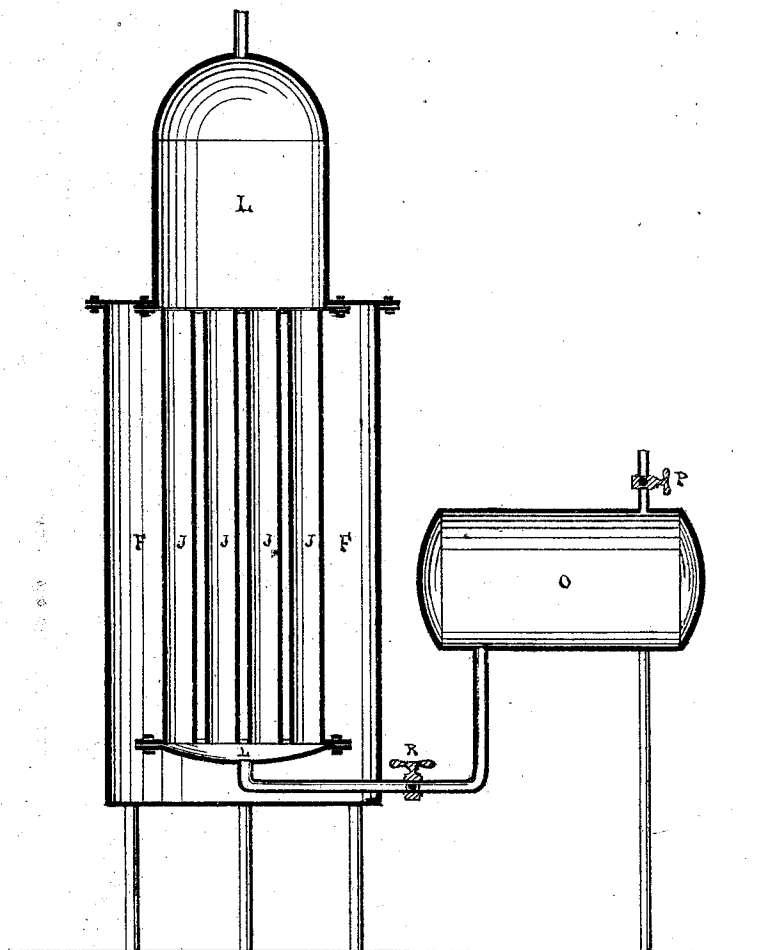


Emile Lamm
Tender for Gas Boilers.

No. 121,527.

Patented Dec. 5, 1871.



Witnesses:

Robert Bruce
G. L. Haughland

Inventor.

Emile Lamm

UNITED STATES PATENT OFFICE.

EMILE LAMM, OF NEW ORLEANS, LOUISIANA.

IMPROVEMENT IN FEEDERS FOR AMMONIACAL-GAS ENGINES.

Specification forming part of Letters Patent No. 121,527, dated December 5, 1871.

To all whom it may concern:

Be it known that I, EMILE LAMM, of the city of New Orleans and State of Louisiana, have invented a Tender for an Ammoniacal-Gas Boiler.

The object of my invention is the adding of a tender containing liquefied ammoniacal gas to the tubular boiler of an ammoniacal-gas engine patented July 19, 1870, No. 105,581, in order to keep in the boiler of said engine any level of liquid that may be desired while the engine is in motion; and for the purpose of making my description clearer a cross-section of the tubular boiler is shown and lettered as in the above-referred to patent.

I will now describe my invention.

O in the drawing is the tender containing liquefied ammoniacal gas. It is provided with a stop-cock, I, above, in order to charge it with liquid, and one below lettered, R, which regulates the supply of liquefied gas which is to be forced into tubular boiler or reservoir L.

I will now describe the working of this tender when in open connection by means of stop-cock R with tubular boiler L. Now, for clearness, I will suppose that the temperature at the moment I wish to work my engine is 50° Fahrenheit; the

pressure of the liquefied ammoniacal gas in the apparatus will then be ninety-seven and a half pounds to the square inch, at that temperature; but as soon as the engine begins to operate the rapid ebullition taking place in boiler L has a tendency to lower its temperature a few degrees. Notwithstanding the sensible heat developed in the water surrounding it in tank F the effect of a lowering temperature is to lower the pressure. Now, as there was no evaporation during this time in the tender O, the temperature and pressure are the same as at the start. The consequence of this is that the liquefied ammoniacal gas is gradually forced through stop-cock R in boiler L by reason of the greater pressure in the tender as compared with that in the boiler.

What I claim in this my invention is—

The combined tender and injector into one single instrument, in connection with a boiler of liquefied ammoniacal gas, as set forth and specified, or its equivalent.

EMILE LAMM.

Witnesses:

ROBERT BRUCE,
G. L. LAUGHLAND.

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