PATENT SPECIFICATION

Application Date: Sept. 14, 1921. No. 24,437/21. **190,236**

Complete Accepted: Dec. 14, 1922.

COMPLETE SPECIFICATION.

Improvements in Carburettors.

I, GEORGE CONSTANTINESCO, of "Carmen Sylva," Beechwood Avenue, Oatlands Park, Weybridge, in the County of Surrey, a subject of the King of Great Britain and Ireland, 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 carburettors; especially to carburettors of the type described in the Patent Specification No. 155,001, in which an inverted jet is employed from which the fuel is cut off by a partition projecting above the fuel when the engine is at rest but to which the fuel is supplied by being raised above the partition by the suction of the engine acting on the liquid in the float chamber through a restricted passage communicating with the induction pipe between the engine and the throttle.

The invention consists in a carburettor of the type described having a butterfly throttle valve the main jet being placed symmetrically with reference to the axis of the throttle valve and in a direction at right angles to the valve when the latter is in the full open position.

The invention also consists in the improved construction of carburettor hereinafter described.

Referring to the accompanying drawings:—

Figure 1 is a vertical section of the carburettor;

Figure 2 is a section at right angles to Figure 1;

Figure 3 is a sectional plan of the float chamber;

Figure 4 is a sectional plan of the induction pipe immediately below the float chamber.

In carrying the invention into effect according to the example illustrated; the float chamber *a* and a portion of the induction pipe *b* are cast in one piece of the form shown. Screwing into the bottom of the float chamber, there is provided a sleeve *c* projecting above the level of the petrol in the float chamber when the engine is not running.

Projecting downwards from the cover *d* of the float chamber, there is provided a sleeve *e* in a central position and within the sleeve *e* and resting on the flange of the sleeve *c* there is provided a petrol filter *f*.

The jet *g* is screwed into the lower end of a central rod *h* which screws into the bottom of the sleeve *c*.

The float consists of a cork *k* attached to the free end of a hinged member *l* of the form illustrated having an upwardly projecting tongue *m* which bears against the needle valve *n* controlling the flow of petrol into the float chamber.

At one side of the float chamber, there is provided a passage *o* leading through a restriction *p* from the induction pipe *b* to the interior of the sleeve *e*. A disc valve *q* controls a passage leading from the main space within the float chamber into the passage *o* to limit the suction effect which can be obtained inside the sleeve *e*.

The throttle valve *r* is placed immediately below the jet *g* between the choke tube *s* and the engine. A slotted plug *t* is provided adapted to control the flow of air into the float chamber.

The operation of the above described carburettor is as follows:—

When the engine is at rest, the central rod *h* may be unscrewed and removed; the petrol level in the float chamber and in the space within the sleeve *e* will then be the same; and it will be impossible for any petrol to flow over the edge of the sleeve *c* to the induction pipe. When it is desired to start the engine, the rod *h* carrying the jet is replaced in position and the engine turned over; the suction thus produced through the passage *o* and restricted passage *p* raises the level of

the petrol within the sleeve *e* until it is above the top of the sleeve *c*. Petrol accordingly flows to the jet and the engine can be started.

It will be seen that in this carburettor the flow of petrol through the jet depends on the constant head above the jet and the suction in the induction pipe. A fixed aperture jet is employed of diameter of about 5 *per cent.* of that of the choke tube.

The adjustment is effected by first running the engine up to speed on open throttle to determine the correct size of jet with the air aperture controlled by the plug *t* fully open. The air aperture is then adjusted by screwing in the plug *t* until the mixture is correct when the throttle is nearly closed.

Better distribution is obtained by reason of the jet being placed immediately over the centre of the throttle valve *r*.

It will be seen that the carburettor above described is extremely simple and is easily constructed while the mixture supply is approximately correct at all positions of the throttle.

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. A carburettor of the type described having a butterfly throttle valve, the main jet being placed symmetrically with reference to the axis of the throttle valve and in a direction at right angles to the valve when the latter is in the full open position, substantially as described.

2. The improved carburettor hereinbefore described and illustrated in the accompanying drawings.

Dated the 14th day of September, 1921.

