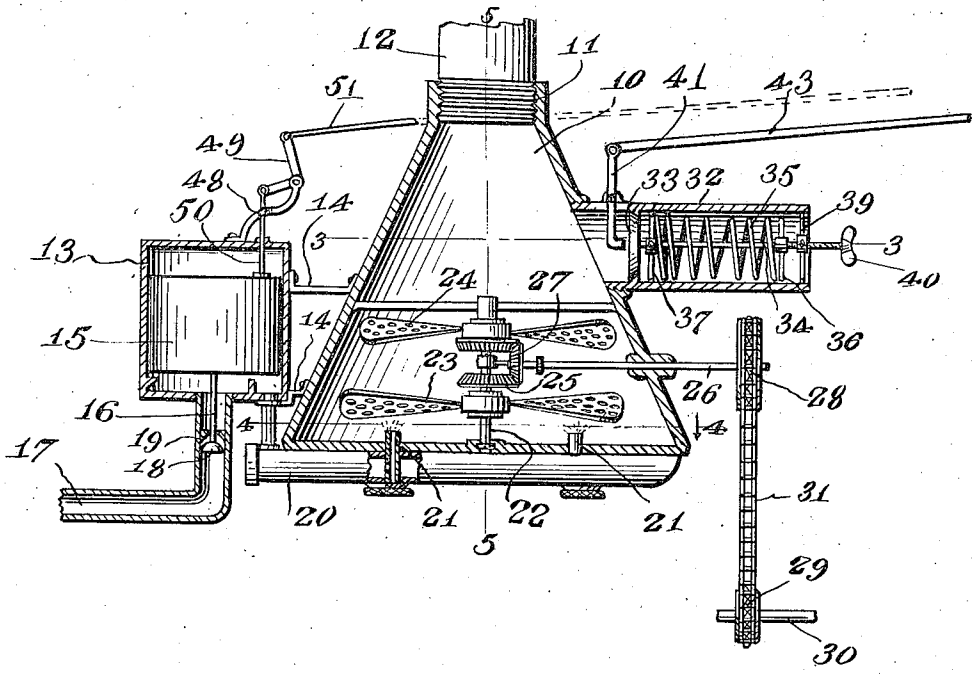
W. P. SHORES.

CARBURETER.

APPLICATION FILED OCT. 16, 1912.

1,156,716. Patented Oct. 12, 1915.



Witnesses:—

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WILLIAM PARLEY SHORES, OF ANTONITO, COLORADO.

CARBURETER.

1,156,716. Specification of Letters Patent. Patented Oct. 12, 1915.

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To all whom it may concern:

Be it known that I, WILLIAM P. SHORES, a citizen of the United States, residing at Antonito, in the county of Conejos, State of Colorado, have invented certain new and useful Improvements in Carbureters; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to carbureters and has for an object to provide a carbureter having a novel mechanical agitator for thoroughly mixing the mixture in the carbureting chamber.

With the above objects in view the invention consists of certain novel details of construction and combination of parts hereinafter fully described and claimed, it being understood that various modifications may be made in the minor details of construction within the scope of the appended claim.

In the accompanying drawings forming part of this specification the figure is a longitudinal sectional view through the carbureter.

Referring now to the drawings in which like characters of reference designate similar parts, 10 designates a carbureting chamber which is conical in contour and is closed at the bottom and open at the top, the top being provided with screw threads 11 to receive the engine intake pipe 12.

A substantially cylindrical float chamber 13 is arranged to one side of the carbureting chamber and is fixed to the latter by spaced arms 14. Within the float chamber a float 15 is arranged, the float being equipped with a depending valve stem 16 which projects into the gasolene feed pipe 17 and is provided with a conical valve 18 which seats in a correspondingly shaped valve seat 19 formed in the feed pipe.

The float chamber is provided on the bottom with an outlet pipe 20 which projects across the bottom of the carbureting chamber and is equipped with upright fuel tubes 21 that project through the bottom of the chamber.

An agitator is arranged in the carbureting chamber and comprises a standard 22 which is fixed to the bottom of the chamber between the fuel tubes 21, and revolubly mounted on this standard are a pair of spaced perforated fans 23 and 24, these fans being equipped on their confronting sides with bevel gears 25. A horizontally disposed shaft 26 is journaled in one side of the carbureting chamber and is terminally equipped at the inner end with a bevel gear 27 which is disposed between and meshes with both of the fan bevel gears 25, and upon rotation of the shaft both fans are simultaneously rotated in opposite directions. The shaft is equipped at the outer end with a sprocket gear 28 over which and a sprocket gear 29 carried on the engine crank shaft 30, a sprocket chain 31 is trained, this chain drive continuously actuating the agitator while the engine is running.

The air intake is arranged in one side of the carbureting chamber above the agitator.

When the agitator is set in motion it will cause the gasolene in the bottom of the chamber to be thrown upwardly in a fine spray and this will be completely agitated by the rotation of the fans. This will cause the spray to be thoroughly mixed with the air which comes in through the intake pipe and a rich mixture will result.

The air inlet comprises a pipe 32 within which is disposed a disk valve 33 having an axial stem 34 which projects through the bore of a helical spring 35 and is equipped terminally with a rod 36 which slidably fits within the bore of the pipe and moves with the valve stem, and during such movement compresses the spring 35 against a rod 37 which is fixed in the bore of the pipe and is provided with an opening 38 which slidably receives the valve stem. A rod 39 is fixed in the bore of the pipe and is equipped with a set screw 40 which bears against the movable rod 36 and serves to vary the tension of the spring, the valve 33 opening against the tension of the spring 35 due to the suction of the engine as usual.

For priming the carbureter, a tubular bearing 48 is fixed on the top of the float chamber, and pivoted on this bearing is a bell crank lever 49 which is provided with a stem 50 that projects through the bearing and bears upon the top of the float 15. A push rod 51 is connected to the bell crank lever and is led through the dash, the push rod being terminally equipped with a button 52 between which and the dash a helical spring 53 is confined. Upon the push rod being actuated the stem 50 is depressed with

a resultant depression of the float to open the valve 18 and permit of fuel flowing into the carbureter.

What is claimed is:—

In a carbureter, the combination with a conical carbureting chamber having a closed bottom and means at the top for attachment to an engine, a fuel feed pipe extending across the bottom of the chamber and having an upright nozzle opening through said bottom into the conical chamber, a revoluble stand shaft located within the chamber, a pair of oppositely rotatable agitators on said shaft, each agitator including a plurality of feathered or inclined perforated blades, the said chamber having an air inlet located above the said agitators, a shaft journaled in the side of the casing and having a portion projecting into said casing, power transmission connections between the stand shaft and the last mentioned shaft, and power transmission means connected with the outer end of the last mentioned shaft and adapted to be connected with an engine shaft.

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

WILLIAM PARLEY SHORES.

Witnesses

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