M. SHEA & J. McC. HAMILTON.

Carbureter.

No. 200,000. Patented Feb. 5, 1878.

Fig. 1.

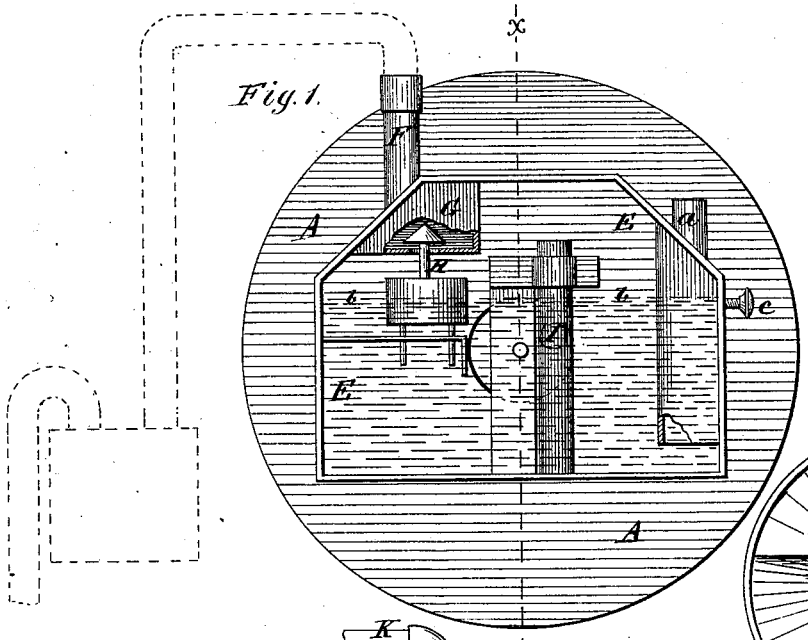


Fig. 3.

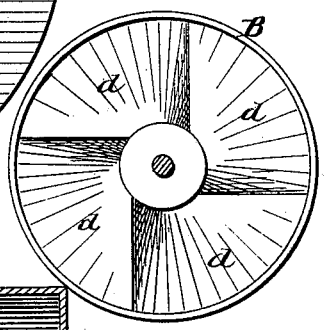
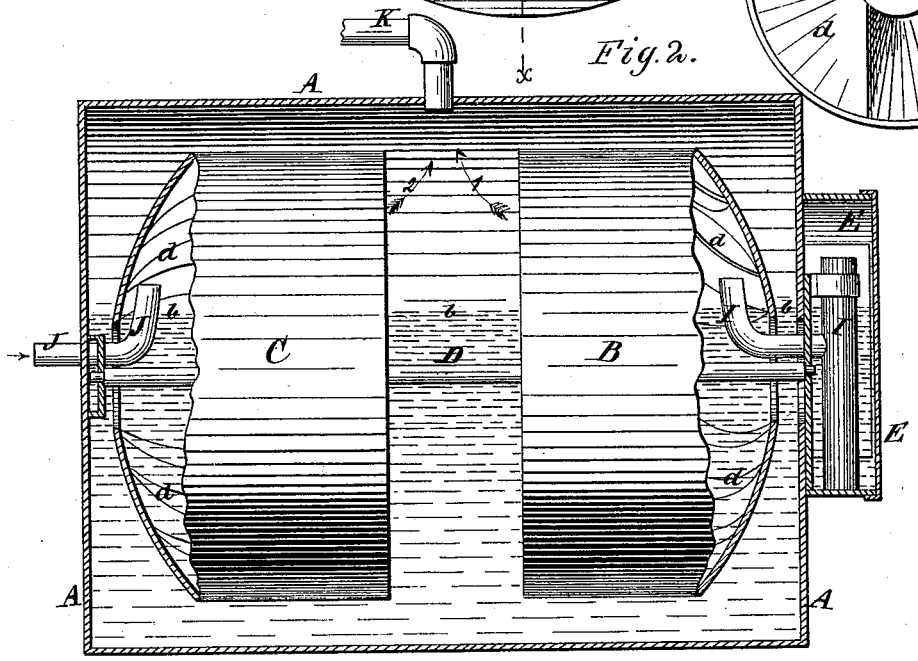


Fig. 2.



WITNESSES:

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UNITED STATES PATENT OFFICE.

MORTIMER SHEA AND JAMES McC. HAMILTON, OF NASHVILLE, TENNESSEE.

IMPROVEMENT IN CARBURETERS.

Specification forming part of Letters Patent No. **200,000**, dated February 5, 1878; application filed October 31, 1877.

To all whom it may concern:

Be it known that we, MORTIMER SHEA and JAMES MCCLUNG HAMILTON, of Nashville, in the county of Davidson and State of Tennessee, have invented a new and Improved Carbureter, of which the following is a specification:

The object of our invention is to provide a simple and efficient machine for carbureting and thus enriching illuminating-gas, mixing and thus diluting it with air in desired proportions, carbureting air and thus manufacturing gas from gasoline or other volatile hydrocarbons, and for other similar purposes.

The invention will first be described in connection with the drawing, and then pointed out in the claim.

In the accompanying drawing, Figure 1 represents an end view of a machine constructed according to our present invention. Fig. 2 is a longitudinal vertical section of the same, taken on the line *x x* of Fig. 1. Fig. 3 is an end view of one of the drums.

Similar letters of reference indicate corresponding parts.

A is the outer shell of the machine. B and C are the drums secured on the shaft D, the ends of which latter work in bearings at the ends of the cylinder A. E is a closed chamber communicating with the cylinder A, so that when water is poured in through the supply-pipe *a*, the drums being partly immersed in water, as in the case of an ordinary wet gas-meter, it will fill the chamber E and the cylinder A to the same water-line, *b*, gaged by the overflow-pipe or outlet-pipe *c*.

In Fig. 1 the machine is shown connected to the outlet-pipe from an ordinary gas-meter. The gas enters through the pipe F into the valve-chamber G; thence through the float-valve H (which is regulated by the water-line to close when the water gets too low) into the chamber E; thence through the pipe I (whose inner end is bent up to project above the water-line) into the drum B.

The drums B and C are provided with spiral flanges *d*, surrounding the shaft D like the threads of a screw, and so constructed that the entering gas, shut up between the water-surface and the shell of the drum B, cannot pass through into the cylinder A without revolving the drum B, and by it also the drum C.

The spiral flange *d* of the drum C is wound in opposite direction to that of the drum B, so that air admitted through the inlet-pipe J (this pipe J being constructed and arranged similar to the pipe I) will be drawn inward by the drum C, and, passing out from the same in direction of arrow 2, will meet the gas issuing in direction of arrow 1 from the drum B, and thus the two gases (whether one of them be air or any other gas) become thoroughly mixed in the mixing-chamber formed by and between the water-surface and the shell A, the mixing being in the same proportion as the relative sizes of the drums B and C, which may be varied for the purpose.

K is the outlet-pipe for the combined or mixed gas, to lead it to its destination for use.

By supplying the cylinder A with a volatile hydrocarbon instead of water, the said liquid will vaporize and carburet the air, thus forming illuminating-gas; or, by leading in air and gas together, or ordinary gas alone, it will enrich such gases with hydrocarbon in proportions as desired.

Having thus described our invention, we claim as new and desire to secure by Letters Patent—

The combination, with a carbureter, of chamber E, with the pipes *a c* F, valve-chamber G, float-valve H, and pipe I, substantially as and for the purposes set forth.

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JAMES MCCLUNG HAMILTON.

Witnesses:
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G. P. LIPSCOMB.