R. KENNEDY.

CARBURETER.

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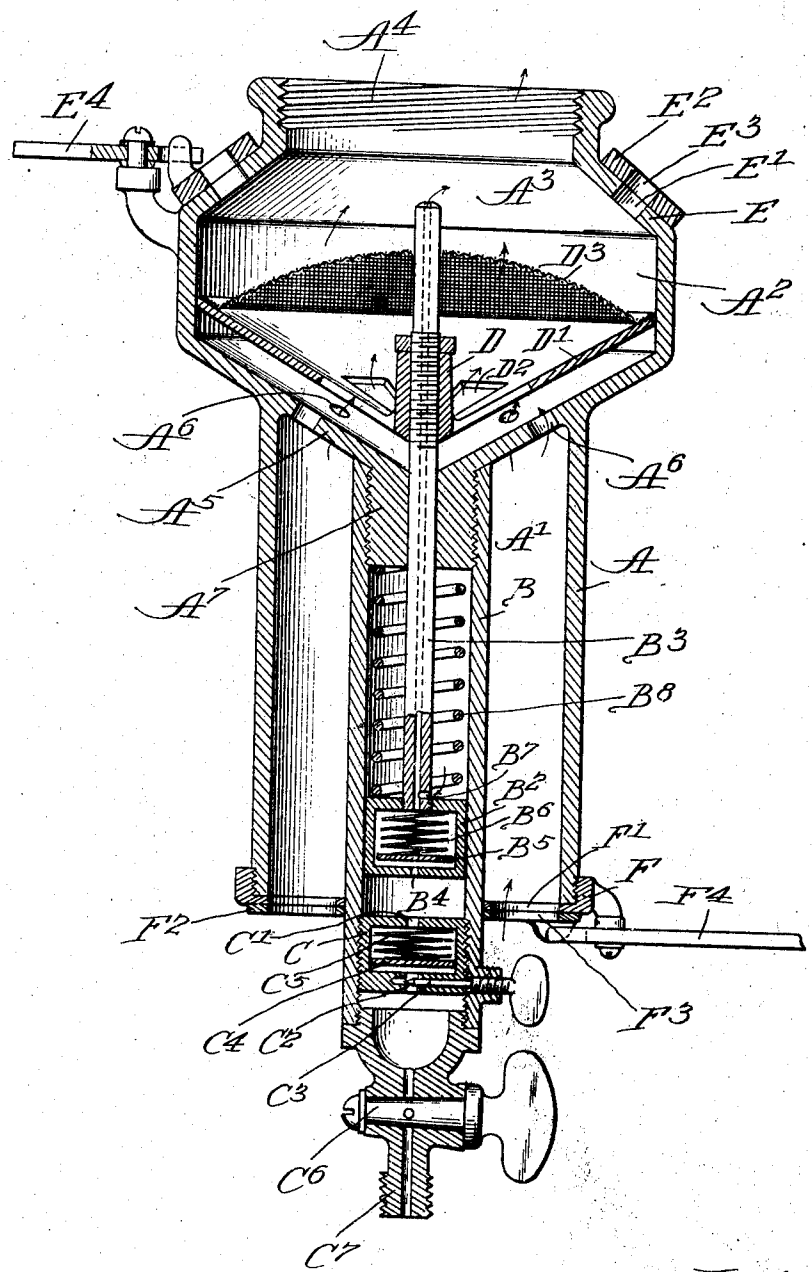

Witnesses:

P. J. Gathmann

Sophie B. Werner.

Inventor:

Richard Kennedy.

By Baker & Coates

Attorneys:

UNITED STATES PATENT OFFICE.

RICHARD KENNEDY, OF CHICAGO, ILLINOIS.

CARBURETER.

1,019,800. Specification of Letters Patent. Patented Mar. 12, 1912.

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To all whom it may concern:

Be it known that I, RICHARD KENNEDY, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a certain new and useful Improvement in Carbureters, of which the following is a specification.

My invention relates to improvements in carbureters, and is illustrated in one form in the accompanying drawing, which shows a section through my device.

The cylindrical casing A inclosing the annular air passageway A^1 has at one end the enlargement A^2 which incloses the carbureting chamber A^3 in communication with the engine by means of the mixture discharge passage A^4. The conical partition A^5 perforated at A^6 and carrying the screw-threaded hub A^7, separates the air passageway A^1 from the carbureting chamber A^3. The cylinder B which is screw-threaded upon the hub A^7 is located centrally within the air passage A^1 and contains slidably mounted therein the hollow drum B^2, mounted upon the hollow piston rod or tube B^3 which is in turn slidably mounted within the hub A^7. The interior of the drum B^2 communicates at one side with the interior of the tube B^3 and is provided at the other with the passageway B^4 controlled by a valve B^5 and spring B^6. The passageway B^7 in the wall of the tube B^3 furnishes communication between said tube and the interior of the cylinder B above the drum B^2. The spring B^8 is inclosed within the cylinder B, surrounds the tube B^3 and is compressed between the surface of the hub A^7 and the drum B^2.

