

A. C. STEWART.
 THROTTLE FOR CARBURETERS.
 APPLICATION FILED OCT. 10, 1910.

1,064,866.

Patented June 17, 1913.

Fig. 1

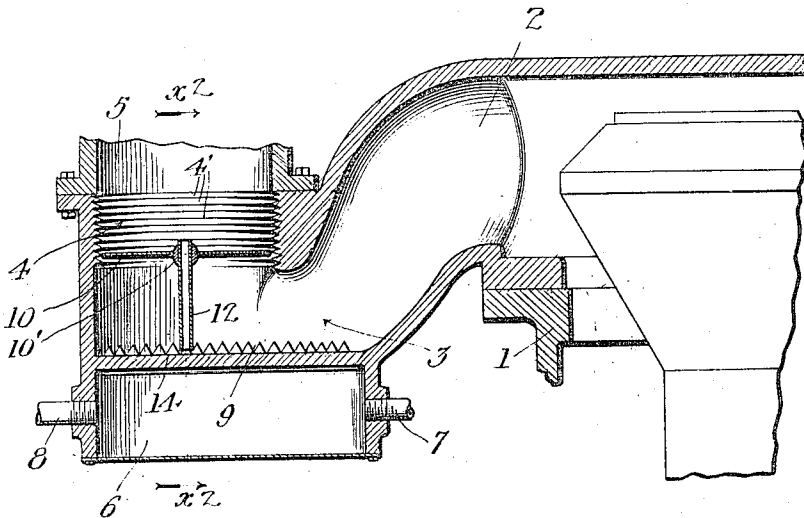


Fig. 3

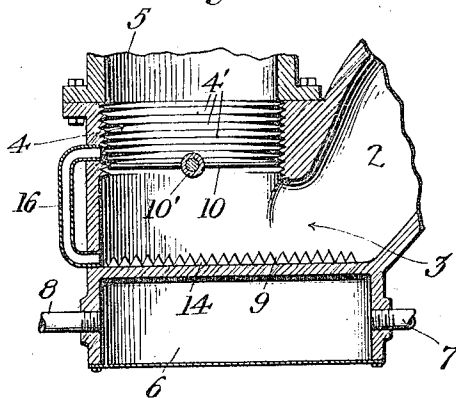
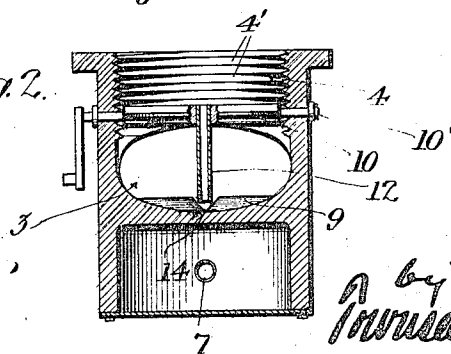


Fig. 2



Witnesses:
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Inventor:
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 by
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UNITED STATES PATENT OFFICE.

ALFRED C. STEWART, OF LOS ANGELES, CALIFORNIA.

THROTTLE FOR CARBURETERS.

1,064,866.

Specification of Letters Patent.

Patented June 17, 1913.

Application filed October 10, 1910. Serial No. 586,378.

To all whom it may concern:

Be it known that I, ALFRED C. STEWART, a citizen of the United States, residing at Los Angeles, in the county of Los Angeles and State of California, have invented a new and useful Throttle for Carbureters, of which the following is a specification.

This invention relates to throttles for controlling the passage of mixture from a carbureter to an integral combustion engine, and it relates particularly to the class of such devices wherein a chamber is provided between the carbureter and the throttle outlet, for example, for applying an additional quantity of heat to the mixture as it passes to and through the throttle. Such construction is especially adapted for use with the heavy oils, it being necessary in such case to provide an additional quantity of heat to vaporize the oil. With such a construction the heating capacity of the chamber is adjusted or adapted for the ordinary running conditions, with the consequence that in starting or stopping the flow, with the throttle nearly closed, there is a tendency to accumulation of oil in said chamber by reason of the decreased suction there-through, and when the throttle is opened more widely there results a sudden increase in the amount of oil taken up by reason of this accumulation of oil in said chamber and the increased suction brought thereon.

