

G. A. HOCKMAN.

CARBURETER.

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975,038.

Patented Nov. 8, 1910.

Fig. 1.

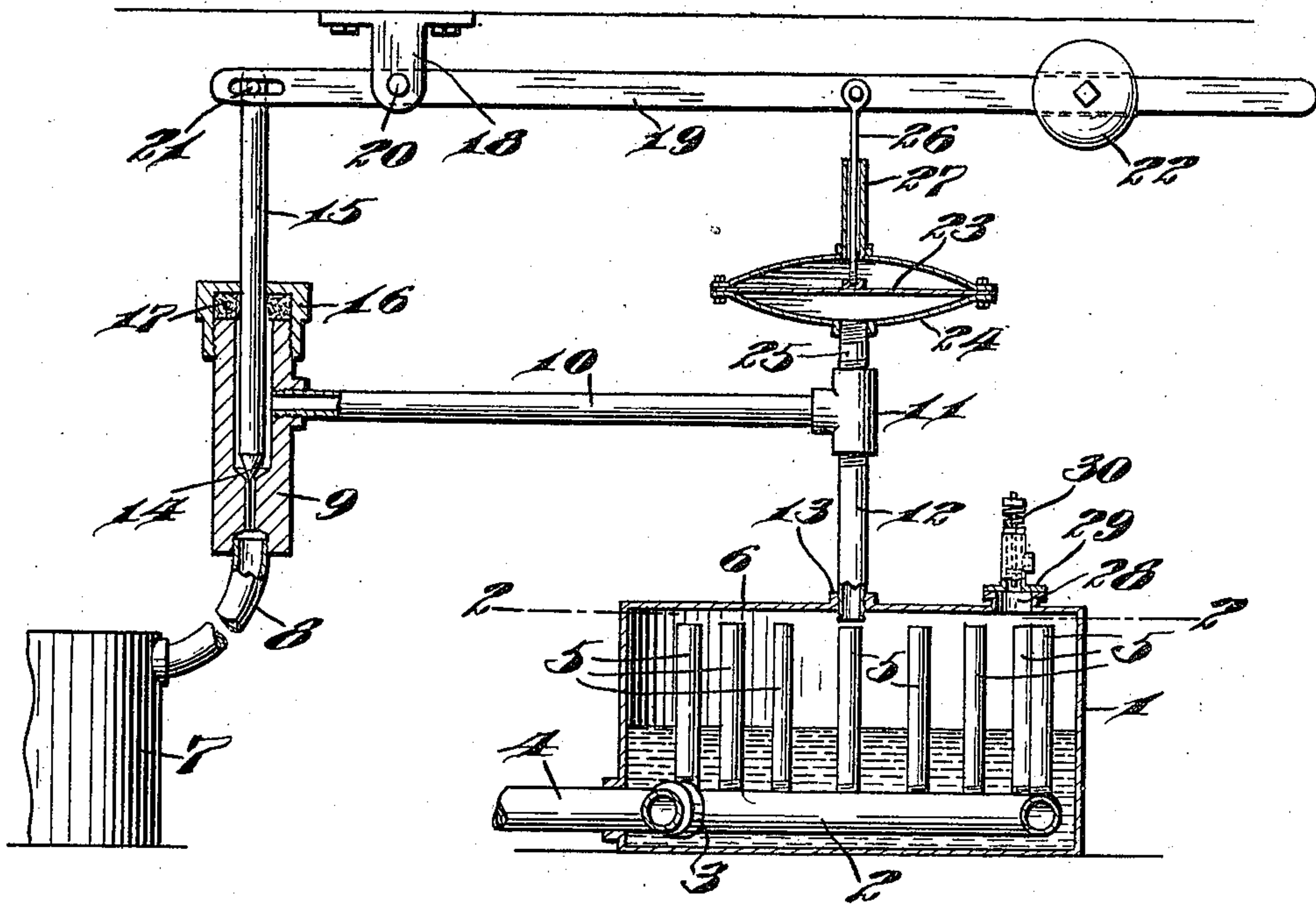
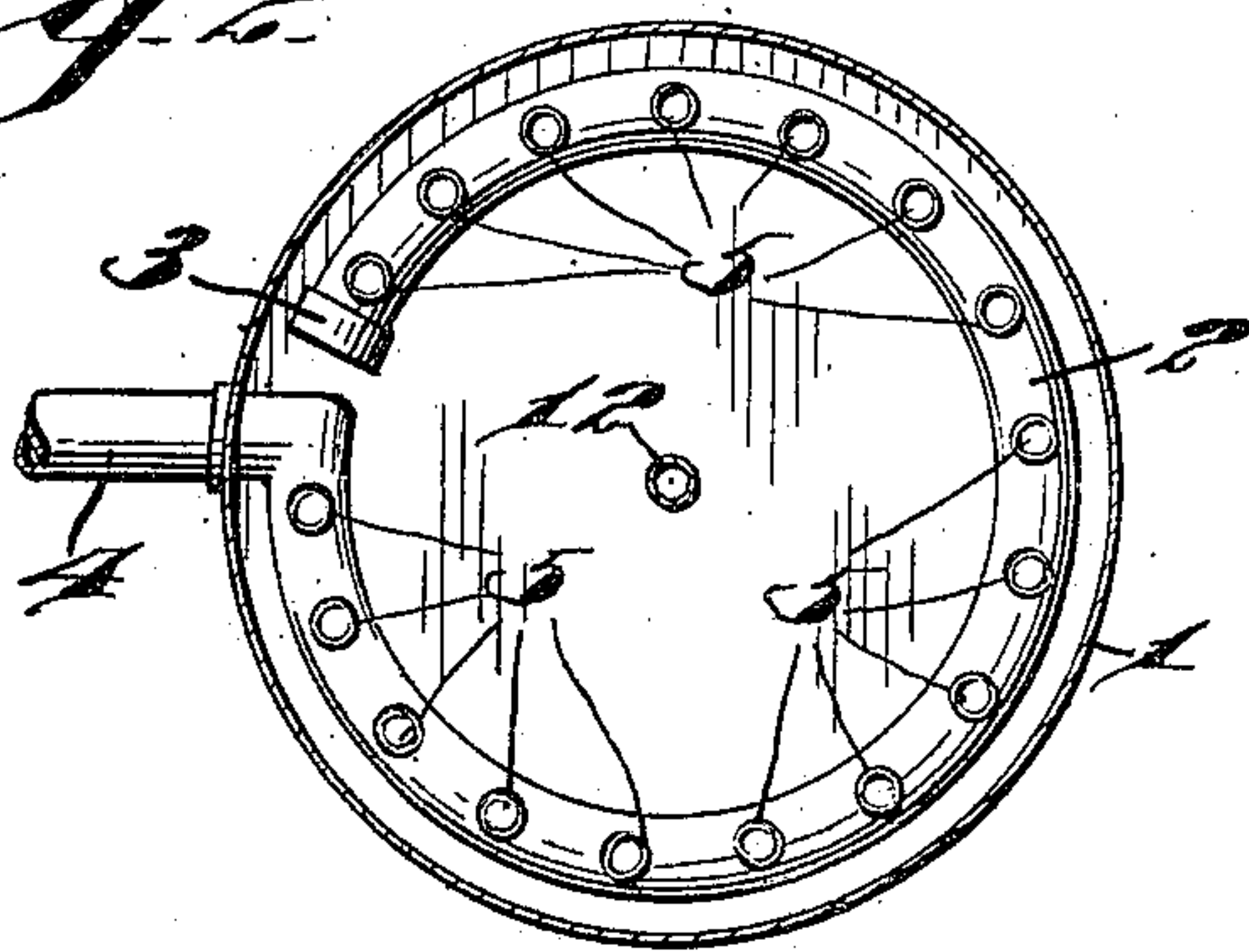


