

W. J. RUBESKY.
CARBURETER.
APPLICATION FILED JAN. 2, 1913.

1,157,588.

Patented Oct. 19, 1915.
2 SHEETS—SHEET 1.

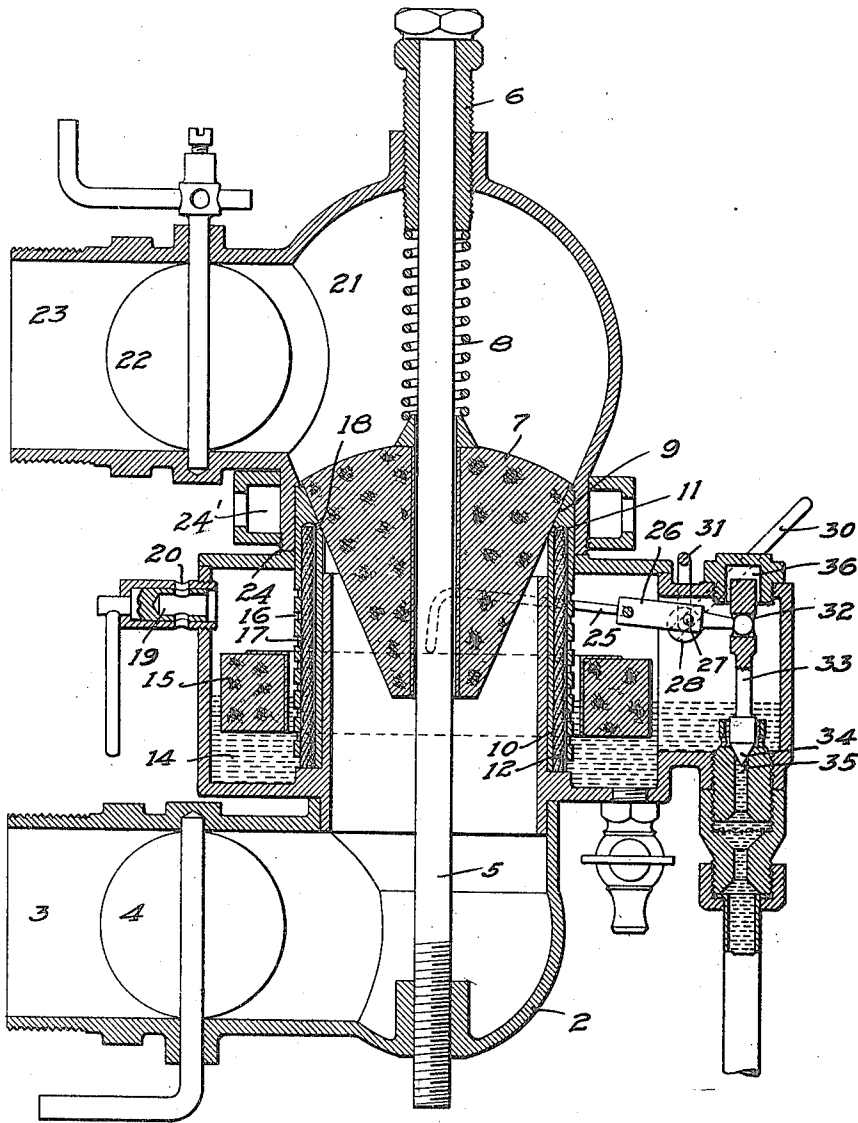


FIG. 1.

