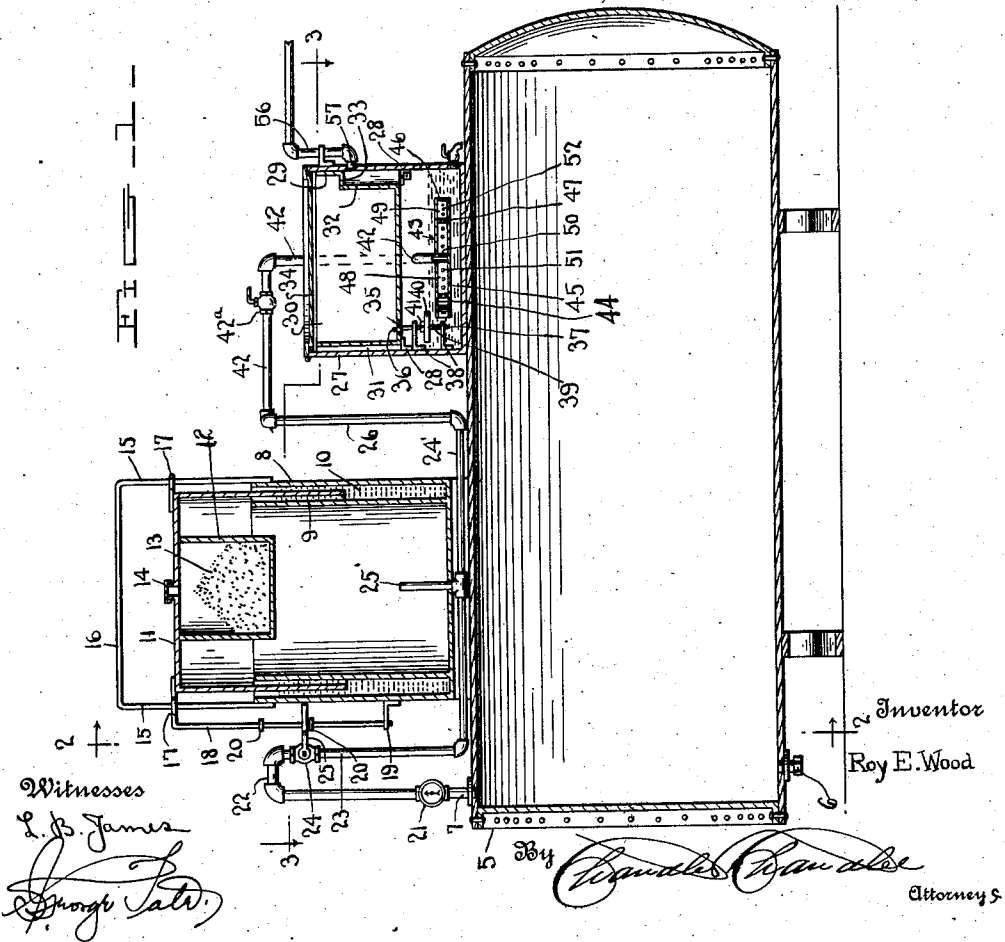
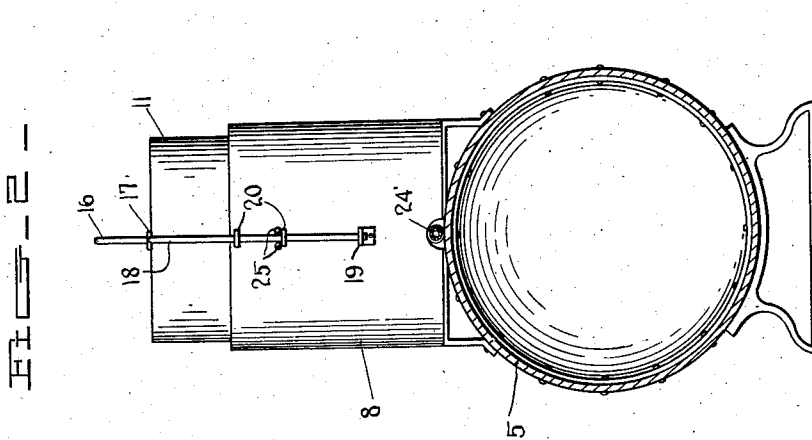


R. E. WOOD.
CARBURETER.
APPLICATION FILED FEB. 6, 1911.

1,027,456.

Patented May 28, 1912.

2 SHEETS—SHEET 1.



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2 SHEETS-SHEET 2.