The main object of the invention is to provide for withdrawing such oil from the heating chamber at times when the throttle is closed.

Another object of the invention is to provide a heating chamber, for the above stated purpose, of improved construction.

The accompanying drawings illustrate the invention, and referring thereto: Figure 1 is a vertical section of the throttle, and showing the connection to the carbureter. Fig. 2 is a transverse section on line x^2-x^2 in Fig. 1. Fig. 3 is a vertical section showing a modified form of the invention.

1 designates the carbureter which may be of any usual or suitable construction having an outlet 2 connected to the heating chamber 3 which communicates with the throttle chamber 4, an outlet pipe 5 being connected to said throttle chamber 4 and leading to the internal combustion engine to be supplied with mixture. A chamber 6 is provided adjacent to the chamber 3, for example, directly beneath the same, said chamber 6

being provided with means for supplying heat thereto, for example, a pipe 7 communicating with exhaust of the engine, or with other source of heat, and an outlet means 8. The floor or bottom of the chamber 3, which is directly above the chamber 6, is preferably corrugated or transversely grooved, as shown at 9, to increase the evaporative effect on the oil and reduce to a minimum the tendency of the oil to collect thereon.

The throttle 10 is pivoted at 10' in the throttle chamber 4, so as to be movable to open and close the communication through the throttle chamber, and means are provided for establishing connection from the lower part of the chamber 3 to the portion of the throttle chamber on the outlet side of the throttle. In the form shown in Fig. 1, said means consists of a tube 12 extending through the throttle valve and nearly to the bottom of the chamber 3, the upper end of said tube 12 extending into the throttle chamber 4 above the throttle valve, so that when the throttle is closed the suction from the outlet 5 may draw mixture through said tube and suck up any oil which may have collected in the bottom of chamber 3. To insure passage of the oil to the tube 12, a longitudinal groove 14 may be provided extending through all of the corrugations 9 and directly beneath the tube 12.

In the form of the invention shown in Fig. 3, the communication from the lower part of the chamber 3 to the upper part of the throttle chamber is provided by a bypass tube 16 extending into the said portions of said chambers, said tube being of sufficiently small cross section to be without material effect on the amount of mixture passing, but providing for the suction of the oil from the lower part of the chamber 3 to the throttle outlet under the increased condition of suction produced when the throttle is closed and the engine is still running.

The throttle chamber 4 may be provided with corrugations or ridges 4' on its walls to increase the evaporative effect or reduce to a minimum the condensing effect thereon.

What I claim is:

1. A throttle for carbureters comprising a throttle chamber, a heating chamber communicating with said throttle chamber, means for connection of the carbureter to said heating chamber, means for applying heat to said heating chamber, a throttle valve in said throttle chamber, and a con-

nection from the throttle chamber on the outlet side of the throttle valve to the lower part of the heating chamber.

2. A throttle for carbureters comprising
5 a throttle chamber, an oil collecting chamber communicating with said throttle chamber, means for connection of the carbureter to said oil collecting chamber, a throttle valve in said throttle chamber, and a connection
10 from the throttle chamber on the outlet side of the throttle valve to the lower part of the oil collecting chamber, consisting of a tube connected to and extending through the throttle valve.

3. A throttle for carbureters comprising a
15 throttle chamber, a heating chamber communicating with said throttle chamber,

means for connection of the carbureter to said heating chamber, means for applying heat to said heating chamber, a throttle 20 valve in said throttle chamber, and a connection from the throttle chamber on the outlet side of the throttle valve to the lower part of the heating chamber, said heating chamber having corrugations in its bottom 25 for the purpose set forth.

In testimony whereof, I have hereunto set my hand at Los Angeles, California, this 3rd day of October 1910.

ALFRED C. STEWART.

In presence of—

ARTHUR P. KNIGHT,
FRANK L. A. GRAHAM.