Fig. 2.



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GEORGE A. HOCKMAN, OF CHESTER, PENNSYLVANIA.

CARBURETER.

975,038.

Specification of Letters Patent.

Patented Nov. 8, 1910.

Application filed November 2, 1909. Serial No. 525,857.

To all whom it may concern:

Be it known that I, GEORGE A. HOCKMAN, a citizen of the United States, residing at Chester, in the county of Delaware and State of Pennsylvania, have invented certain new and useful Improvements in Carbureters, of which the following is a specification.

My invention relates to improvements in carbureters, and more particularly to gas generators of the carbureter type, the object of the invention being to provide an improved construction of automatic air supply controlling mechanism, together with an improved construction of gas outlet pipes within the generating tank.

A further object is to provide an improved gas generator of simple inexpensive construction, strong and durable in use.

With these and other objects in view, the invention consists in certain novel features of construction, and combinations and arrangements of parts as will be more fully hereinafter described and pointed out in the claims.

In the accompanying drawings, Figure 1, is a diagrammatic view partly in section illustrating my improvements, and Fig. 2, is a view in section on the line 2—2 of Fig. 1.

1 represents a closed tank, adapted to contain hydro-carbon, and provided with a circular outlet pipe 2, adjacent the bottom of the tank, said pipe closed at one end by means of a cap 3, and at its other end projecting through the tank as shown at 4, and adapted to convey the gas to the point of use. This pipe 2 is provided with a series of vertical inlet pipes 5 communicating at their lower ends with pipe 2, and open at their upper ends, the upper ends terminating in close proximity to the top 6 of tank 1.

7 represents a compressed air supply tank, from which air passes through a pipe 8 to a valve casing 9, and from the latter through a pipe 10 to a T-coupling 11, said T-coupling connected by a vertical pipe 12 with an opening 13 in the top 6 of tank 1. In valve casing 9 a needle valve 14 is provided, and operated by a stem 15 projecting up through the valve casing, and said casing suitably packed by means of a cap nut 16 and packing 17.

18 represents a bracket, secured to any suitable support, and 19 is a lever which is pivoted in the bracket by means of a pin 20, and has a slot and pin connection 21 with

the upper end of stem 15, the other end of said lever being provided with an adjustable counterweight 22.

23 represents a diaphragm, which is secured within a casing 24, the latter connected below the diaphragm by means of a pipe 25 with the T-coupling 11. A rod or link 26 connects lever 19 with the diaphragm 23, and moves through a tube 27 communicating with the upper portion of the diaphragm casing 24.

The operation is as follows: Compressed air from tank 7 passes through pipe 8, valve casing 9, pipe 10, T-coupling 11, and pipe 12 into the tank 1, where it commingles with the hydro-carbon gases in the tank and passes into the upper ends of branch pipes 5, thence down through said branch pipes into pipe 2, and through the outlet 4 to the point of use. Should the pressure become excessive, the air will cause the diaphragm 23 to raise, and through the medium of rod 26 move lever 19 on its fulcrum, and cause the needle valve 14 to close until the pressure is reduced, the valve will be automatically opened and the operation resumed.

The hydro-carbon may of course, be supplied to the tank 1 in various ways, but I have provided for this purpose an opening 28 normally closed by a cap 29, and this cap 29 is provided with a spring pressed safety valve 30, so that, if in the event the pressure should become dangerous, and the diaphragm and coöperating mechanism fail to properly do their work, this valve 30 will be opened and allow the excessive pressure to escape.

Various slight changes might be made in the general form and arrangement of parts described without departing from my invention, and hence I do not restrict myself to the precise details set forth, but consider myself at liberty to make such changes and alterations as fairly fall within the spirit and scope of the claims.

Having thus described my invention what I claim as new and desire to secure by Letters Patent is:

1. In a carbureter, the combination with a tank adapted to contain liquid hydro-carbon, of a gas outlet pipe having a closed end and bent into circular form adjacent the bottom portion of the tank, a series of vertical pipes communicating with the curved portion of said pipe and having their open upper

ends projecting above the liquid level in said tank, means for supplying air under pressure to the center of said tank, means for automatically controlling said supply of air, 5 a cap normally closing a hydro-carbon inlet in the top of said tank, and a safety pressure valve on said cap.

2. In a carbureter, the combination with a tank adapted to contain liquid hydro-carbon, of a gas outlet pipe having a closed 10 end and bent into circular form adjacent the bottom portion of the tank, a series of vertical pipes communicating with the curved

portion of said pipe and having their open upper ends projecting above the liquid level 15 in said tank, and means for supplying air under pressure to the center of said tank, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of 20 two subscribing witnesses.

GEORGE A. HOCKMAN.

Witnesses:

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R. H. KRINKEL.