Fig. 4



Inventor:

Otto Halm

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UNITED STATES PATENT OFFICE

OTTO HALM, OF DRESDEN-LOSCHWITZ, GERMANY, ASSIGNOR TO DIRECTOR HEINRICH HOFMANN, OF LEIPZIG, GERMANY

CARBURETOR

Application filed October 6, 1927, Serial No. 224,452, and in Germany February 27, 1927.

The invention relates to a carburetor, and the object of my invention is to provide an improved type of carburetor which is of simple design and can be manufactured at relatively low cost.

In the known types of carburetor too many parts are required to produce a useful gas mixture, and the result is that these constructions are unsatisfactory in operation and expensive to manufacture.

A carburetor constructed according to the present invention requires neither floats, jets nor needles, and the fuel need not be raised by vacuum but is sucked up by the carburetor from a tank arranged underneath it.

An embodiment of my invention is illustrated in the accompanying drawing, in which Figure 1 is a sectional view of the carburetor on the line E—F, of Fig. 2; Fig. 2, a general view of the carburetor; and Figs. 3 and 4 are views of the perforated ring.

Referring to the drawing, 26 is the casing of the carburetor; 28 is the movable conical valve; and 21 the lever controlling the valve; 23, an air suction connection; 24, a tank connection; 25, a channel; 27, a channel; 29, a perforated ring; 31 are openings in the groove 30; 32 is a groove connected with the channel 25 to regulate the supply of fuel to the channel 27; and 33 is a locking pin controlling idling, full gas and complete shutting off of the fuel and air supply. 34 is a screw possessing variable openings and being adapted to be inserted in the tank connection 24 to regulate the fuel supply to the carburetor.

The device functions as follows:

The air is drawn in by means of the air suction connection 23 while simultaneously the fuel enters the channel 25 of the casing 26 through the tank connection 24 and then passes into the channel 27 in the movable conical valve 28 to drop on the ring 29 carrying on its outside an annular groove 30 provided with the holes 31.

The quantity of fuel is regulated as follows:

By means of the tank connection 24 the fuel is guided through the hole 25 in the casing 26 to the groove 32 in the conical valve. This groove is connected with the channel 27, the fuel being drawn in from the holes 31 of the ring 29.

By turning the conical valve 28 about its vertical axis by means of the lever 21 the position of the openings in the casing and in the valve is altered and the fuel supply throttled by reducing the opening to the corresponding section of the diminishing groove 32.

By turning the conical valve 28 about the normal position the air supply is throttled also. As both fuel and air are thus throttled, an economical mixture is obtained.

If the conical valve 2 be turned a full 100°, the supply of fuel, gas and air will be shut off completely so that the carburetor will draw in air only and the motor can be well cooled while driving uphill for example.

The three main positions, i. e., maximum, minimum and an intermediate one, are controlled by locking stops cooperating with the spring pin 33.

To regulate the amount of fuel to be supplied to the carburetor, a replaceable screw 34 provided with a calibrated opening can be inserted in the tank connection 24.

The grooves 30 may contain a wick to supply the mixing chamber with fuel through the holes 31.

I claim:—

A floatless carburetor comprising a casing having an air inlet and a mixture outlet, a smooth frusto-conical regulating cock disposed in the said casing, a cylindrical passage within the said regulating cock adapted to connect the air inlet and mixture outlet of the said casing, a fuel admission duct opening radially into the said casing, a wedge-like groove arranged on the circum-

ference of the said regulating cock and adapted to communicate with the said cylindrical passage, such combination comprising an annular spray ring in said passage, having a plurality of fuel admission openings, the annular spray ring with the air inlet and mixture outlet having a shape like a Venturi tube, the fuel inlets opening at the narrowest point of the inner free section.

In testimony whereof I have affixed my signature.

OTTO HALM.