W. GRYLLS ADAMS,
87, Victoria Street, London, S.W. 1,
Chartered Patent Agent.

Redhill: Printed for His Majesty's Stationery Office, by Love & Malcomson, Ltd.—1923.

[This Drawing is a reproduction of the Original on a reduced scale]

Fig. 1.

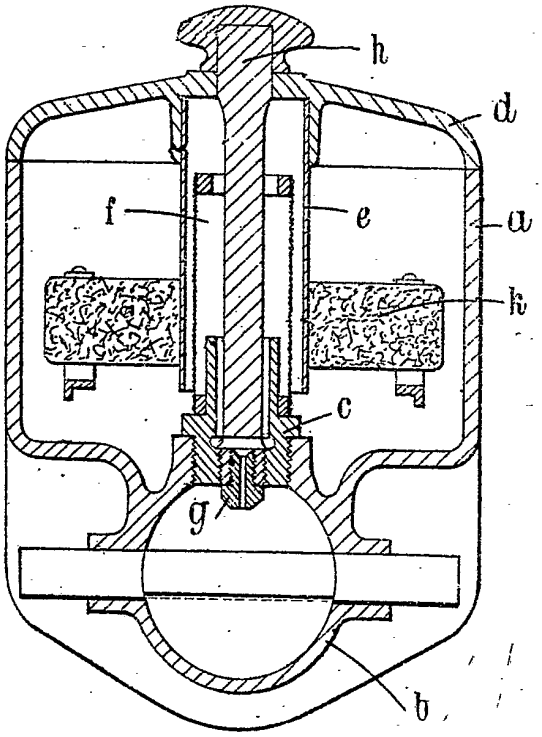


Fig. 2.

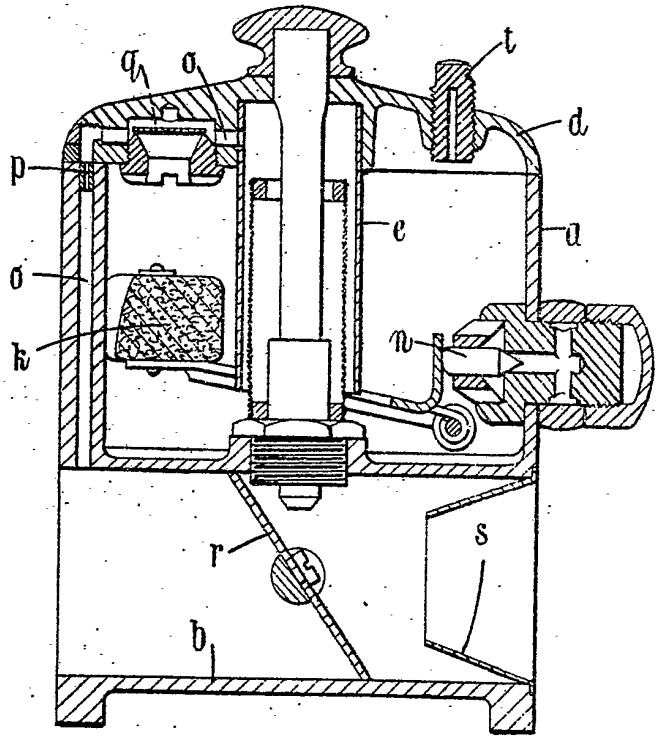


Fig. 3.

