

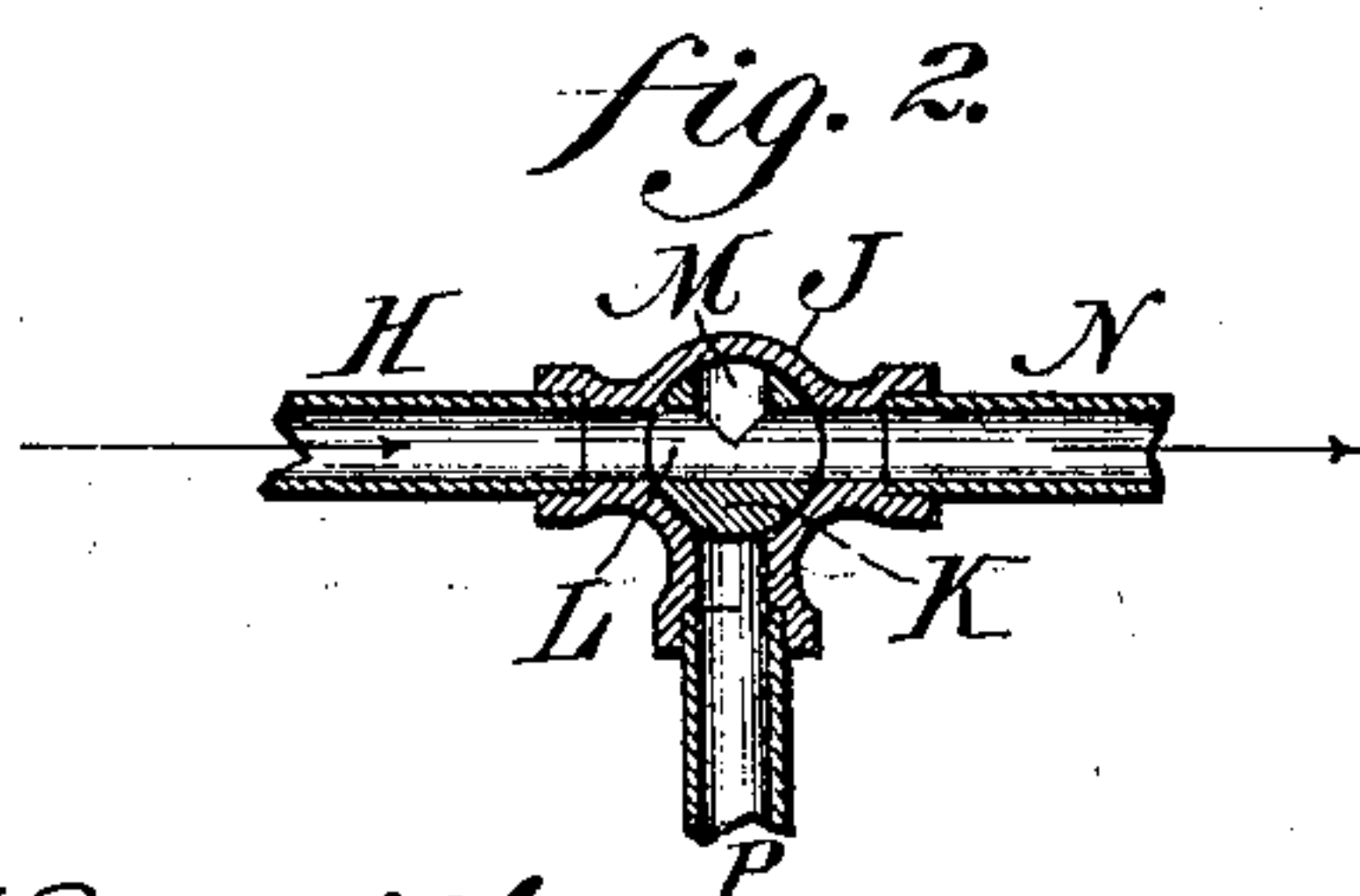
