No. 806,079. PATENTED NOV. 28, 1905.

O. GAVELEK.

CARBURETER FOR HYDROCARBON ENGINES.

APPLICATION FILED JULY 25, 1904.

Fig. 1.

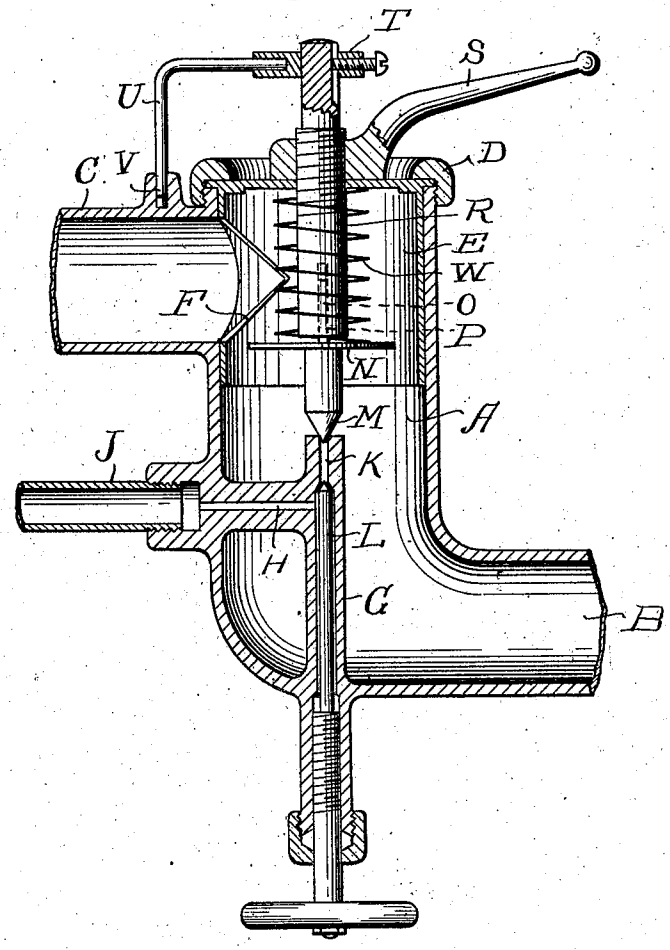
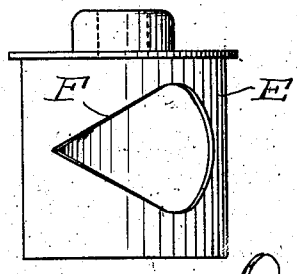


Fig. 2.



Witnesses:

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CARBURETER FOR HYDROCARBON-ENGINES.

No. 806,079. Specification of Letters Patent. Patented Nov. 28, 1905.

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To all whom it may concern:

Be it known that I, OSCAR GAVELEK, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Carbureters for Hydrocarbon-Engines; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to a novel construction in a carbureter particularly adapted for use in connection with gasolene-motors, the object being to provide a device in which the feed of gasolene or other vapor and air are simultaneously controlled by a single lever, which determines the proportions of each admitted to the motor to control the speed and power of the latter; and it consists in the features of construction and combinations of parts hereinafter fully described and claimed.

In the accompanying drawings, illustrating my invention, Figure 1 is a central vertical section of a carbureter constructed in accordance with my invention. Fig. 2 is a detail view in elevation of the throttle-valve employed.

My said device comprises a casing the middle portion of which constitutes a vertically-disposed cylinder A, connected at its lower end with an air-inlet B and connected at its upper end with the suction end of the motor-cylinder by means of the pipe C. The upper end of said cylinder A is externally threaded to receive a flanged nut or collar D, by means of which the cylindrical throttle-valve E, mounted in the upper end of said cylinder, is held in place. The said throttle-valve E is open at its lower end and is provided between its ends with a substantially triangular opening F, through which communication is established between said cylinder A and pipe C, the said triangular opening F determining the volume of carbureted air admitted to said pipe C, and thus to the motor-cylinder at each stroke of the piston in the latter. Disposed vertically in the middle of said cylinder A at its lower end is a valve-casing G, having an inlet H at one side, which is connected with a source of supply of gasolene or other volatile hydrocarbon liquid or gas by means of the pipe J and having an outlet-passage K, which is controlled at its lower end by the pin-valve L, entering said casing G at its lower end, and which is further controlled by a pin-valve M, seating on a valve-seat at the upper end of said passage K. The said valve M carries a horizontally-disposed disk N between its ends, which is of less diameter than the casing A or throttle-valve E and is disposed below the opening F in the latter. At its upper end said valve M carries a stem O, which is longitudinally movable in a central longitudinal opening P in a vertically-disposed plunger R, the latter being threaded between its ends and passing through a central threaded opening in the upper wall of the throttle-valve E and a similar opening in the end of an operating-lever S, rigidly secured to said throttle-valve. At its upper end said plunger R carries a vertically-adjustable collar T, carrying an L-shaped arm U, the free end of which enters an opening V in a projection on the pipe C. The said collar T is held rigidly in position on the said plunger by means of a set-screw, and said plunger is thus held against revolution, but is moved vertically by turning the said throttle-valve E. A light spring W, bearing on the disk N, holds said valve M normally closed, the same being opened by the pressure of carbureted air on the lower face of said disk N at each stroke of the piston of the motor, the extent of opening of said valve being determined by the piston of said plunger R. The said throttle-valve E is so arranged that when it is desired to admit carbureted air to the motor the smaller end of the opening F first establishes communication between the cylinder A and pipe C, and as said valve is turned farther a larger opening is gradually provided. When the throttle-valve is entirely closed, the said plunger R is lowered, so as to bear on the upper end of the said valve M to hold same positively closed independently of valve L, which may remain open. As the throttle-valve is opened the said plunger R is gradually raised, thereby gradually allowing the valve M to open wider and admitting a quantity of hydrocarbon liquid proportioned to the volume of air which can pass through the opening F, such liquid being immediately evaporated, and thus carbureting the air. The motor is thus controlled by a single lever, and the valve E may be connected with the governor of the motor and the latter be thus partly controlled automatically.

My said device is very simple, cheap, and efficient.

I claim as my invention—

A carbureter for hydrocarbon-motors, comprising a cylindrical casing provided at one end with inlets for air and hydrocarbon liquid respectively, and at its other end with an outlet for carbureted air, a throttle-valve controlling said outlet, a valve controlling said inlet for liquid, fluid-pressure-actuated means on said last-named valve for opening same, a longitudinally-movable plunger disposed in the path of said valve and controlling the degree of opening movement of same, said plunger being threaded between its ends and passing through a threaded opening in said throttle-valve, means for holding said plunger against revolution, and means for holding said throttle-valve against longitudinal movement, whereby when said throttle-valve is turned said plunger will be moved longitudinally.

In testimony whereof I have signed my name in presence of two subscribing witnesses.

OSCAR GAVELEK.

Witnesses:

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