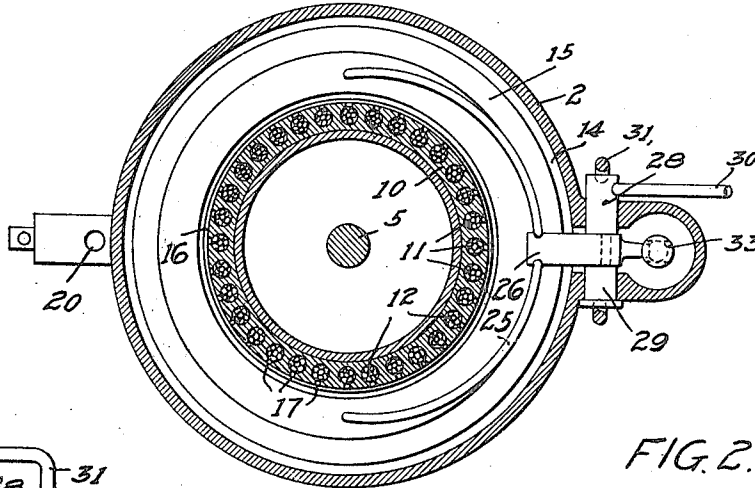
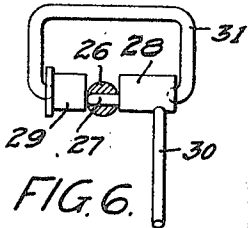
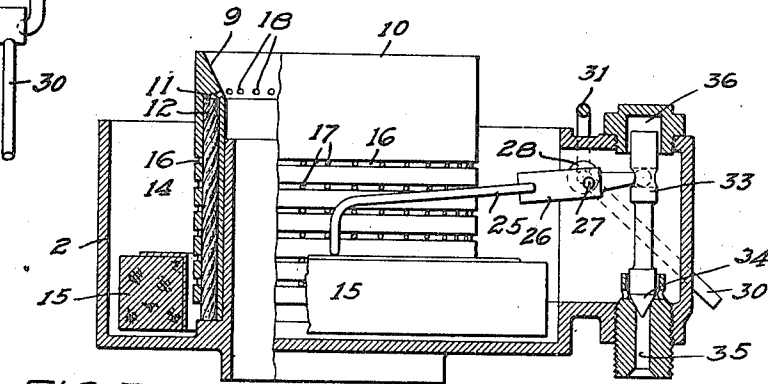
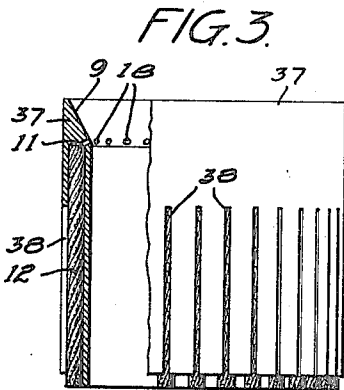
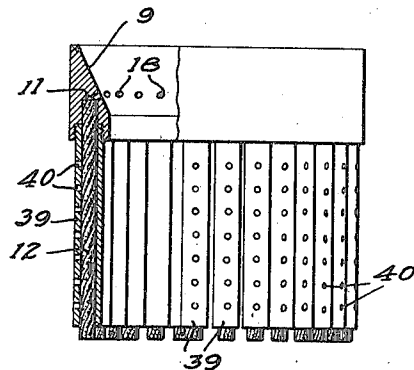
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FIG. 4.

FIG. 5.

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UNITED STATES PATENT OFFICE.

WILLIAM J. RUBESKY, OF MINNEAPOLIS, MINNESOTA.

CARBURETER.

1,157,588.

Specification of Letters Patent.

Patented Oct. 19, 1915.

Original application filed July 16, 1910, Serial No. 572,364. Divided and this application filed January 2, 1913. Serial No. 739,650.

To all whom it may concern:

Be it known that I, WILLIAM J. RUBESKY, of Minneapolis, Hennepin county, Minnesota, have invented certain new and useful
5 Improvements in Carbureters, of which the following is a specification.

My invention relates to the type of carbureter shown and described in my pending application filed October 11, 1909, Serial No.
10 522,200, and the primary object of my present invention is to provide an improved arrangement of the oil bearing wicks and the manner of feeding the oil and air thereto.

A further object is to provide a free and
15 positive oil feed that is easily adjusted to suit varying conditions of the weather and will be thoroughly economical in the use of fuel.

A further object is to provide means for thoroughly saturating the air and effecting
20 an equal distribution of the fuel.

A further object is to provide a carbureter capable of handling or vaporizing a low grade of oil and producing a mixture that will be highly explosive and easily
25 ignited.

A further object is to provide a carbureter which will insure a smoother and more uniform working of the engine, particularly those of the multi-cylinder type.
30 I am also able to effect a very complete combustion, thereby insuring a minimum amount of carbon deposits, reducing the necessity for repairs and giving a longer life to the engine.

My invention consists generally in various constructions and combinations, all as hereinafter described and particularly pointed out in the claims.

In the accompanying drawings forming
40 part of this specification, Figure 1 is a vertical sectional view of a carbureter embodying my invention, Fig. 2 is a horizontal sectional view, Fig. 3 is a detail sectional view illustrating the arrangement of the governor device, Figs. 4 and 5 are detail sectional views of the wick carrier, showing modified constructions, Fig. 6 is a detail view of the eccentric device by means of which the reservoir float is controlled.

The principle involved in the operation of this carbureter of causing the currents of air to come in contact with the oil saturated wick or other suitable conveying means, is similar to the one set forth in my prior ap-

plication above referred to. In my present
55 invention the wick carrier or casing is provided with a series of openings of different horizontal levels to adapt the wicks for gathering up the oil and being exposed to the air currents at different points. Air is
60 admitted to the oil chamber and permitted to flow into the ports or openings in the wick carrier and communicate with the oil carrying wicks.

