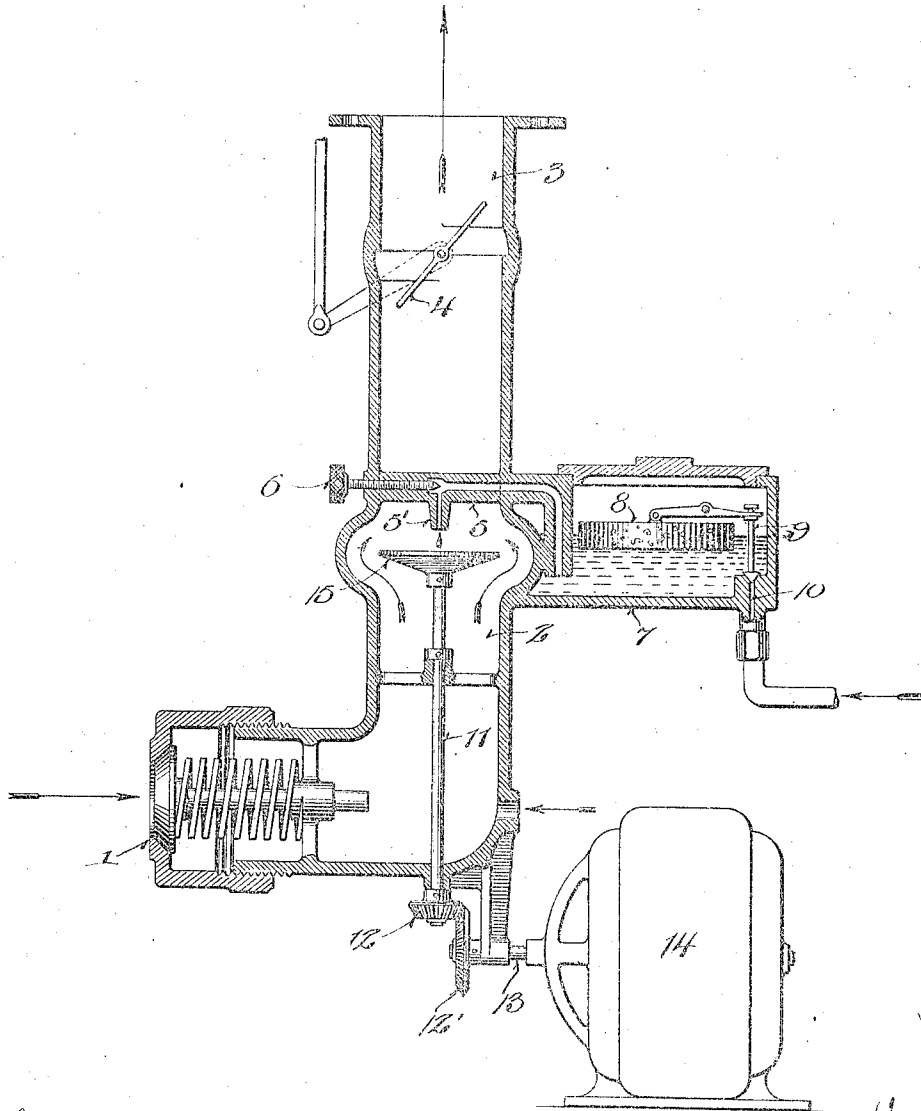


F. GETTELMAN.
CARBURETER.
APPLICATION FILED FEB. 25, 1913.

1,190,540.

Patented July 11, 1916.



Witnessed
Casimir Young
May Downey.

Inventor:
Frederick Gettelman
By *Robert Young*
Attorneys.

UNITED STATES PATENT OFFICE.

FREDERICK GETTELMAN, OF MILWAUKEE, WISCONSIN.

CARBURETER.

1,190,540.

Specification of Letters Patent.

Patented July 11, 1916.

Application filed February 25, 1913. Serial No. 750,551.

To all whom it may concern:

Be it known that I, FREDERICK GETTELMAN, a citizen of the United States, and resident of Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented certain new and useful Improvements in Carbureters; and I do hereby declare that the following is a full, clear, and exact description thereof.

My invention refers to carbureters, its object being to provide positive means for forcibly breaking up the globules of oil and distributing the same in a spray, through which spray air is caused to pass, whereby the carbureted mixture is rendered uniform.

