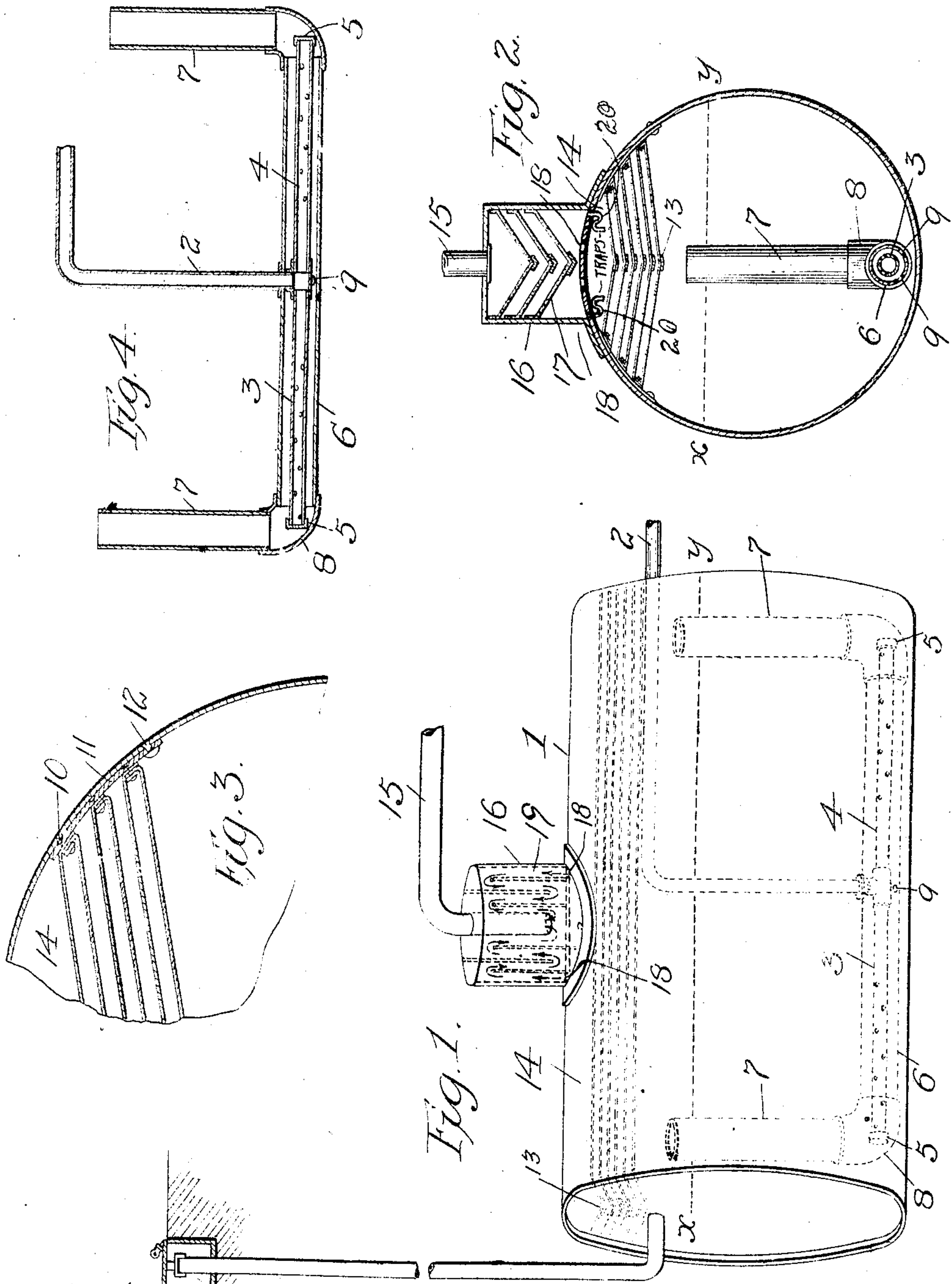


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PATENTED AUG. 6, 1907.

S. W. PEREGRINE.
CARBURETER.

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CARBURETER.

No. 862,196.

Specification of Letters Patent.

Patented Aug. 6, 1907.

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To all whom it may concern:

Be it known that I, SEYMOUR W. PEREGRINE, a citizen of the United States, residing at Portland, Maine, have invented certain new and useful Improvements in Carbureters, of which the following is a specification.

My invention relates to carbureters and is designed to provide a simple and effective construction having a maximum capacity and which will produce a uniform quality of the carbureted fluid.

The invention consists in the features and combination and arrangement of parts hereinafter described and particularly pointed out in the claims.

In the accompanying drawings,—Figure 1 is a perspective view of the apparatus with interior parts shown in dotted lines. Fig. 2 is a cross sectional view with parts shown in elevation and showing a modified arrangement of strainers or condensers in the dome. Fig. 3 is a detail sectional view showing the manner of securing the textile strainers in place. Fig. 4 is a detail view of the air inlet pipe and the pipe or chamber within which the air mingles with the oil.

In these drawings, 1 indicates a tank of any suitable form, which in the present embodiment of my invention I show as of cylindrical shape, arranged in a horizontal position. This tank is adapted to contain a body of oil or gasoline, which, in the normal operation of the apparatus reaches to the level of the line $x-y$. An air pipe 2 extends through one end of the tank longitudinally of the same to about the center thereof, where it is turned downwardly, reaching to near the bottom of the tank and well below the oil level. At its lower end this air inlet pipe is coupled to branches 3, 4, extending longitudinally near the bottom of the tank, the said branches being closed by a cap 5 at their ends, but being perforated at different points in its length, the perforations directing the air current in different directions.

