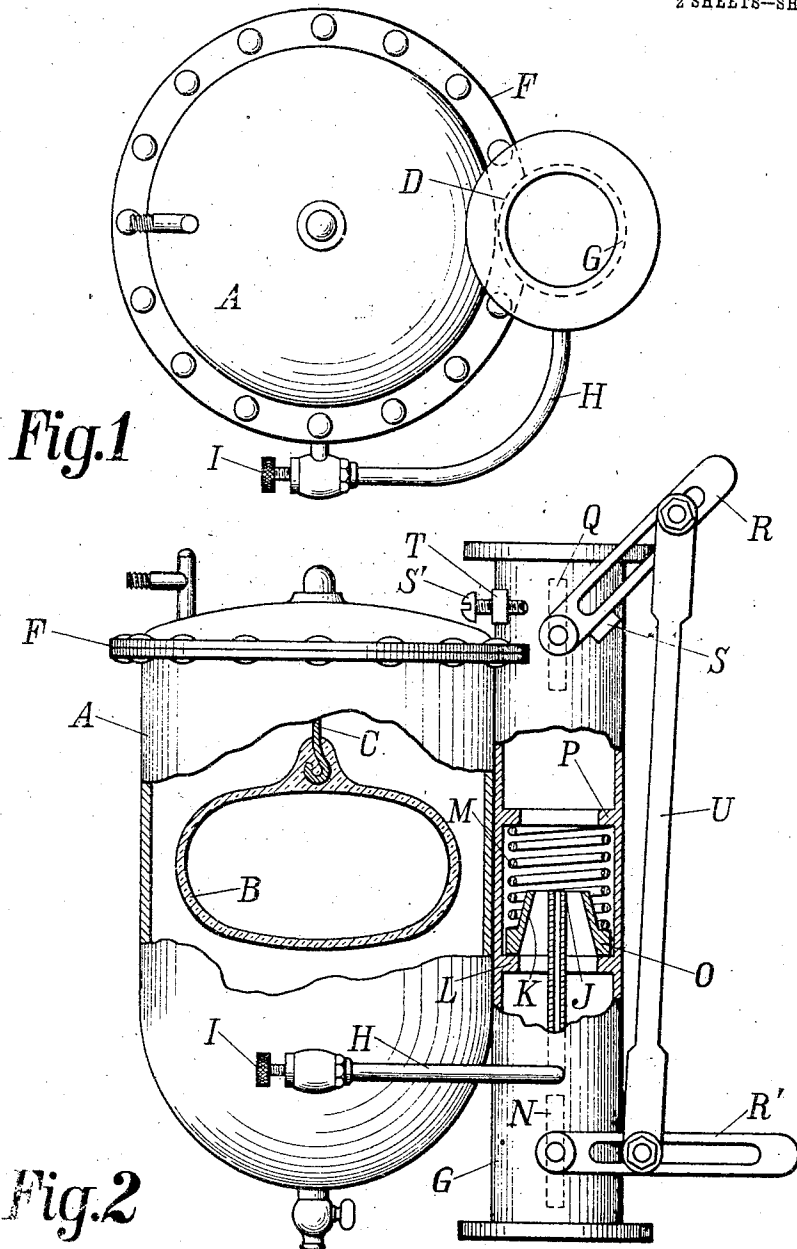


935,833.

Patented Oct. 5, 1909.
 2 SHEETS—SHEET 1.



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2 SHEETS—SHEET 2.