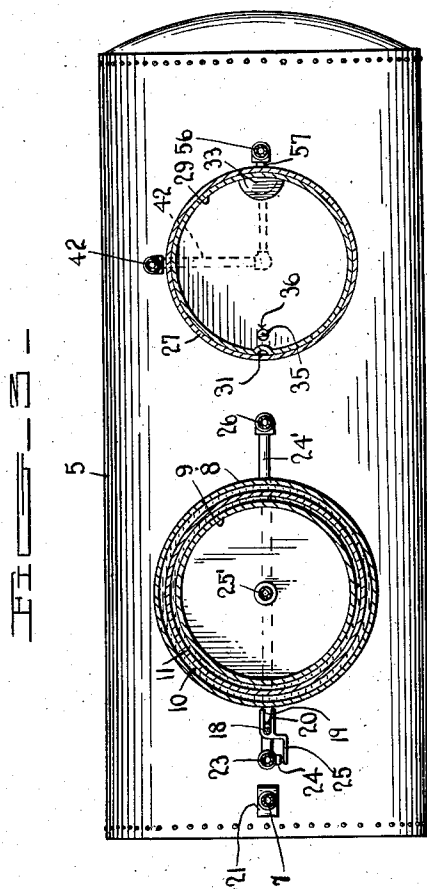


Fig. 1 -

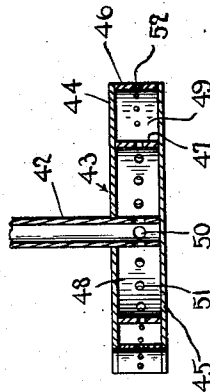
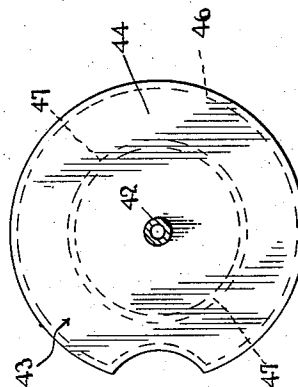


Fig. 2 -



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UNITED STATES PATENT OFFICE.

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CARBURETER.

1,027,456.

Specification of Letters Patent.

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Application filed February 6, 1911. Serial No. 606,826.

To all whom it may concern:

Be it known that I, Roy E. Wood, a citizen of the United States, residing at Syracuse, in the county of Otoe, State of Nebraska, 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 an improvement in carbureters.

The principal object of my invention is to provide a carbureter which is safe, simple and economical in operation.

Another object of the invention is to provide a carbureter which is compact, having its parts so constructed and arranged as to feed the air automatically through the air-governor and thereby insure equal pressure in the gas service pipe, regardless of the pressure in the air reservoir.

Another object of the invention is to provide a carbureter in which a constant level of gasoline in the carbureter is maintained.

With these and other objects in view, the invention consists in the construction and novel combination of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claim hereto appended; it being understood that various changes in the form, proportion, size and minor details of construction, within the scope of the claim, may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

In the drawings: Figure 1 is a vertical longitudinal sectional view through the invention. Fig. 2 is a transverse section taken on the line 2—2 of Fig. 1, parts thereof being shown in elevation. Fig. 3 is a horizontal sectional view taken on the line 3—3 of Fig. 1, and Fig. 4 is a top plan view of the distributor. Fig. 5 is a vertical sectional view through the center of the distributor.

Like reference numerals designate corresponding parts in all the figures of the drawings.

Referring to the drawings 5 designates an air reservoir of any suitable construction having an air inlet 6 and an air outlet pipe 7 associated therewith. Suitably mounted upon the top of the reservoir is a tank 8 having an open top and provided with an

inner wall 9 forming an annular chamber 10 which is adapted to be filled or partly filled with water. A bell 11 of ordinary construction has its lower end disposed within the chamber 10, and centrally depending from the top is a receptacle 12 adapted to receive some weighted material 13, such as sand or the like. Associated with the said top and communicating with the receptacle 12 is a suitable opening having a closure cap 14. Extending upwardly and secured to the tank 8 are diametrically opposed guide rods 15—15 which may be connected by a transverse bar 16. Suitable guides 17—17 are carried by the bell 11 and these guides coact with the rods 15—15. Also secured to the bell 11 and extending downwardly over the tank 8 is a rod 18 which is led through suitable guides 19 carried by the said tank 8. This rod 18 is provided with spaced stops 20—20 for a purpose hereinafter described.

The air outlet pipe 7 preferably extends vertically and is provided with an ordinary air gage 21. This pipe is disposed contiguous to the guide rod 18 and has its upper end connected by a short pipe 22. A pipe 23 connects the pipe 22, and this pipe 23 extends downwardly to the top of the reservoir. Associated with the pipe 23 is a valve 24 having an arm 25 extending therefrom. The free end of this arm is provided with a suitable perforation for the reception of the rod 18. It will be observed in this connection that as the bell 11 descends, the rod 18 will of course be carried therewith, and as a result the upper stop 20 will coact with the outer end of the valve arm 25 and thereby open the said valve. When the bell reverses its direction, due to the air pressure, the lower stop 20 will engage the valve arm and thereby close the valve.