Surrounding the air pipe branches 3, 4, there is a pipe or chamber 6 of sufficient diameter to leave a space around the air pipe into which the air therefrom discharges. The horizontal chamber or pipe 6 is coupled at its ends to vertical pipes or extensions 7 by means of the couplings 8, the arrangement being such that the vertical pipes 7 extend above the oil. The chamber formed by the pipes 6 and 7 is closed against the inlet of oil thereto excepting at the center of the pipe or chamber 6 where an opening 9 is provided on each side of the said pipe or chamber of sufficient size to admit the proper quantity of oil to be taken up by the air issuing from the perforations in the horizontal pipe sections 3 and 4. The area of these oil inlets to the pipe or chamber 6 as compared with the combined area of the air inlet perforations is such that a proper commingling of the air and oil will take place and a uniform quality of gas will be produced by reason of this properly pro-

portioned supply of oil and air, it being understood that the air is admitted under a constant pressure.

Above the oil level and at the top of the tank I suspend a series of layers of burlap or other suitable textile fabric, each two sheets of burlap being riveted as shown at 10, to strips of iron indicated at 11 and these strips are then riveted as at 12 to the wall of the tank. The layers of burlap may be of various forms and depend at their central portions preferably in the form of an extended V, and in order to hold them in this shape they are weighted down at their central portions by means of strips 13, preferably of iron, said strips being suitably secured to the burlap.

There is a space 14 above the burlap layers and with this space the gas pipe 15 connects, said gas pipe being secured to the central upper portion of the tank.

The mixed oil and air issuing from the vertical pipes or chamber extensions 7 into the space between the upper surface of oil and the burlap layers is caused to pass through the said burlap layers before reaching the space 14 to pass out therefrom through the gas pipe 15, and in its passage through the burlap layers the fluid is strained and excess of oil is removed and this falls back into the body of oil in the tank, which action is accelerated by the V shape of the burlap layers, causing the moisture to collect in drops at the apex of the layers to fall therefrom into the body of oil. The metal strips 13 at the center of the burlap layers hold the same in proper form for this action and prevents the air pressure from raising the said layers.

It will be noticed from Fig. 3 that the layers of burlap are held separate from each other and are not arranged as one mass.

It will be seen from the above that in producing the gas I avoid passing the air through the entire body of oil as has heretofore been the practice and instead of this I bring the proper quantity of air into contact with the limited and proper quantity of the oil, thereby I secure more uniform results, giving the apparatus a capacity for producing a greater amount of gas for a longer time and making the apparatus generally more efficient.

At the top of the tank I prefer to form a dome 16 in which layers or sheets of metal or burlap are arranged vertically at 19 as shown in Fig. 1 or as indicated at 17, and from this dome the gas pipe extends. This dome will act as a condenser to take out moisture and hold a supply of comparatively dry gas. The gas charged air passes into this dome through the openings 18.

I arrange baffle plates 19 in the dome forming a circuitous path for the carbureted air therein.

I do not wish to limit myself to the combination of the dome and the burlap layers at the top of the tank.

I do not wish to limit myself to the burlap as other material may be used.

As shown in Fig. 2 I place bent pipe traps at 20 which

will let out the gasoline from the dome and discharge it back into the main chamber while at the same time they will not allow the air to pass through them into the dome. Such a trap can be used with either arrangement of strainers.

I am aware that it has been proposed to discharge air through a pipe into the bottom of the carbureter through perforations in said pipe and below the oil line. This method is not desirable and in fact impracticable as it uses up the best elements of the oil first and leaves a large amount of oil too thin or impoverished for supplying lights with the proper mixture. It has been proposed also to place a well about the inlet end of the air pipe, the top of said well being open and extending above the oil line, the sides of the well being perforated to let in a limited amount of oil, but by this method the capacity of the apparatus is rendered very limited as only a few lights can be run from a carbureter so constructed, while with my arrangement there is practically no limit to the capacity of the evaporator or condenser for the larger the tank the larger the oil chamber and air pipe.

Oil is supplied to the reservoir through the pipe shown at the left of Fig. 1 connecting with the tank.

I claim as my invention:

1. In combination in a carbureter, a tank for containing a body of oil, an air inlet pipe, a horizontally extending chamber below the oil level into which a limited quantity

of the oil is allowed to pass, said air inlet pipe extending into and along the said chamber and having outlet openings disposed at different points in its length whereby the air commingles with the limited quantity of the oil, and a gas outlet pipe reaching above the oil level, substantially as described.

2. In combination in a carbureter, a tank, a chamber therein consisting of the horizontal portion having an upturned end extending above the oil line, an inlet for the oil and an air pipe extending into the horizontal portion of the chamber with a space between it and the chamber, said pipe being perforated, substantially as described.

3. In combination in a carbureter, a tank, a chamber therein consisting of the horizontal portion having an upturned pipe at each end, and an air pipe extending along the horizontal portion and perforated, said horizontal portion having inlets for the oil at or near the center, substantially as described.

4. In combination in a carbureter, a tank, textile fabric extending across a part of the tank and weighted at one portion to assume the form of a V, means for introducing air below the textile fabric to commingle with the oil and a gas outlet, substantially as described.

5. In combination in a carbureter, a tank, a series of layers of burlap at the upper portion thereof weighted at their central portion to assume the form of a V, means for introducing air at the lower portion of the tank to mingle with the oil and a gas outlet, substantially as described.

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

SEYMOUR W. PEREGRINE.

Witnesses:

LEVI TURNER,

EDWARD S. AUTHOREL.