In the drawing, 2 represents a casing hav-
65 ing an air intake passage 3 and a valve 4. 5 is a stem supported at each end in the walls of said casing and carrying an externally threaded sleeve 6 below which a valve 7 and coil spring 8 are arranged. The
70 tension of this spring is regulated by the adjustment of the sleeve 6. The valve 7, preferably of cork or other light material, is tapered in form and has a seat on the upper beveled portion 9 of a wick carrier 10 which
75 is preferably cylindrical in form and has a series of longitudinal sockets 11 therein adapted to receive the wicks 12. These wicks preferably consist of wire coils having cores of ordinary wicking. The wires in-
80 close the cores and allow the oil to penetrate therein and the oil also collects on the surfaces of the wires and creeps upwardly thereon to a position where it will be in the path of the air currents. The wicks are sub-
85 stantially the same as those described in my former application, above referred to, and their lower ends preferably depend below the wick carrier into a reservoir 14 that is adapted to contain a supply of oil and a
90 float 15. To prevent the inner surface of the float above the oil level from covering up the air inlet ports, the wick carrier is provided with a series of annular grooves 16 in its outer surface, in the bottom of
95 which holes 17 are provided at intervals leading to the sockets 11, wherein the wicks are arranged. Some of these holes may be below the level of the liquid in the reservoir 14 and some of them may be above the level
100 of the liquid, thus permitting currents of air to mingle with the oil as it rises on the wicks and passes to the mixing chamber.

The upper ends of the wick sockets have ports 18 extending through the valve seat
105 9 and are normally closed by the tapered valve 7 resting on said seat. An air intake 19 having ports 20 is provided, communicat-

ing with the reservoir 14 and by this means a certain predetermined volume of air can be admitted to the reservoir to mingle with the oil. The mixture of air and oil passes through the ports 18 when the valve is raised and mingles with the air currents brought in through the pipe 3 in the mixing chamber 21, the valve 22 separating this chamber from the passage 23 which leads to the engine cylinder. This mixing chamber forming the upper portion of the carbureter is readily removable from the wick carrier by means of the joint 24 and when the mixing chamber is detached the wick carrier will be exposed and may be also removed for inspection or repairs. An annular chamber 24' is provided, extending around the carbureting passage and having walls provided with intake and outlet openings through which hot air or hot water may be admitted to keep the walls of the carbureter at a suitable temperature to obtain the best results.

A bail 25 rests on the float and a lever 26 is connected to said bail and is pivotally mounted at a point intermediate to its ends on a pin 27, which is eccentrically formed on the hub 28. The hub 28 has an operating lever 30 and a loop 31 has its inwardly turned ends arranged to bear on the outer end of the hub 28 and on a plug 29, that fits within a socket in the casing 2 opposite and in line with the hub 28. The end of the lever 26 fits into a recess 32 in the stem 33 of a valve 34, which is adapted to close a port 35 and shut off the flow of the liquid fuel therethrough into the reservoir. The upper end of the valve stem is guided in a socket 36. The position of the float 15 determines the flow of liquid fuel into the reservoir and by the rotation of the eccentric hub 28 the position of the float is regulated so that it will shut the valve or open it, according to the level of the oil in the chamber. The higher the float in the reservoir, the larger number of holes leading to the wicks will be covered by the oil supply and a fewer number of holes be left open for the passage of the air currents. On the contrary, when the oil and the float are low in the chamber, a large number of the holes will be exposed to the air currents and the number of those through which the air may pass into contact with the wicks will be correspondingly reduced.

The movement of the lever 30 will allow the proper adjustment of the float according to the volume of feed desired and the degree of richness of the mixture.

In Figs. 4 and 5 I have shown modifications, which consist in providing wick carriers of different formation. In Fig. 4 a carrier 37 is shown, provided with a series of narrow vertical slits or slots 38, leading to the wicks, and in Fig. 5 a series of tubes

39 are shown, having perforations 40 located one above another and communicating with the wicks therein, thus allowing an increased flow of air or oil through the walls of the carrier into contact with the oil bearing wicks.

In various ways the details of construction herein may be modified, without departing from my invention.

This application is filed as a division of my application Serial No. 572,364 filed July 16, 1910.

I claim as my invention:—

1. In a carbureter, a wick carrier having inner and outer walls and wick sockets between them, the wall of said carrier having an annular groove therein and ports or openings in the bottom of said groove, for the purpose specified.

2. In a carbureter, a wick carrier having an inner and outer wall and wick sockets between them, said outer wall having a series of annular grooves therein and perforations in the bottoms of said grooves leading to said sockets.

3. In a carbureter, a wick carrier having longitudinal wick sockets therein and a valve seat at one end provided with perforations leading to said sockets, wicks fitting within said sockets, the lower ends of said wicks being exposed, for the purpose specified.

4. In a carbureter, a wick carrier having a valve seat and ports therein, wick sockets communicating with said ports and extending lengthwise of said carrier, wicks fitting within said sockets, the lower ends of said wicks being exposed, for the purpose specified.