To obtain the desired result, I provide a rotor that is located within the carbureter mixing chamber and arranged to receive oil from a suitable source of supply, the said rotor being positively driven by a suitable motor in connection therewith.

With the above object in view the invention consists in certain peculiarities of construction and combination of parts as set forth hereinafter with reference to the accompanying drawing and subsequently claimed.

The accompanying drawing illustrates a sectional elevation of a carbureter embodying the features of my invention.

Referring by characters to the drawing, 1 represents a valve-controlled air intake mouth that communicates with a mixing chamber 2, the discharge nozzle 3 of which is provided with the ordinary regulating valve 4. Extending into the mixing chamber is an oil discharge pipe 5, the same being controlled by an ordinary needle valve 6. This discharge pipe communicates with a float chamber 7, which float chamber is adapted to contain a predetermined quantity of oil, the said quantity being regulated by a float 8 which is by a suitable lever connected to a pin-valve 9 that controls an oil supply channel 10. Journalled in suitable bearings with which the mixing chamber is provided is a spindle 11 having one end extending outside of the mixing chamber and to which end is secured a beveled gear-wheel 12. The said gear-wheel 12 meshes with a similar gear-wheel 12' that is secured to the shaft 13 of a motor 14. The oil discharge pipe 5 is provided with a downturned nipple 5' that is centrally disposed with relation to the mixing chamber, the spindle 11 being in alinement with said nipple. Secured to

the upper end of the spindle 11 directly under the oil pipe nipple 5' is a disk 15, which disk constitutes a rotor upon the face of which oil is discharged from the pipe 5, the mixing chamber, for convenience, in this exemplification of my invention, being preferably enlarged about the edge of the disk or rotor, whereby a channel for the free passage of air is obtained thereabout.

In practice air is admitted through the valve-controlled mouth 1 and travels upward through the mixing chamber about the edge of the disk and is discharged in the usual manner. When in operation the spindle 11 of the rotor is positively driven at a high speed by its motor connection and as the oil is fed upon the center disk or rotor in a downward direction it is apparent that it will, by centrifugal force, be thrown outwardly into a fine spray or sheet, through which sheet the air, traveling in the opposite direction, is compelled to travel and thus take up the oil in uniform proportions, the carbureted air being thereby thoroughly mixed before it is admitted to the explosive end of the engine cylinder to obtain the most effective results.

I am aware that various rotors have been employed for mixing the air and oil in carbureters, but, so far as I am aware, heretofore, none of the carbureters of this type have utilized a solid rotor in the form of a disk located in the air chamber to thus restrict the air passage and cause the same to travel upwardly about the peripheral edges of the disk. Nor have these devices employed means for discharging oil downwardly upon the center of a solid disk in a direction opposite the flow of air. This construction enables me to obtain a new result due to the fact that the oil striking the center of the disk must be deflected in a spray uniformly in all directions meeting the peripheral restricted air passing about the edges of said disk, whereby a uniform supply of air passing upward through said passage is brought into contact with the uniform fine spray of oil, thus insuring an efficient and even mixture, whereby variations in the fuel mixture are effectually eliminated. It is also apparent that while I have shown and described the rotor as being in gear connection with a prime mover that I may, without departing from the spirit of my invention, connect the rotor directly to the shaft of the prime mover or

motor, or, in some instances I may, without departing from the spirit of my invention, utilize the power from the internal combustion engine to which the carbureter is applied.

I claim:—

In a carbureter, a mixing chamber comprising a vertically disposed cylindrical casing provided with an air intake and discharge at its respective ends and having an intermediate annular enlargement, a driven disk arranged transversely in the casing at the point of its annular enlargement and axially thereof, the disk having an uninterrupted upper flat surface upon a horizontal

plane, and a fluid discharge nozzle positioned axially of the cylindrical casing above the flat surface of the disk adapted to discharge fuel upon the center of the flat surface of the disk whereby a uniform radial spread of the fluid is insured.

In testimony that I claim the foregoing I have hereunto set my hand at Milwaukee in the county of Milwaukee and State of Wisconsin in the presence of two witnesses.

FREDERICK GETTELMAN.

Witnesses:

GEO. W. YOUNG,
M. E. DOWNEY.