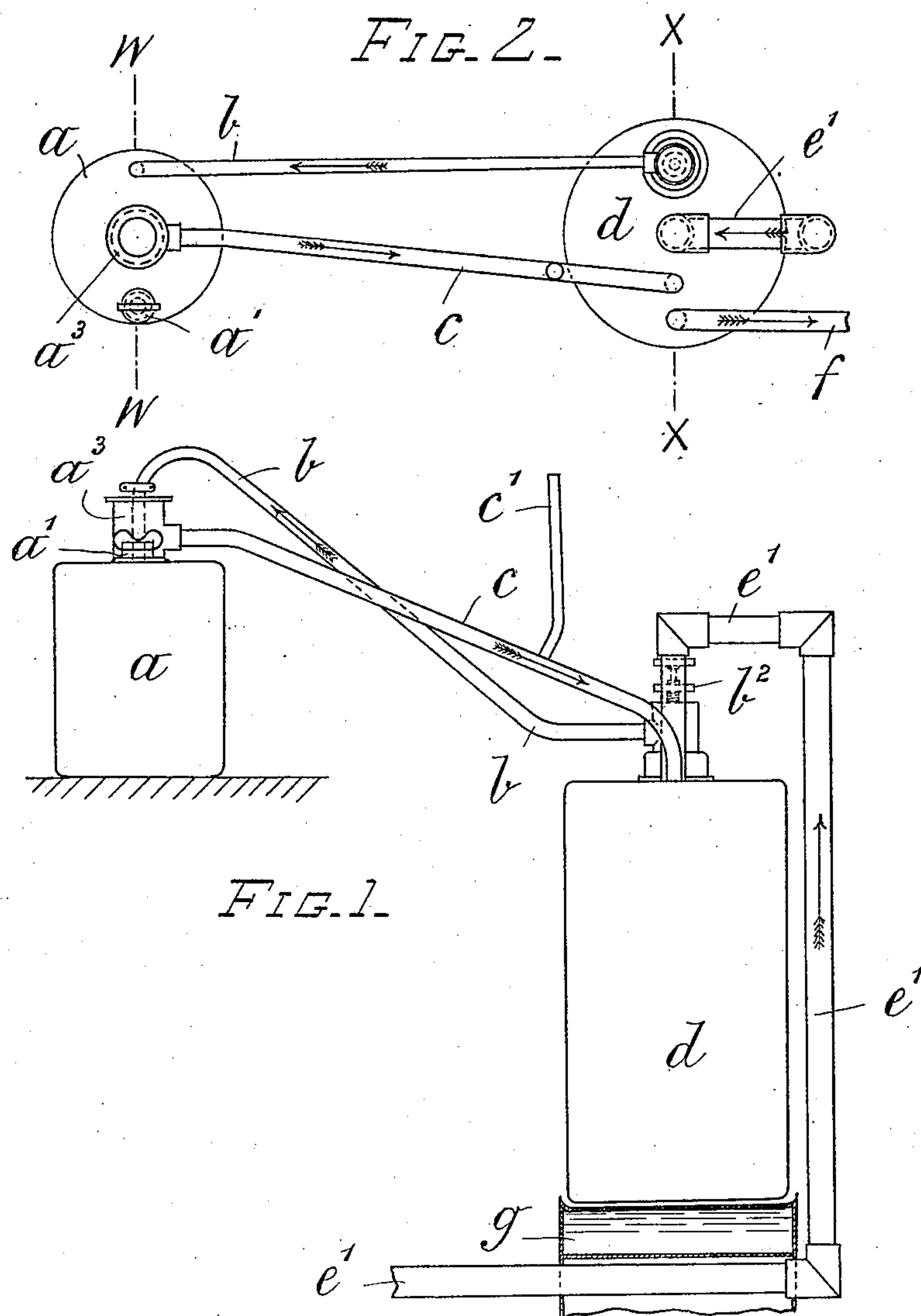


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 APPLICATION FILED APR. 24, 1908.

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Patented Sept. 14, 1909.
 2 SHEETS—SHEET 1.



