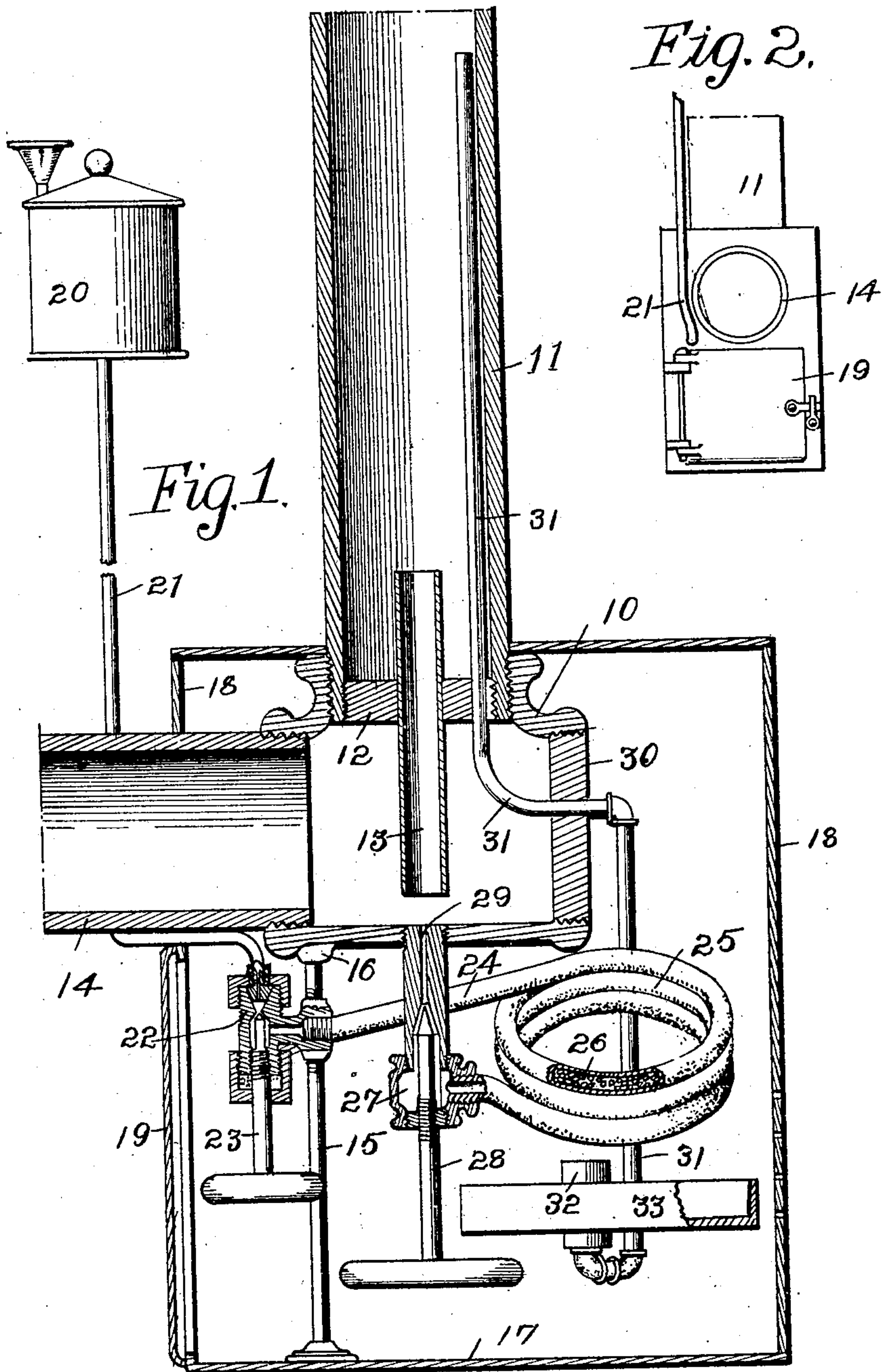


No. 814,617.

PATENTED MAR. 6, 1906.

R. M. MICK.  
CARBURETER.

APPLICATION FILED JUNE 1, 1905.



Witnesses:  
A. G. Hague  
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# UNITED STATES PATENT OFFICE.

RICHARD M. MICK, OF BUSSEY, IOWA.

## CARBURETER.

No. 814,617.

Specification of Letters Patent.

Patented March 6, 1906.

Application filed June 1, 1905. Serial No. 263,293.

*To all whom it may concern:*

Be it known that I, RICHARD M. MICK, a citizen of the United States, residing at Bussey, in the county of Marion and State of Iowa, have invented a certain new and useful Carbureter, of which the following is a specification.

My invention relates to that class of carbureters in which the gas is first generated by applied heat and after the gas has started to generate a portion of it is removed from the supply-pipe and ignited to continue the generation of gas.

My object is to provide a carbureter of this class of simple, durable, and inexpensive construction.

