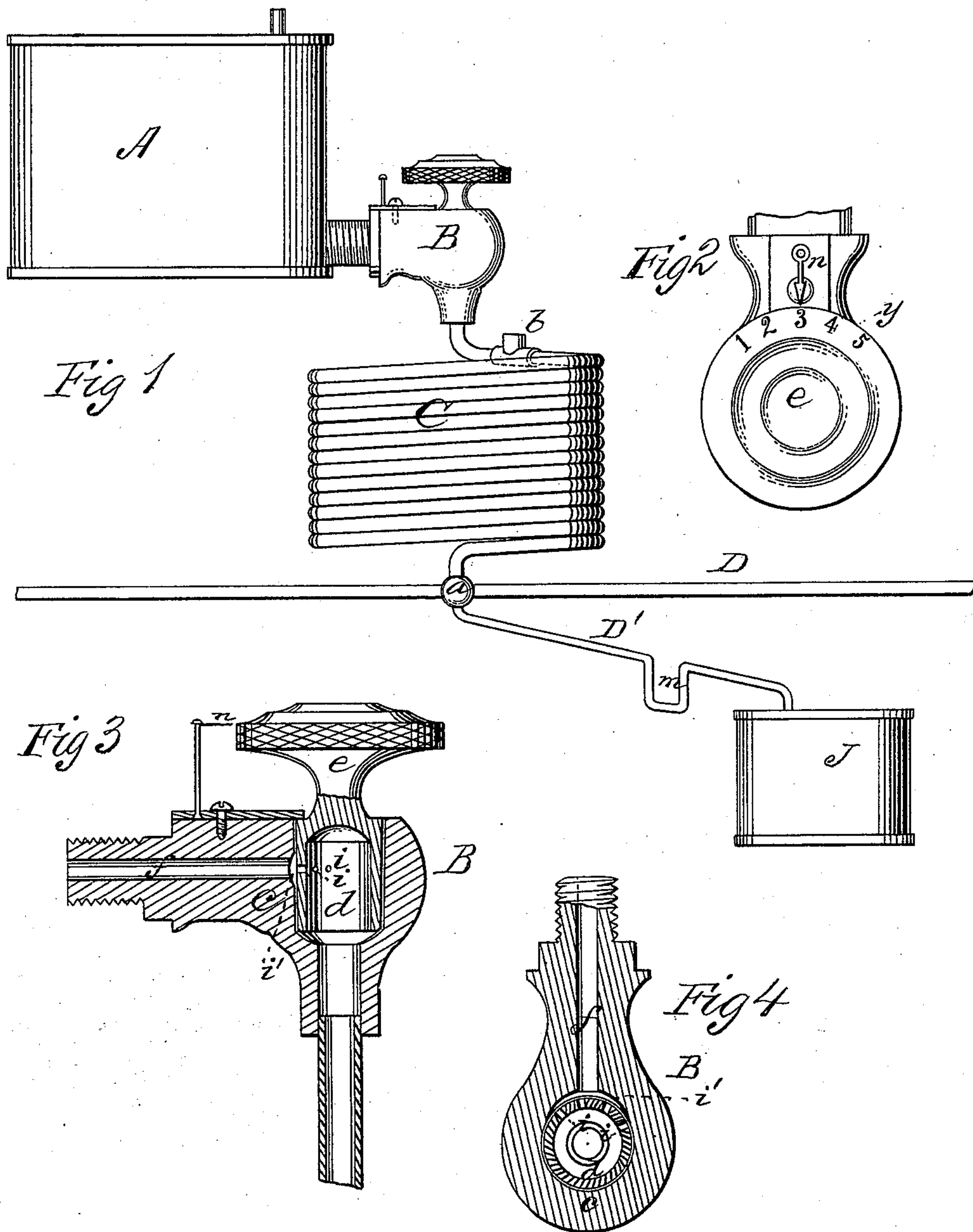


W. H. REED.  
Carbureter.

No. 200,568.

Patented Feb. 19, 1878.



WITNESSES  
*Villette Anderson*  
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# UNITED STATES PATENT OFFICE.

WILLIAM H. REED, OF CHICAGO, ILLINOIS.

## IMPROVEMENT IN CARBURETERS.

Specification forming part of Letters Patent No. **200,568**, dated February 19, 1878; application filed November 10, 1877.

*To all whom it may concern:*

Be it known that I, WILLIAM H. REED, of Chicago, in the county of Cook and State of Illinois, have invented a new and valuable Improvement in Carbureters; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a side view of my invention. Fig. 2 is a top view of the regulating-cock. Fig. 3 is a vertical section of the cock, and Fig. 4 is a horizontal section thereof.

My invention relates to certain improvements in that class of carbureters in which the hydrocarbon liquid and the gas to be carbureted are caused to flow in opposite directions through a coiled pipe in order to charge the gas with hydrocarbon vapor; and it has for its object to provide a means for regulating the flow of the hydrocarbon liquid into and through the coil to correspond to the quantity of gas passing through the same, and to provide for the escape of superfluous hydrocarbon liquid without permitting the escape of gas; and to these ends it consists in the combination, with the coil and the gas-main, of an escape-pipe and trap, whereby the hydrocarbon liquid is discharged without permitting the escape of gas, as more fully hereinafter shown and described.

In the annexed drawings, the letter A designates a preferably metallic oil-reservoir, having a regulating-cock, B, opening into a continuous coil of pipe, C, of suitable dimensions, connected at its lower end by a suitable coupling, *a*, with the main D, or a pipe leading from the main to the said coil. This latter is continuous and coiled in cylindrical form. It presents no angles nor sharp turns to arrest the flow of oil and cause condensation. It is provided with a T-coupling, *b*, upon its horizontal portion, close to the cock, through which the gas passes into the supply-pipes. The oil descends slowly through the convolutions of the said coil, and enriches the gas in

its upward passage to the supply-pipes. The regulating-cock B is composed of the usual seat *c* and a conical plug, *d*, having a milled head, *e*, or its equivalent. The plug is tubular, and is provided with a number of spaced perforations, *i*. The seat has the usual cavity for the reception of the plug, and a duct, *f*, leading from the reservoir into said cavity, on the same level with the perforations *i*.

Inside of the cavity, at the end of the duct *f*, a horizontal groove, *i'*, is made, embracing the perforations *i* between its ends. By turning the plug *d* the relative positions of the perforations *i* in the plug and the groove *i'* of the seat may be so changed that only one or more of the former will communicate with the said groove, thereby cutting off the flow of oil proportionately. By this means the quantity of oil delivered to the coil is regulated according to the quantity of gas consumed.

The head of the plug is provided with a graduated scale, *g*, in the proper relation to the perforations *i* of the plug, and a needle, *n*, secured to the cock and pointing to the scale, indicates the relative positions of the said perforations and the groove *f*—that is, if the needle is at 3 of the scale, oil in sufficient quantity to enrich the gas consumed by three burners is being delivered to the coil. Should there be any excess of oil thus delivered, it flows from the coil through the coupling *a* into a pipe, D', below the feed-pipe D, and is collected in a drip-tank, J, escape of gas from the same being prevented by a U-bend, *m*, in the said pipe D'.

What I claim as new, and desire to secure by Letters Patent, is—

The combination, with the reservoir A, having regulating-cock B, the coil C, and a feed-pipe, D, of the drip-pipe D', having the U-bend *m*, and the drip-tank J beyond said bend, substantially as specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

WILLIAM H. REED.

Witnesses:

LEONARD THOMAS,  
JOHN C. COOK.