5. In a carbureter, an oil reservoir, a cylindrical wick carrier depending therein and having a plurality of wick sockets and an air passage encircled by said carrier, the lower outer walls of said carrier having ports leading from said reservoir to said wick sockets, and the upper inner walls of said carrier having ports leading from said sockets to said air passage.

6. In a carbureter, an oil reservoir and means for supplying oil thereto, said reservoir being closed and having an air intake, a wick carrier depending within said reservoir, wicks arranged therein, the outer wall of said carrier having openings therein leading to said wicks and communicating with said reservoir, said openings being on different horizontal levels in said reservoir, the upper wall of said carrier having exit ports leading from said wicks, substantially as described.

7. In a carbureter, a wick carrier having a socket therein, a wick fitting within said socket, the lower outer wall of said carrier having a perforation leading to said socket and wick and the upper inner wall of said

carrier having a perforation or port leading from said socket and wick and a valve normally closing said last named port.

8. A carbureter comprising a casing having an oil reservoir and an air intake passage and a valve normally closing said passage, a wick carrier encircling said air passage and provided with a plurality of longitudinal wick sockets and wicks fitting within said sockets, the outer walls of said carrier having ports upon different levels leading from said reservoir and said wick sockets and the upper inner walls of said carrier having ports leading from said sockets to said air passage and normally closed by said valve.

9. In a carbureter, a cylindrical wick carrier having a plurality of wick sockets extending longitudinally therein and in parallel relation with one another, and wicks fitting within said sockets, the lower ends of said wicks being exposed and the walls of said carrier having ports therein leading to and from said wick sockets.

10. In a carbureter, an oil reservoir, a wick carrier removably fitting therein and having a valve seat and a valve for said seat, a series of wicks fitting within said carrier, said carrier having ports communicating with said oil reservoir and leading to the lower portion of said wicks and also having exit ports in said valve seat leading from said wicks, said exit ports being normally closed by said valve.

11. In a carbureter, an oil receptacle, a wick carrier depending therein and having a plurality of parallel sockets disposed between the inner and outer surfaces of said carrier and wicks mounted in said sockets, the outer wall of said carrier having openings upon different levels leading to said wicks and the upper wall of said carrier having openings leading from said wicks, and a valve for normally closing said last named openings.

12. In a carbureter, an oil receptacle, a wick carrier depending therein and having an air intake opening therethrough, a suction valve normally closing said openings, wicks mounted in said carrier, the wall of said carrier having openings therein upon different levels in said oil receptacle, said openings leading to said wicks, said carrier also having exit openings leading from said wicks and normally closed by said valve.

13. In a carbureter, an oil receptacle having an air passage, a wick carrier depending within said receptacle and encircling said passage, a wick mounted in said carrier, the wall of said carrier having open-

ings upon different levels communicating with said wick and also having exit openings leading from said wick and a valve for normally closing said exit openings.

14. In a carbureter, a wick carrier having an air passage therethrough and a wick socket in its walls and a wick fitting within said socket, the outer wall of said socket having openings therein and the inner wall of said socket having an opening communicating with said passage, and a reservoir wherein said carrier depends.

15. In a carbureter, a cylindrical wick carrier having a plurality of wick sockets in its walls and metal covered wicks fitting therein, the outer walls of said sockets having intake ports therein and the inner walls of said sockets having outlet ports, a fuel supply being conducted over and through said wicks from said inlet ports to said outlet ports.

16. In a carbureter, a wick carrier having inner and outer walls, and wick sockets between them, said outer walls having intake ports communicating with said wick sockets and said inner walls having outlet ports communicating with said wick sockets.

17. In a carbureter, a fuel supply reservoir having an air intake, a wick carrier depending within said reservoir and having a wick socket and a wick therein and a plurality of ports upon different levels leading to said wick socket, the upper portion of said carrier having outlet ports, the fuel being fed through the lower ports to said wick and upwardly by capillary attraction, the currents of air entering through the upper ports and mingling with the fuel as it is carried up by said wick.

18. A carbureter comprising a fuel supply reservoir having an air intake, a wick carrier depending within said reservoir and having a plurality of wick sockets and wicks fitting therein, said carrier having a plurality of ports upon different levels leading to said wicks, some of said ports being normally below the level of the fuel in said reservoir and others of said ports being normally above the level of the fuel, the upper walls of said carrier having outlet ports, the fuel being fed upwardly by capillary attraction through said wicks and mixed with air entering said upper ports before reaching said outlet ports.

In witness whereof, I have hereunto set my hand this 19th day of December, 1912.

WILLIAM J. RUBESKY.

Witnesses:

GENEVIEVE E. SORESENSEN,
EDWARD A. PAUL.