

J. SCHWARTZ.

CARBURETER.

APPLICATION FILED MAY 27, 1909.

952,547.

Patented Mar. 22, 1910.

Fig.1

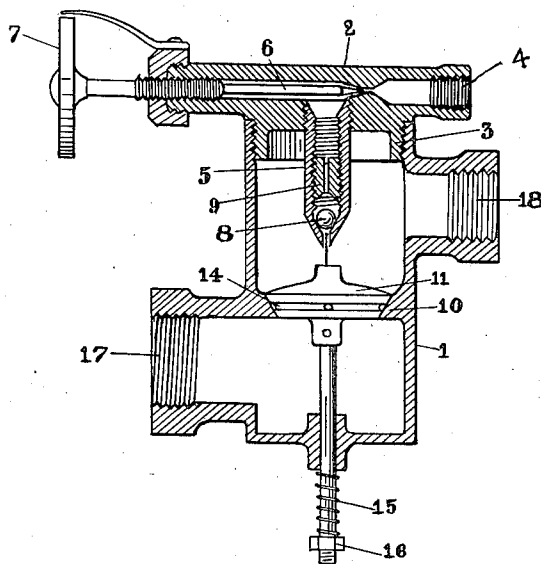
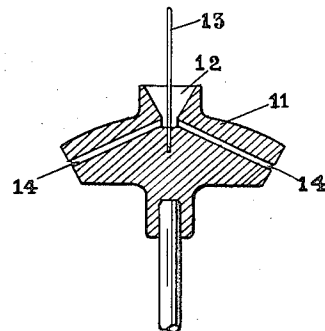


Fig. 2



WITNESSES:

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INVENTOR

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UNITED STATES PATENT OFFICE.

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CARBURETER.

952,547.

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To all whom it may concern:

Be it known that I, JOSEF SCHWARTZ, a citizen of the United States of America, residing at Bay City, in the county of Bay and State of Michigan, have invented certain new and useful Improvements in Carbureters, of which the following is a specification, reference being had therein to the accompanying drawings.

10 This invention relates to carbureters for internal combustion engines and to a certain arrangement and disposition of parts combining simplicity of construction with efficiency of action.

15 The invention consists in the matters hereinafter set forth, and more particularly pointed out in the appended claims.

In the drawings, Figure 1 is a view in vertical, central section of a carbureter, embodying features of the invention. Fig. 2 is a view in detail of a lifting and distributing valve closure.

Referring to the drawing, a hollow casing 1 of suitable design is closed at its upper end 25 by a head or cap 2 which has a flange 3 exteriorly screw-threaded or otherwise bolted to make a close joint with the casing. A lateral inlet 4 in the cap that is adapted for pipe connections with the fuel supply opens 30 into the bore of an axially apertured tube 5 secured centrally on the inner face of the cap. A needle valve 6 with regulating head 7 and of any preferred construction, controls the inlet.

35 An apertured valve seat is formed on the interior of the tube 5 near its lower, exteriorly coned or tapered end, and a ball closure 8 thereon has its upward movement limited by an apertured bushing 9 screw-threaded into or otherwise adjustably secured therein, the lower end of the bushing preferably being an inverted valve seat 40 which the ball closes when pushed against it. An annular beveled valve seat 10 is 45 formed on the interior of the casing below the tube 5, and a disk valve closure 11 is seated thereon; the latter has a central opening 12 whose upper end is adapted to receive the lower end of the tube when the valve is 50 raised, and a needle stem 13 on the closure is likewise adapted to enter the tube and raise the ball 8 from its seat. The opening 12 terminates in radial passages which open into a groove 14 in the face of the disk. A 55 spindle extends from the lower side of the disk through a guide opening in the casing

base, a tension spring 15 on the outer part of the spindle in compression between the casing and an adjustable check nut 16 keeping the disk yieldingly seated. An air intake 17 preferably laterally disposed, below the valve seat 10 and an outlet nipple 18 above the seat adapted to be connected to an engine intake or manifold, complete the essential features of the carbureter. 60 65

In operation, each influx of air to the engine raises the disk, thus unseating the ball and allowing the fuel contained in the space between the ball seat and regulating bushing to flow into the valve and out 70 through the radial passages to the peripheral groove. The inrush of air around the disk vaporizes this, intimately mixing it evenly with the incoming current. The certainty and uniformity of the mixture thus obtained 75 together with the ease of regulating the fuel supply constitute features of the invention while its simplicity and non-liability to wear or get out of order are likewise of great 80 advantage.

Obviously, changes in the details of construction may be made without departing from the spirit of the invention, and I do not care to limit myself to any particular form or arrangement of parts. 85

What I claim as my invention is:—

1. A carbureter comprising a casing, a valved fuel inlet in the upper end thereof, a tube extending from the casing top and connected with the inlet and provided near 90 its lower end with an interior apertured valve seat, a ball closure for the seat, a bushing adjustable longitudinally in the tube limiting the upward movement of the ball, an annular valve seat in the casing 95 below the tube, a disk closure yieldingly held on the seat having a needle stem adapted to raise the ball closure when the disk is unseated and a duct adapted to receive the tube end, and radial passages therefrom 100 to the disk periphery, an air intake below and a mixture outlet above the annular seat.

2. A carbureter comprising a casing, a valved fuel inlet in the upper end thereof, 105 a tube extending from the casing top and connected with the inlet and provided near its lower end with an interior apertured valve seat, a ball closure for the seat, a bushing adjustable longitudinally in the tube limiting the upward movement of the ball, an annular valve seat in the casing 110

below the tube, a disk closure, a spindle therefrom extending through a guide aperture in the lower end of the casing, a spring encircling the outer end of the stem, a check
5 nut compressing the spring against the casing, a needle stem on the disk adapted to raise the ball when the disk is unseated, said disk having a duct adapted to receive the tube end and radial passages therefrom
10 to the disk periphery, an air intake below and a mixture outlet above the annular seat.
3. A carbureter comprising a casing, a valved fuel inlet in the upper end thereof, a tube extending from the casing top and
15 connected with the inlet and provided near its lower end with an interior apertured valve seat, a ball closure for the seat, a bushing adjustable longitudinally in the tube limiting the upward movement of the
20 ball, an annular valve seat in the casing be-

low the tube, a disk closure, a spindle therefrom extending through a guide aperture in the lower end of the casing, a spring encircling the outer end of the stem, a check
nut compressing the spring against the casing, a needle stem in the disk adapted to
25 raise the ball when the disk is unseated, said disk having a duct adapted to receive the tube end and radial passages therefrom to the disk periphery, opening into a peripheral
30 groove on the sealing face of the disk, an air intake below and a mixture outlet above the annular seat.

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

JOSEF SCHWARTZ.

Witnesses:

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ROBT. W. KING.