PATENT SPECIFICATION

Application Date: Sept. 5, 1919. No. 21,903/19. **155,000**

Complete Accepted: Dec. 6, 1920.

COMPLETE SPECIFICATION.

Improvements in Carburettors.

I, GEORGE CONSTANTINESCO, of "Carmen Sylva", Beechwood Avenue, Oatlands Park, Weybridge, in the County of Surrey, Engineer, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

The present invention relates to carburetters such as are used for supplying liquid fuel to internal combustion engines.

In such carburettors the float which is used to maintain a constant level of liquid fuel within the carburettor is generally made as a closed hollow body of metal or the like. Trouble has been experienced with such floats when the carburettor is used on an aeroplane, owing to the reduced pressure of the rarefied atmosphere causing the float to burst. The same difficulty has been encountered as a result of rise of temperature within the float.

The object of the present invention is to provide a float for the carburettor which shall be free from these objections.

Floats have also been proposed which are in the form of a bowl open at the top controlling the fuel inlet to the float chamber, the fuel supply being allowed to flow into the bowl over its edge and passing from the interior of the bowl to the engine.

The invention consists in a carburettor having a float kept free of liquid consisting of a hollow body which is either open or only partially closed at the top.

The invention further consists in means for keeping the float free of liquid fuel which may accumulate in it owing to splashing or condensation.

The invention also consists in the improved carburettor substantially as hereinafter described with reference to the accompanying drawings.

[*Price* 1/-]

The accompanying drawings, illustrating one form of the invention, show a carburettor of the type described in the Specification of my co-pending Application No. 21,904 of even date herewith. The improved float, however, is not to be regarded as confined in its use to a carburettor of this type, but is of general application.

Figures 1 and 2 show vertical sections of the carburettor taken at right angles the one to the other.

In the carburettor illustrated, the jet 1 projects through the bottom of the float chamber and the float 2 is therefore made of annular form, being supported in the well known manner by a lever 3 pivoted at 4 and controlling the needle valve 5, whereby fuel is admitted.

The float 2 is in the form of a hollow body of such a shape as will float on the liquid fuel, but left open at the top, as indicated. If there be a liability of accumulation of liquid fuel in the float the top of the latter may be covered by a plate, which plate, however, must have an aperture in order that the pressure within the float shall be the same as that in the float chamber. In practice, however, it is impossible to ensure that the fuel shall have no access to the float either by means of splashing or condensation, and it is therefore necessary to provide means for extracting any fuel that may accumulate. This is accomplished by means of a suction tube 6 which is fitted in the cover of the carburettor and communicates at its upper end with an induction pipe 7 by such means as a passage 8 and a chamber 9. The lower end of the tube 6 projects into a recess 10 formed in the bottom of the float so that any fuel which finds its way into the float accumulates in the recess 10 and is drawn thence through the tube 6

by the suction of the engine. The aperture at the bottom of the tube 6 is made of very small diameter so that the air or petrol vapour drawn in through it will not have any appreciable effect on the mixture supplied to the engine.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is:—

1. In a carburettor, a float kept free of liquid consisting of a hollow body which is either open or only partially closed at the top.

2. In a carburettor as set forth in Claim 1, a fixed tube projecting downwards into the float and adapted to suck any fuel which may enter therefrom by means of the suction produced by the engine, in order to keep the float free of liquid, substantially as described.

3. A carburettor as set forth in Claim 1, having formed in its cover a chamber connected to the induction pipe and also to a tube which projects into the float in order to suck any liquid which may accumulate in the float, substantially as described.

4. The improved carburettor substantially as hereinbefore described with reference to the accompanying drawings.

Dated this 5th day of September, 1919.

MARKS & CLERK.

Redhill: Printed for His Majesty's Stationery Office, by Love & Malcomson, Ltd.—1920.

