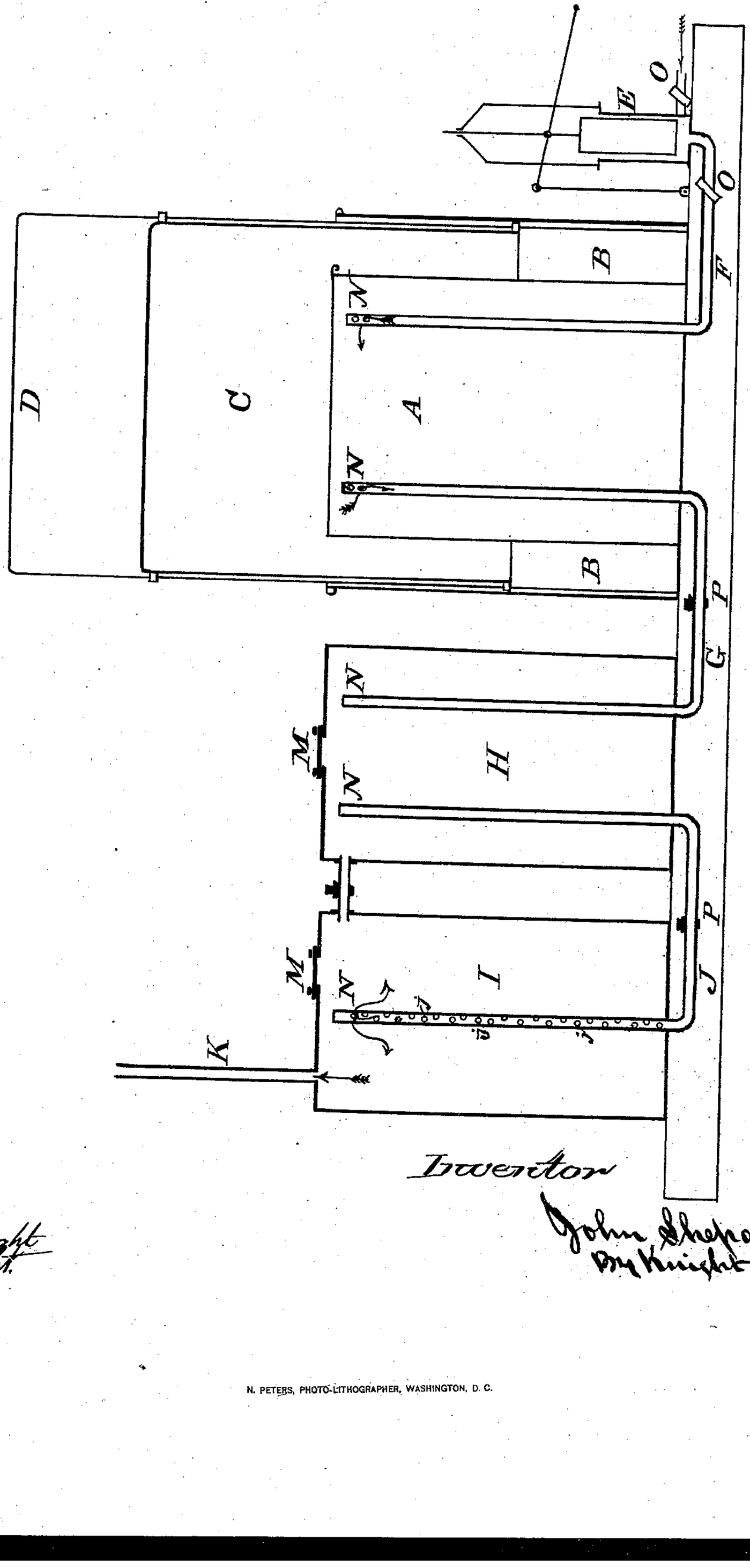
J. SHEPARD.

CARBURETERS.

No. 194,733. Patented Aug. 28, 1877.



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UNITED STATES PATENT OFFICE.

JOHN SHEPARD, OF CARMI, ILLINOIS.

IMPROVEMENT IN CARBURETERS.

Specification forming part of Letters Patent No. **194,733**, dated August 28, 1877; application filed December 27, 1876.

To all whom it may concern:

Be it known that I, JOHN SHEPARD, of Carmi, in the county of White and State of Illinois, have invented a certain new and Improved Carbureter, of which the following is a specification:

This invention relates to devices for carbureting air; and it consists in a certain arrangement and combination of parts, as hereinafter more fully set forth.

The accompanying drawing represents a vertical longitudinal section of my improved carbureter.

A B C may represent an ordinary reservoir or receiver for air, and D guides for steadying the movable part C of said reservoir. Air is prevented from escaping from underneath part C by means of a water-seal in part B.

E is an air-pump, of any suitable construction, for forcing air through a pipe, F, into the reservoir. H is a chamber containing coal-oil and water, and it receives air from the reservoir through a pipe, G.

I is the gasoline-reservoir, and it is connected to chamber H by a pipe, J. Pipe J, after it enters the reservoir I, is perforated, as shown at *j j*, and, if desired, it may be arranged in a coil. The gasoline will rise to the same level in that part of connecting-pipe J in the chamber H that it is in the reservoir I. The gas escapes from reservoir I through service-pipe K.

L is a pipe connecting gasoline-reservoir and chamber H near their tops. M are manholes in the chamber and reservoir. The ends N of the connecting-pipes are sealed up, and the air enters and escapes from them through perforations, as shown.

O represent valves relating to the air-pump, and P suitable cocks in the various pipes.

Operation: Air is forced by the pump into the receiver, from whence it passes into the chamber containing the coal-oil and water, and mingles with the vapor arising therefrom. From thence it passes down through the gasoline in the pipe J, and out through the perforations *j* in said pipe into the body of gasoline in the reservoir, and passes through it into the service-pipe, and from thence to the burners.

Sulphuric acid is introduced into the water in the receiver during cold weather, to prevent freezing.

I am aware that it is common to employ in carbureters an air-reservoir formed as a gas-holder, with a bell working in a water-seal over a stand-pipe, through which the air is supplied.

I am also aware that it is common to force air through a succession of carbureting-chambers by means of pipes terminating in perforations beneath the hydrocarbon liquid.

I have found great advantage to result from my mode of passing the gas through a vapor-chamber containing a mixture of oil and water, the air being received and the vaporized air being delivered, as described, through pipes terminating above the surface of the liquid, and delivered through perforations below the surface of the hydrocarbon liquid in the carbureting-chamber, as described.

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

The combination of the receiver A B C, the inlet-pipe F, the oil-and-water chamber H, the gasoline-chamber I, the connecting-pipe G, conducting air from the receiver to a point above the liquid in the chamber H, and the connecting-pipe J, receiving air and vapor from the upper part of the chamber H, and delivering it through perforations *j j j* beneath the gasoline in the chamber I, as and for the purpose set forth.

In testimony of which invention I hereunto set my hand.

JOHN SHEPARD.

Attest:

CHARLES E. MCDOWELL,
BERNARD FLYNN.