Connected to the pipe 23 is a pipe section 24' which is disposed directly under the tank 8 and is centrally provided with a short pipe 25', the said pipe 25' passing through the bottom of the tank 8 into the said tank and terminating a short distance from the bottom thereof. The pipe 24' then extends outwardly to the other side of the tank 8 and is connected to a vertical pipe 26.

The invention further comprises a carbureter tank 27, said tank being suitably supported upon the reservoir 5. Within the tank and secured to the wall thereof above the bottom are brackets 28, which support a

gasolene tank 29 having an open top 30. The wall of the said tank 29 is provided with a vertical groove 31 forming an air vent. The tank is further provided opposite the groove 5 31 with a chamber 32 which communicates with the bottom of the tank 27. This chamber is formed by suitably grooving the wall of the tank and extends from the bottom of the tank to a point below the top, and is 10 closed at said point by a top 33. A closure 34 is provided for the tank 27 and this closure is formed with any suitable sealing means. An opening 36 is formed in the bottom of the tank 29 and disposed directly 15 therebelow is a valve 35 carried by a stem 37 which is slidably mounted in brackets 38—38. This stem is preferably screw-threaded as shown by 39, and engaging said screw-threads is an adjustable float 40, said 20 float being secured in any adjusted position by means of a lock nut 41. Connected with the pipe 26 is a pipe 42 which is provided with a hand valve 42^a, said pipe 42 extending into the tank 27 below the gasolene tank 25 29 and has its end connected to the inner end of a distributor 43. This distributor is formed of spaced top and bottom circular plates 44 and 45 respectively. The pipe 42 extends through a suitable opening concentrically formed in the top plate 44 and has its end terminating against and closed by the bottom plate 45. An outer wall 46 connects the two plates and a wall 47 is arranged intermediate the pipe 42 and the 30 outer wall 46 and also connects the said plates. Thus it will be observed that the intermediate wall 47 constitutes a partition forming inner and outer compartments 48 and 49 respectively. The lower end of the 35 pipe 42 is provided with a plurality of openings 50 which communicate with the inner compartment 48. The partition 47 is provided with a plurality of openings 51 which are of smaller diameter than the openings 40 50, and the outer wall 46 is provided with a plurality of still smaller openings 52.

A gas service pipe 56 has one end 57 suitably connected to the wall of the tank 27 and communicates with the chamber 32.

50 In the operation of the generator, air will be admitted within the bell as before explained. As soon as a sufficient amount is admitted the bell will begin to rise and in so doing will cut off the air by means of the 55 valve 24. The weighted material 13 carried by the bell will cause the said bell to be lowered, and thereby force the air from within the bell through the pipe 25 to the distributor 43. This distributor being normally submerged in gasolene will cause the 60 air to pass from the pipe 42, through the openings 50 thereof, through the inner com-

partment 48, thence through the openings 51 of the intermediate wall or partition 47, thence into the outer compartment 49 and 65 finally through the smallest openings 52 formed in the wall 46 and into the gasolene. The air thus passing through the gasolene will volatilize the latter, and the carbureted air thus formed will pass upwardly through 70 the chamber 32 and thence out through the gas service pipe 56. As soon as the quantity of gasolene surrounding the distributor decreases the float 40 will cause the valve 36 to become unseated and thereby permit the 75 egress of gasolene from the tank 29. After a sufficient amount of gasolene has passed through the opening 35 the float 40 will of course cause the valve 36 to be seated and thereby close the said opening. When the 80 valve 36 is unseated air can pass from below the gasolene tank 29, through the groove 31 to the top of the tank, thereby permitting an easy discharge of the gasolene. Whenever it is desired to shut off the generator 85 the hand-valve 42^a is actuated.

Should it be desired the gasolene tank as well as the gas bell may be placed upon supports other than the air reservoir.

What is claimed is:—

90 In a carbureter, the combination with an air reservoir, of a tank, a bell disposed within the tank for vertical movement, an outlet pipe connected to the reservoir and communicating with the interior of the bell, a valve 95 in said pipe for controlling the flow of air, a connection between the valve and the bell for operating the former upon movement of the latter, a carbureter tank, a gasolene tank supported therein and provided with an outlet opening, a float valve controlling said 100 opening, a distributor disposed within the carbureter tank below the gasolene tank, said distributor consisting of spaced upper and lower plates, a wall connecting the outer 105 edges of said plates and provided with a plurality of openings, and a partition wall also connecting said plates and provided with a plurality of openings of larger diameter than the first mentioned openings, 110 a pipe connecting said air outlet pipe and the distributor, the end of the pipe connecting the distributor being disposed within the partition wall and provided with a plurality of openings, and a service pipe communicating 115 with the carbureter tank below the gasolene tank.

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

ROY E. WOOD.

Witnesses:

LE ROY REIF,
FRITZ NICKLAS.