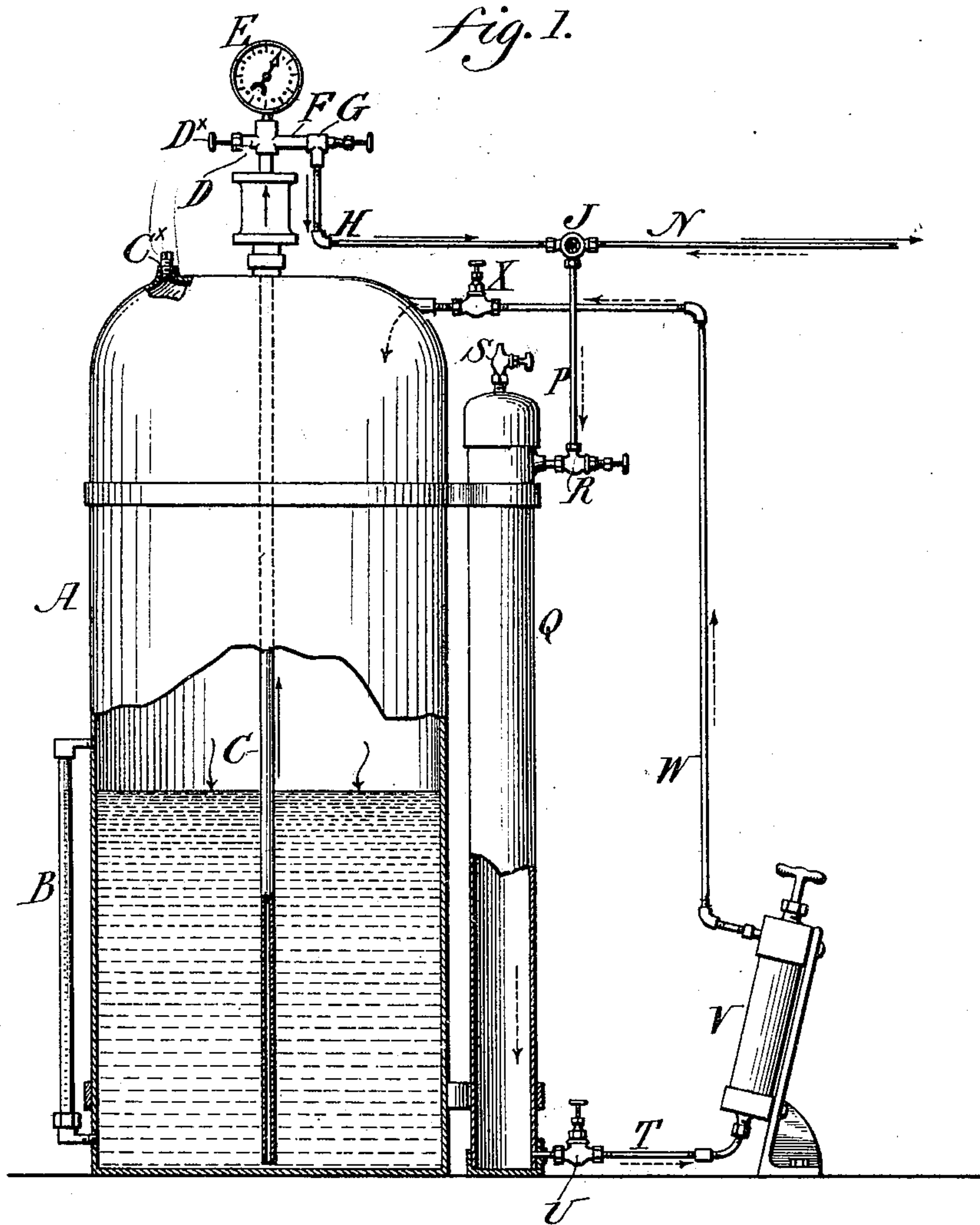
No. 631,077.