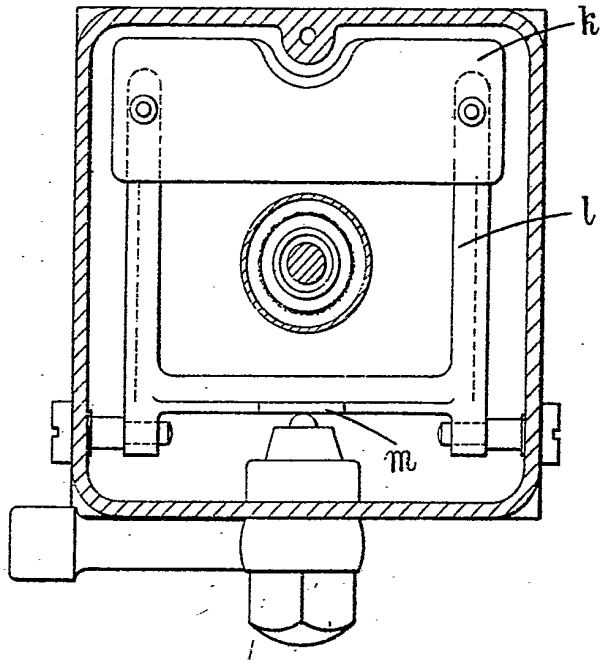
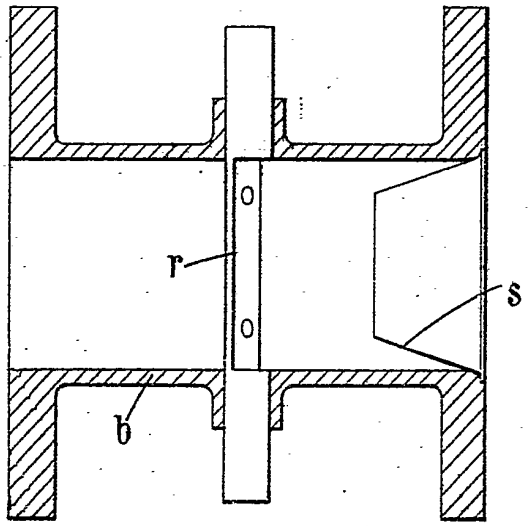


Fig. 4.



Malby&Sons, Photo-Litho

[This Drawing is a reproduction of the Original on a reduced scale]

Fig. 1.

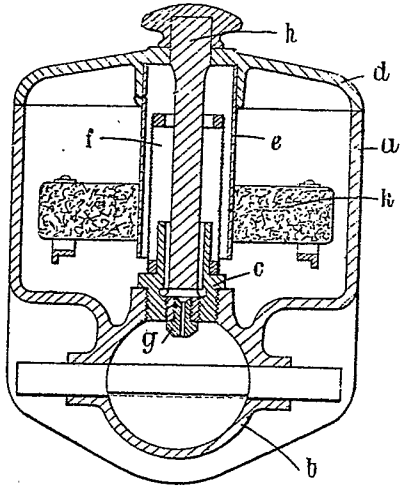


Fig. 2.

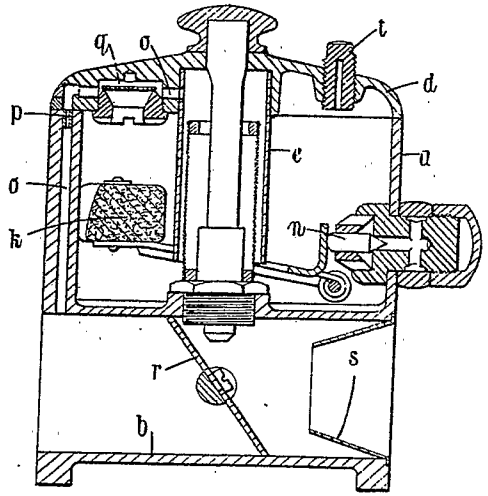


Fig. 3.

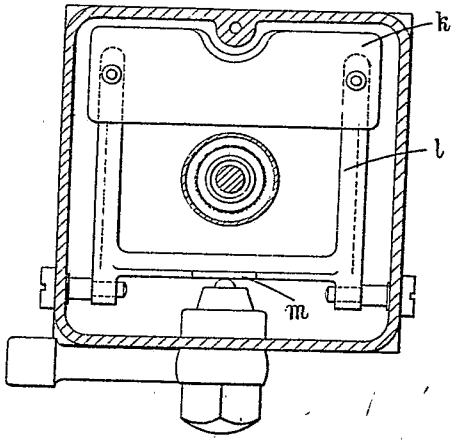
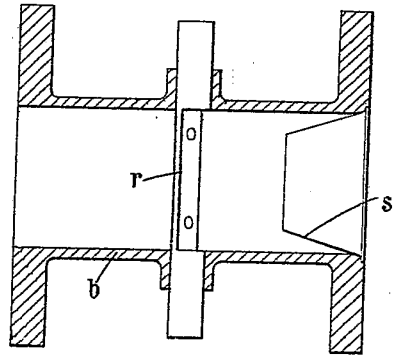


Fig. 4.



Malby&Sons, Photo-Litho