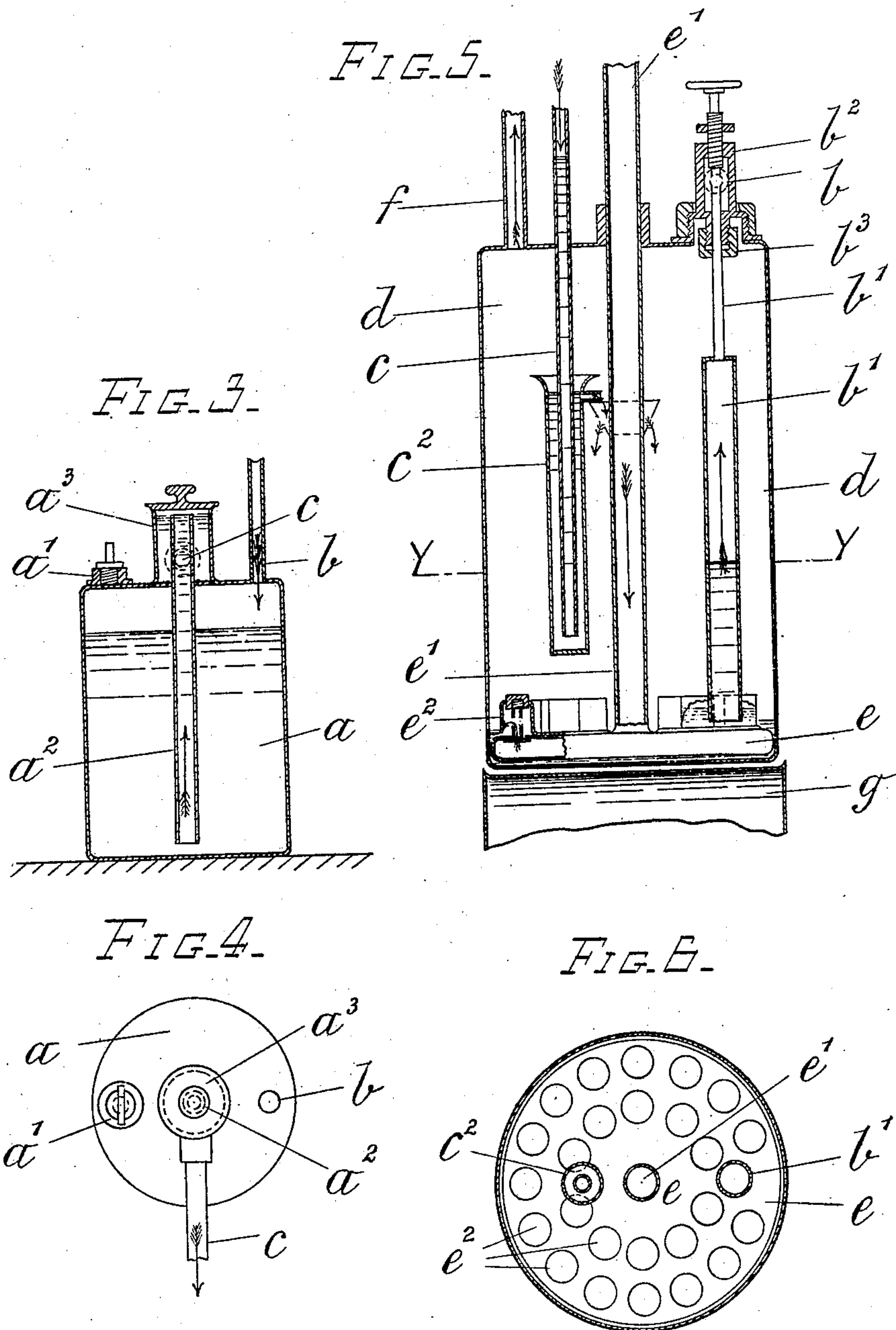
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Inventor:
 Matthew Steel, Jr.
 By William J. Witherman
 his Attorneys

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UNITED STATES PATENT OFFICE.

MATTHEW STEEL, JR., OF GOSFORTH, ENGLAND.

MEANS FOR SUPPLYING OIL TO CARBURETERS.

934,366.

Specification of Letters Patent. Patented Sept. 14, 1909.

Application filed April 24, 1908. Serial No. 429,008.

To all whom it may concern:

Be it known that I, MATTHEW STEEL, JR., a subject of the King of Great Britain and Ireland, residing at Gosforth, in the county of Northumberland, England, have invented certain new and useful Improvements in and Relating to Means for Supplying Oil to 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.

My invention relates to improvements and means for supplying oil to carbureters for lighting, heating and power purposes, the whole apparatus acting automatically and not provided with valves.

The object of the invention is to supply oil from a reservoir as needed, to the carbureter and provide means whereby this supply shall be automatic and not depend upon valves, and be regulated by the pressure of the carbureter or within the carbureter.

With this object in view, my invention consists in the construction and combinations of parts as hereinafter described and claimed.