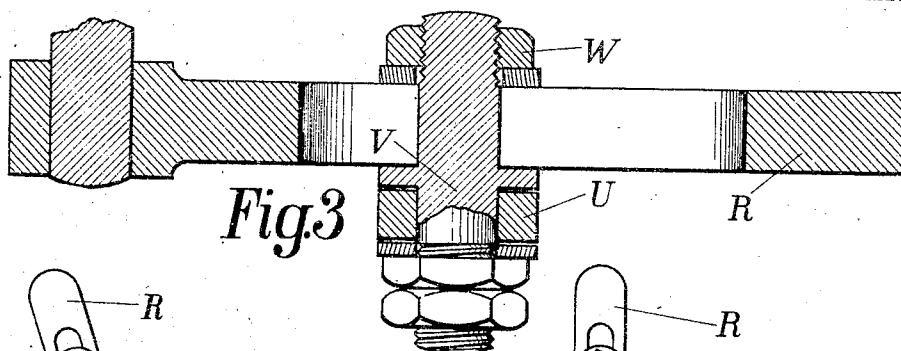


Fig.3

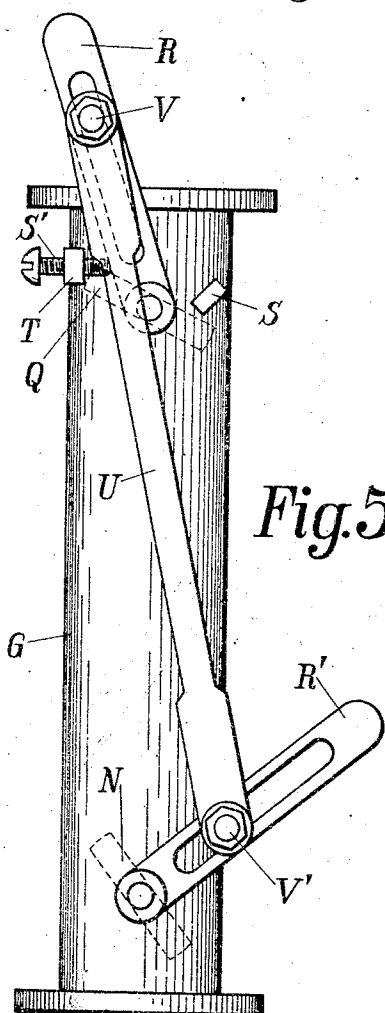


Fig.5

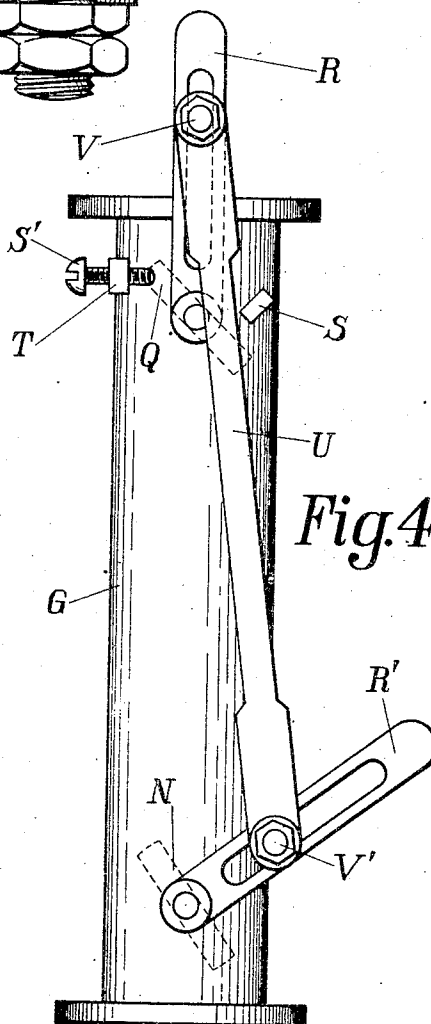


Fig.4

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935,833.

Specification of Letters Patent.

Patented Oct. 5, 1909.

Application filed November 24, 1908. Serial No. 464,247.

To all whom it may concern:

Be it known that I, WILLIAM K. BASSFORD, citizen of the United States of America, and resident of Perth Amboy, in the county of Middlesex and State of New Jersey, have invented certain new and useful Improvements in Carbureters, of which the following is a specification.

My invention relates to a carbureter, especially adapted for automobiles, and motor boats.