Patented Aug. 15, 1899.

S. L. JONES.
OIL SUPPLY SYSTEM FOR BURNERS.

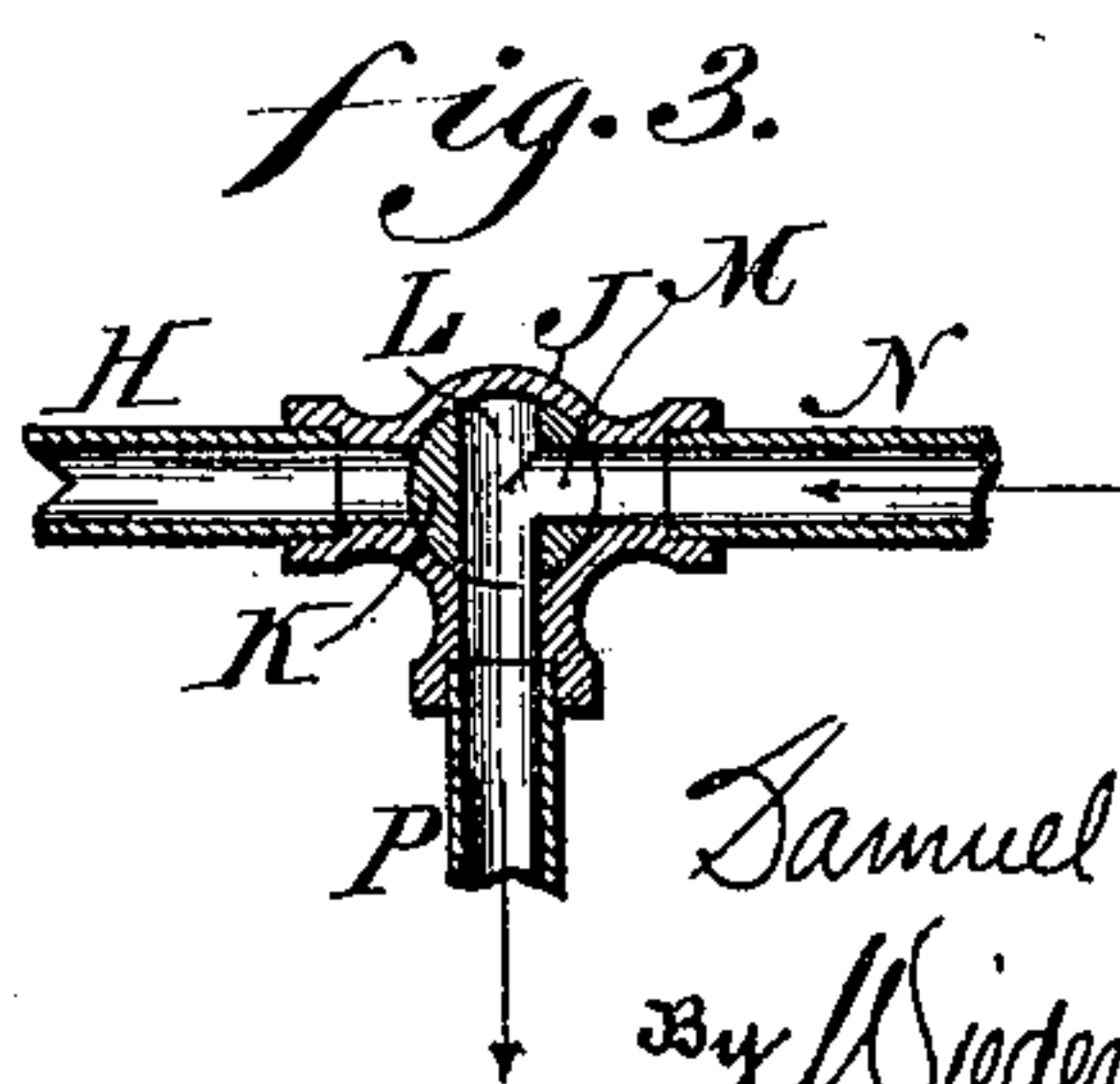
(Application filed Apr. 7, 1899.)

(No Model.)



Witnesses

L. Douville,
P. F. Tragle.



Inventor
Samuel Lewis Jones
By *Wiedersheim & Heibank*
Attorneys

UNITED STATES PATENT OFFICE.

SAMUEL LEWIS JONES, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR OF
ONE-HALF TO JOHN T. MORRIS, OF PITTSBURG, PENNSYLVANIA.

OIL-SUPPLY SYSTEM FOR BURNERS.

SPECIFICATION forming part of Letters Patent No. 631,077, dated August 15, 1899.

Application filed April 7, 1899. Serial No. 712,086. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL LEWIS JONES, a citizen of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Improvement in a Combined Vacuum-Chamber, Oil-Tank, and Pressure-Pump for Returning the Oil from Service-Lines, which improvement is fully set forth in the following specification and accompanying drawings.

My invention consists of an improved construction of combined vacuum-chamber, oil-tank, and pressure-pump whereby I am enabled to return the oil or hydrocarbon from service-lines, so that when the oil-supply is shut off from the burners the service-line can be exhausted of oil until such time as it shall be desired to start the lights again, whereby the objectionable feature of having the service-lines full of hydrocarbon after the lights are extinguished is obviated by my invention.