In the accompanying drawings:—Figure 1 is a side view of the complete apparatus the lower vessel being broken away. Fig. 2 is a top plan view of the same. Fig. 3 is a vertical section of the supply tank. Fig. 4 is a plan view of the same. Fig. 5 is a vertical section of the carbureter. Fig. 6 is a horizontal section of the carbureter on the line $y-y$ of Fig. 5.

a represents the supply tank which is provided with an aperture a' through which it may be filled, this aperture being usually closed by a plug. On the top of the supply tank is an open dish a^3 on which a cover loosely rests.

b is a pressure pipe leading from the carbureter to the top of the supply tank a , whereby the pressure from the carbureter transmits oil from the supply tank, keeping up the proper feed of oil to the carbureter.

Centrally located in the tank a is a pipe a^2 open at both ends and projecting down nearly to the bottom of the tank a and through the top of said tank into the dish a^3 with which the pipe c communicates, and which leads oil from said dish into the carbureter as desired. The oil pipe c is pro-

vided with a stand pipe c' to prevent an air lock and to give free flow to the oil.

c^2 represents a tube within the carbureter surrounding the pipe c and furnishing an oil seal. This tube c^2 is closed at the bottom and open at the top.

d represents the carbureter into which the oil pipe c delivers the oil into the pipe c^2 over the top of which the oil flows.

e represents an air drum located at the bottom of the carbureter and e' represents a pipe leading from a blower down through the carbureter into the air drum.

e^2 represents air nozzles on top of the air drum through which the air is forced through the oil and thereby carbureted.

b' represents an adjustable pressure pipe in the carbureter which is connected with the pipe b . This is adjusted by means of a screw b^2 and it passes through a sliding joint b^3 in the top of the carbureter.

When the lower end of the pipe b' is covered with oil, the gas pressure in the carbureter is cut off from the tank a and continues in this condition until the oil in the carbureter falls below the lower end of this pipe b' . This cut off point is determined by the adjusted position of the pipe b' .

f is a pipe for the delivery of carbureted air and g represents a water jacket or heater upon the top of which the carbureter rests.

The operation is as follows: A suitable amount of oil having been introduced into the carbureter, air is forced in through the pipe e' and through the nozzles e^2 , becoming carbureted in its passage. The carbureted air is delivered to the place of consumption through the pipe f . The gas under pressure in the carbureter passes up through the tube b' through the tube b , and is delivered on top of the oil in the supply tank a . Oil is thereby forced up into the dish a^3 and flows out through the pipe c into the pipe c^2 in the carbureter. When a sufficient amount of oil has been forced into the carbureter to cover the lower end of the pipe b' , the gas supply to the tank a is cut off, and this condition of affairs continues until the oil in the carbureter has sunk below the lower end of the pipe b' . The operation is perfectly automatic and does not depend upon the use of valves.

I claim:—

1. The combination of a carbureter, an oil tank, means for supplying air under pres-

sure to said carbureter, a dish open to atmospheric pressure located on top of said tank, and connections between said carbureter and said tank and said carbureter and said dish, substantially as described.

2. The combination of a carbureter, of means for supplying air thereto, including a tank, a dish open to atmospheric pressure located on said tank, means for supplying oil to the carbureter, a pipe connecting the carbureter and the tank, and a pipe connecting said dish with said carbureter, substantially as described.

3. The combination of a carbureter and means for supplying air under pressure thereto, means for supplying oil to said carbureter, including an oil tank, a dish open to atmospheric pressure located on the top thereof, a pipe leading from the said tank into said dish, a pipe connecting the said carbureter to the top of said tank, and a pipe leading from said dish to said carbureter, substantially as described.

4. The combination of a carbureter, means for supplying air under pressure thereto, an oil tank, a dish on the top of said tank, open

to atmospheric pressure, a pipe leading from a point near the bottom of said tank into said dish, a pipe leading from the top of the carbureter into the top of said tank, a pipe leading from said dish to said carbureter, and a stand pipe connected to said last named pipe, substantially as described.

5. The combination of a carbureter, means for heating the same, means for supplying air under pressure thereto, an oil tank, a dish on the top of said tank open to atmospheric pressure, a pipe leading from a point near the bottom of said tank into said dish, a two-part pipe leading from the carbureter into the oil tank, means for adjusting one of the parts of said last named pipe a pipe leading from said dish to said carbureter, and a stand pipe connected to said last named pipe, substantially as described.

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

MATTHEW STEEL, JUNIOR.

Witnesses:

H. NIXON,
JAS. BROWN.