My invention consists in certain details in the construction, arrangement, and combination of the various parts of the device whereby the objects contemplated are attained, as hereinafter more fully set forth, pointed out in my claim, and illustrated in the accompanying drawings, in which—

Figure 1 shows a vertical central sectional view of the complete carbureter, and Fig. 2 shows a front elevation of same.

Referring to the accompanying drawings, I have used the reference - numeral 10 to indicate a T-shaped pipe-coupling. Screwed into the top of the pipe-coupling is a supply-main pipe 11, having at its bottom a plug 12, through which a tube 13 is passed, and which tube has its lower end open within the T-coupling and its upper end open within the main 11. In one branch of the T-coupling is screwed a short pipe 14, open at both ends and through which air is supplied to be commingled with the gas. The various parts of the carbureter are attached to the T-coupling, and the weight of the supply-pipe 11 on the T-coupling is considerable. Hence I have provided a supporting leg or bracket 15, inserted in a boss 16 at the bottom of the T-coupling and having its lower end resting upon the base 17 of a sheet-metal casing 18, which completely incloses the T-coupling and other parts of the carbureter and is provided with a door-opening at its front, covered by a door 19, through which access may be had to the valves of the carbureter, as will hereinafter appear.

The numeral 20 indicates a hydrocarbon-supply tank, and a pipe 21 is provided for carrying hydrocarbon to the interior of the casing 18 and into a valve-chamber 22, controlled by a valve 23, which valve-chamber

is mounted upon and supported by the leg 15. Communicating with the valve-chamber 22 is a pipe 24, with its body portion formed into a cylindrical coil 25. The interior of this coil is filled with a granular substance 26—such, for instance, as sand—and said coil is tilted at an angle of about forty-five degrees, and its other end communicates with a valve-chamber 27, controlled by a valve 28 and communicating, through the discharge-port 29, with the interior of the T-coupling 10 directly beneath the tube 13.

Screwed into one end of the T-coupling 10 is a plug 30, and this plug supports a gas-pipe 31, the body portion of which lies within the supply-pipe 11 and passes through the plug 12. The lower end of said pipe is provided with a burner 32, which is arranged under the coil 25 in such manner that the flame arising from it will strike successively upon both sides of the coil. Supported on the burner 32 is a pan 33 for containing a combustible liquid.

In practical use the operator first places a small quantity of combustible material in the pan 33 and ignites it. This will apply heat to the coil 25, and the valve 23 is left open, so that the granular substance within the coil is saturated with hydrocarbon and the heat of said blaze will quickly generate gas, which will be discharged through the port 29 and will commingle with air inside of the T-coupling 10 before passing through the tube 13 into the supply-main. As soon as the generation of gas has started, the flame in the pan 33 is of no further use, because the heated burner 32 will cause a circulation upwardly from the burner, and in this way gas will be drawn from the interior of the supply-pipe 11 downwardly through the gas-pipe 31 to supply the burner 32. Obviously the supply of hydrocarbon may be regulated by the operator by a manipulation of valve 23, and the supply of gas discharged through the port 29 may be controlled by manipulation of the valve 28.

The advantages in construction of my invention are, first, the weight of the main 11 and of the various parts of the carbureter is borne upon a supporting-leg, and hence there is no danger of the pipe-couplings becoming broken on account of excessive weight being applied thereto. Furthermore, by wholly inclosing the carbureter the generation of gas by the application of heat from the burner is kept uniform, because drafts of air are prevented from blowing the flame. Further-



more, nearly all of the parts of the device are composed simply of pipe-fittings, which may be readily obtained in almost any locality. Hence a cheap and inexpensive and easily-constructed carbureter is provided. Furthermore, by providing a coiled pipe 25 filled with sand and a generating device of very simple and inexpensive construction is provided, and by placing said coil at the angle shown over the burner the flame from the burner is made to first strike upon one side and then upon the other side, thus imparting to the coil a relatively great amount of heat in proportion to the amount of the blaze. Another material advantage is that by running the gas-supply pipe 31 almost wholly inside of the supply-main 11 and the T-coupling 10 the said pipe is kept warm and the gas within it is kept warm, so that it will burn very readily.

Having thus described my invention, what I claim, and desire to secure by Letters Patent of the United States therefor, is—

An improved carbureter, comprising a T pipe-coupling, a supply-main screwed into one branch thereof, an air-pipe screwed into

another branch thereof, a supporting-leg connected with the T pipe-coupling, a plug in the lower end of the supply-pipe, an open-ended tube supported by said plug, a hydrocarbon-supply pipe, a valve therein, said valve supported upon the said supporting-leg, a coil-pipe communicating with said valve, said coil inclined as set forth and filled with granular substance, a valve communicating with said coil and discharging into the T-coupling below said tube, a burner arranged below the coil, a pipe contained within the supply-main passed through the plug in the bottom thereof, a plug in the T-coupling having said pipe passed through it, a burner-pan supported upon said burner and a casing completely inclosing the burner, the coil and said valves and formed with a doorway to provide access to the interior thereof, as set forth.

RICHARD M. MICK.

Witnesses:

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