It further consists of novel details of construction, all as will be hereinafter fully set forth, and particularly pointed out in the claims.

Figure 1 represents a side elevation, partly broken away, of a combined vacuum-chamber, oil-tank, and pressure-pump embodying my invention. Figs. 2 and 3 represent sectional views of a three-way valve employed, showing the same in different positions which it may assume.

Similar letters of reference indicate corresponding parts in the figures.

Referring to the drawings, A designates an oil-tank, the same being provided with a gage B, whereby the height of the oil or hydrocarbon therein can be readily ascertained.

C designates an outlet-pipe, the lower end of which latter depends nearly to the bottom of the tank A, which latter is replenished with oil or hydrocarbon through the opening C^x, which latter is provided with a suitable closure.

D designates a fitting into which the pipe C discharges, said fitting being provided with a valve D^x, a gage E, and a branch F, which has a valve G therein, from which latter leads the service-pipe H to the three-way valve J, the latter having a plug K therein which is provided with the port L, extending trans-

versely through said plug, said port L having the port M situated at an angle thereto, which latter port is adapted to be turned into communication with the pipe N or P, as will be understood from Figs. 2 and 3.

The pipe P leads from the valve J and discharges into the vacuum-chamber Q and is provided with a valve R, while said chamber has a pipe T leading from the lower portion thereof to the air-pump V, said pipe being provided with the valve U, and said vacuum-chamber having an air-cock S at its upper portion.

W designates a pipe leading from the upper portion of the air-pump to the upper portion of the hydrocarbon-tank A, said pipe W being provided with a valve X.

The operation is as follows: When it is desired to pump air into the oil-tank A, the valve R is closed and the cock S and valves X and U are opened, whereupon it will be seen that upon the operation of pumping air will be forced into the upper portion of the oil-tank A. When the desired pressure has been attained in the oil-tank, the cock S is closed, after which the air is exhausted from the chamber Q, thus making a vacuum therein, after which the valve U is closed. The valves D^x and G being open and the plug K of the valve J being in the position seen in Fig. 2, the system is now ready for lighting. To extinguish the lights and return the oil out of the service-line N to the vacuum-chamber Q, the valve G is closed, the valve-plug K is turned into the position seen in Fig. 3, and the valve R opened. The lights will instantly be extinguished, and the oil in the service-lines will return to the vacuum-chamber Q. To return the oil from the vacuum-chamber Q, the cock S opened and also the valves U and X and the pump operated, the effect of which is evident.

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

1. The combination of an oil-tank, a vacuum-chamber, an air-pump, valved connections common to said oil-tank and vacuum-chamber, a valved pipe common to said oil-tank and air-pump, and a valved pipe leading from the latter to said vacuum-chamber.

2. In a device of the character named, an oil-tank, a vacuum-chamber, a valved service-pipe leading from said oil-chamber, a valved connection from said service-pipe to said vacuum-chamber and from the latter to an air-pump, and a valved connection from said air-pump to said oil-tank.

3. The combination of an oil-tank, a vacuum-chamber adjacent thereto, said chamber having an air-cock at its upper portion, a service-pipe leading from the upper portion of said oil-tank, an air-pump, a pipe leading from said air-pump to the upper portion of said oil-tank, a pipe leading from said service-pipe to the upper portion of said vacuum-chamber, a three-way valve at the junction of said latter pipes, and a valved pipe leading from the lower portion of said vacuum-chamber to said air-pump.

4. The combination of an oil-tank having a pipe leading upward from the lower portion

thereof and connecting with a service-pipe, a three-way valve in said service-pipe, a valved connection from said three-way valve to the upper portion of a vacuum-chamber, an air-cock in the upper portion thereof, an air-pump, a valved connection from the lower portion of said vacuum-chamber to said pump and a valved connection from said pump to the upper portion of said oil-tank.

5. The combination of an oil-tank, pressure-pump, vacuum-chamber and service-line, with means for causing the return of the oil or hydrocarbon from said service-line, whereby the latter can be exhausted of oil when the oil-supply is shut off from the burners.

SAMUEL LEWIS JONES.

Witnesses:

JOHN A. WIEDERSHEIM,
WM. C. WIEDERSHEIM.