The cylinder B is closed at one end by the fixed drum C which is provided with the passageway C^1 in opposition to the passageway B^4 in the drum B^2 and with the passageway C^2 which may be adjusted by means of the needle valve C^3 and which is controlled by the valve C^4 and spring C^5. The turn cock C^6 screw-threaded to the end of the cylinder B communicates with the fuel supply by means of the tube C^7. The tube B^3 which projects upwardly into the chamber A^3 carries the hub D from which projects the conical plate D^1 parallel with and adapted to rest upon the partition A^5 and having the triangular openings D^2 about its center, and carrying the wire gauze partition D^3 through which projects the end of the tube B^3.

The enlargement A^2 is provided at a point farthest removed from the cylinder A with the conical wall E having perforations E^1 therethrough upon which rides the conical collar E^2 having the perforations E^3 therein in opposition to the perforations E^1 and provided with the operating link E^4.

The cylinder A is provided at its open end with the screw-threaded collar F having the openings F^1 therein in communication with the air passage A^1. The annular collar F^2 is slidably mounted upon the collar F and is provided with the openings F^3 in opposition to the openings F^1 and the operating link F^4.

It will be evident that while I have shown in my drawing an operative device still many changes might be made in the size, shape and arrangement of parts without departing materially from the spirit of my invention, and I wish, therefore, that my drawing be regarded as in a sense diagrammatic.

The use and operation of my invention are as follows:—When the engine is at standstill and no demand is made upon the carbureter, the conical disk within the carbureting chamber rests upon a corresponding conical wall of said chamber and the drum or piston attached to the tube carried by the conical disk is in its lower position, the fuel having passed upwardly to fill the carbureter above the piston. If now, the engine is started the suction will draw air through the air passage lifting the conical disk. The piston will then rise with the disk and the fuel being compressed by the piston will be squirted out at the top of the piston rod into the carbureting chamber where it will be atomized and carried into the cylinder of the engine. Any fuel which is not carried away by the first stroke will be arrested and caught upon the wire gauze where it will be taken up by the air at the next stroke. The amount of air passing through the carbureter may be adjusted by means of the valve at the opening to the chamber, and this valve which operates to vary the amount of air, also operates to vary the amount of fuel fed to the engine, in view of the fact that the amount of fuel depends upon the length of travel of the conical plate and the piston, and the travel of the piston and plate depends on the amount of air which is drawn through against the plate. The richness of the mixture is ad-

justed by means of the auxiliary air intakes leading to the carbureting chamber above the conical valve plate.

I claim:

1. A carbureter comprising a cylindrical air passage, a carbureting chamber, separated therefrom by a perforate conical wall, a cylindrical oil chamber concentric with said air passage, a conical valve plate in said carbureting chamber, perforations therethrough, a piston in said oil chamber and a piston rod connecting said piston and valve plate, a passage through said piston rod and a check valve in said piston, means for controlling the supply of oil to said chamber, means for controlling said air passage; and an auxiliary adjustable air supply to said carbureting chamber.

2. A carbureter comprising a cylindrical air passage, a carbureting chamber, separated therefrom by a perforate conical wall, a cylindrical oil chamber concentric with said air passage, a conical valve plate in said carbureting chamber, perforations therethrough, a piston in said oil chamber and a piston rod connecting said piston and valve plate, a passage through said piston rod and a check valve in said piston.

3. A carbureter comprising an air passage, a carbureting chamber, separated therefrom by a perforate wall, an oil chamber within said air passage, a perforate valve plate in said carbureting chamber, a piston in said oil chamber and a hollow piston rod connecting said piston and valve plate, a check valve in said piston.

4. A carbureter comprising an air passage, a carbureting chamber, separated therefrom by a perforate wall, an oil chamber within said air passage, a perforate valve plate in said carbureting chamber, a piston in said oil chamber and a hollow piston rod connecting said piston and valve plate, a check valve in said piston, means for controlling the supply of oil to said chamber, means for controlling said air passage; and an auxiliary adjustable air supply to said carbureting chamber.

5. A carbureter comprising a cylindrical air passage, a carbureting chamber, separated therefrom by a perforate conical wall, a cylindrical oil chamber concentric with said air passage, a conical valve plate in said carbureting chamber in opposition to said perforate wall, perforations therethrough, a piston in said oil chamber and a piston rod connecting said piston and valve plate, a passage through said piston rod and a check valve in said piston.

6. A carbureter comprising an air passage, a carbureting chamber, separated therefrom by a perforate wall, an oil chamber within said air passage, a perforate valve plate in said carbureting chamber in opposition to said perforate wall, a piston in said oil chamber and a hollow piston rod connecting said piston and valve plate, a check valve in said piston.

7. A carbureter comprising a carbureting chamber, a perforate disk slidably mounted upon the walls thereof, a tubular piston rod carried by said disk and pumping means carried by said piston rod, means for closing and unclosing the perforations in said disk.

8. A carbureter comprising a carbureting chamber, a perforate disk slidably mounted upon the walls thereof, a tubular piston rod carried by said disk and pumping means carried by said piston rod, means for closing and unclosing the perforations in said disk, said means comprising a fixed wall in opposition to said disk.

RICHARD KENNEDY

Witnesses:
FRANCIS W. PARKER, Jr.,
SOPHIE B. WERNER.