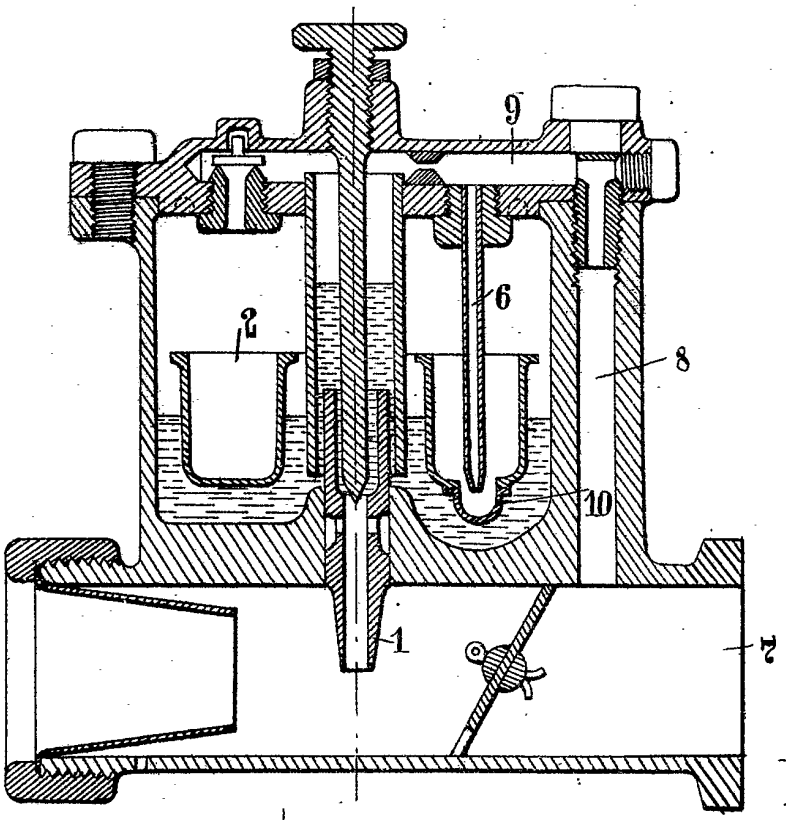

Fig. 1.

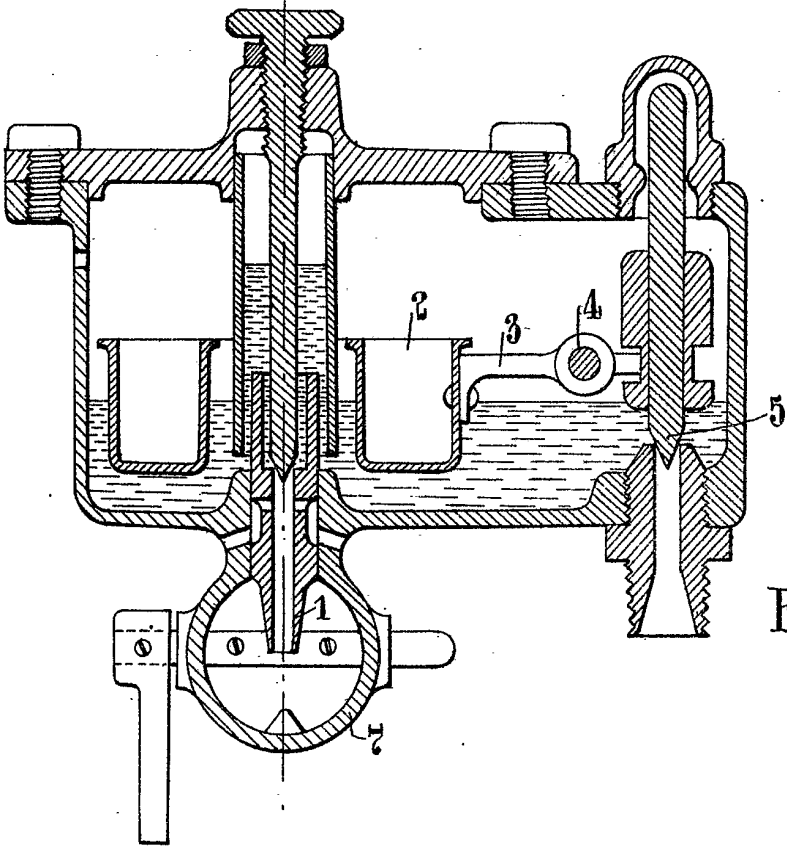

Fig. 2.

Malby&Sons, Photo-Litho.