The objects of the invention are to simplify the construction by forming the float chamber and the mixing chamber of sheet metal, conveniently, by making them of spun metal; and to provide means whereby the air valve will be operated a predetermined amount, automatically, when the throttle valve is manually manipulated.

Other objects are also secured.

The means for carrying out the invention are illustrated in the accompanying drawing.

Figure 1 is a plan of the device, with certain adjuncts omitted. Fig. 2 is a side elevation of the device, with parts broken away to exhibit some of the interior construction. Fig. 3 is an enlarged view of one of the details. Fig. 4 is an elevation of one of the parts, shown in Fig. 2, but in a different phase. Fig. 5 is a similar view to Fig. 4, but in still another phase.

The device consists of the following elements:—A chamber A, of spun sheet metal, or the chamber may be made of sheet metal formed into the bowl shaped chamber in any known manner. All the elements of this float chamber are old, except the blown glass float B, supported by the wire C, which is sealed into the glass, after the manner of sealing in leading in wires in an incandescent electric lamp. Notice, also, that the chamber A, is formed with an arc shaped recess D in its flange E, at the top, so that the casing G, may be brought close to the cylindrical portion of the chamber A, and brazed thereto, along the whole length of said chamber. By this construction, the device is very compact, strong, and cheap, though not inferior to other constructions.

The float chamber A, communicates with the casing G, by means of a pipe H, entirely on the outside of the two vessels, except those end portions which pass through the vessels A, and G. By this construction, the

manual needle valve, whose handle is shown at I, is outside of both chambers A, and G. The end or nozzle of this gasoline pipe is shown at J, terminating at the smaller end of an apertured conical valve K, which normally rests on a ring L, and which is movable upward against the reaction of a retractile spring M, by the air which enters the lower end of the casing A, past an air valve N. The lower end of the helical spring M, abuts against a flange O, of the valve K, and the other end bears against a ring P, fixed, like the ring L, around the inside of the casing G. As the valve K, rises by increased velocity of the air, the air passage around the nozzle J increases, while the increased velocity of the air draws out more gasoline vapor. This result is due to the elements being proportioned to this end.

Q is a throttle valve provided with a handle R, limited in one direction by a stop S, and in the other direction by a stop S', the latter being adjustable, as it is a screw, rotary in a nut T.

U is a connecting rod, joining the handle R, to a lever R', attached to the air valve N. As seen in Figs. 4 and 5, the turning of the handle R, also turns the lever R'.

Fig. 4, shows the relation, when the throttle valve has traveled through 45 degrees, in which case, the air valve N has closed some.

Fig. 5 shows the position of the throttle valve Q, when it has moved to the position of maximum closure, the stop S' being adjustable for the purpose of suiting the conditions of the running of the engine. It will be noticed that the air valve N has changed its position very little. I provide means, however, for adjusting the connecting rod U, so as to adapt the same carbureter to use on different types and sizes of engines. The upper end of the rod U, is pivoted on a pin V, fastened by a nut W, at any of several positions along the length of the handle R. The lower end is held similarly to the lever R', by means of an adjustable pin V'. By manually operating the throttle valve, the air valve is also operated, and to the predetermined degree with relation to the movement of the handle R.

I claim as my invention:—

In a carbureter, the combination of a mixing casing, an apertured conical valve, a flange thereon, a ring within said casing, on

which ring rests said valve, a second ring in
said casing and fixed thereto, a helical
spring bearing on the second ring, and on
said flange, for partly resisting the upward
5 movement of said valve, and for retracting
said valve to a lower position when once
raised, and a gasoline nozzle terminating
in said valve, the valve and nozzle being
so relatively located, with the nozzle at the
10 smaller end of the aperture, normally, that
as the valve rises by the action of the in-

creased velocity of the air, the passage for
the air around said nozzle will become larger
and larger, and the parts being so propor-
tioned that when the velocity of the air in- 15
creases, both more air and more gasoline
vapor will mix together.

WILLIAM K. BASSFORD.

Witnesses:

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